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NOTICE OF CHANGES TO THE SYSTEM

KRONOS Changes

Kevin Matthews installed a correction to program LMA which ensures that all newly allocated central memory is cleared. This is an important security feature which had been installed long ago. The feature affects two programs: LRI and LMA. In the course of some level conversion, the LMA portion of this feature had been lost. Unfortunately, a user discovered this before we did. Re the recent security breach.

Brian Hanson repaired two items in LINK related to his recent enhancement allowing LINK to manage its own field length. The first was an error which caused LINK to sometimes hang in recall. This could occur if the user had a very small amount of field length prior to the load. The second change removes the nonfatal error message issued to the user's dayfile when LINK has to request more memory.

Don Mears installed a change in program LTD which ensures that a null line entered in text mode will generate a single zero word.

Tim Hoffmann repaired an error in FILES processing of the SKIPF, SKIPR and SKIPFB commands. The error caused the file or record count (argument 2) to always be taken as 1 regardless of what was specified. This error was found and corrected shortly after the last new system was installed.

Tim Salo installed further changes to support a 96 character ASCII printer. Program IAD, the current ASCII printer driver, was removed to be replaced by appropriate driver in LCD.

NOS Changes

Since most staff members are still reeling from committee work, few mods have been converted. We do however, have a NOS deadstart tape which is easy to deadstart

and run. All KRONOS permanent files are accessible. This was achieved not by altering KRONOS permanent file type (see DSN 1, 4 p. 2) but by altering the NOS version of MSM to recognize (and unbusy) KRONOS permanent files. We also have program library files set up (on pack UCC, UN=LIBRARY).

JPLNOS	NOS version of JPL
CPLNOS	NOS version of CPL
MPLNOS	NOS version of MPL
WPLNOS	NOS version of WPL

In order to keep pace with the rate at which NOS will be changing, new NOS systems will be produced on a weekly basis. This will continue until production usage begins. Thus far, two updates have been applied to NOS and include the following changes:

1. The above mentioned kludge to MSM (TWL).
2. Two generalization mods to PPCOM (KCM).
3. SUPIO, REBLOCK, 1RF, 1SA, 1SB, 1SU and 2SU were at least moved to MPLNOS (TJS).
4. The following mods currently on JPL will not be converted to NOS:
 - a. DJMODS, GEN005, MMSEU1, MSMODS and MSTDJ because CDC has released their own double density disk drivers.
 - b. PPRBIN because CDC has installed their own binary search of the CLD.

PROPOSED CHANGES TO THE SYSTEM

Proposal in A Minor - by J.J. Drummond

I would like to propose the following changes to the system. They are related to the upcoming conversion to NOS.

1. Remove ACQUIRE and RETAIN from PFILES to a separate deck. This would accomplish several things--first, the code for copying files, etc. would be eliminated from PFILES and would not affect users doing trivial PFM requests. Second, the readability and, more important, the "modability" of PFILES would be greatly enhanced. This could involve some duplicated code, but if so, I feel the need justifies it. I would also like to eliminate the PG and WB parameters from PFILES. These little-used and hard-to-document features are not worth converting to NOS.
2. Adopt a consistent policy regarding abbreviations for control statements. Currently, control statement abbreviations are haphazardly implemented and confusing. For instance, not all control statements have abbreviations; it is not always immediately clear what a particular abbreviation stands for--"R" could be REWIND or RETURN, etc. To eliminate this problem, I propose that one of the following solutions be adopted:
 - a. Eliminate all control statement abbreviations. This would save memory, be compatible with CDC and eliminate confusion over what abbreviations stand for. Some users would have to be reeducated.
 - b. Allow abbreviations for all control statements. This could be done with a uniqueness check (similar to the one performed for TELEX commands). This would be consistent and easily documented. Some abbreviations would change and some CALLPRG packages might have to be renamed.

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New Abbreviation for COPYSBF - by T.W. Lanzatella

For many years UCC has used the abbreviation CS for COPYSBF. At release 4 of NOS, one of the many programs added to the system to accommodate NAM is named CS. I propose that we choose a new abbreviation for COPYSBF now to be used in NOS. I suggest the abbreviation CSF.

SYSTEM MAINTENANCE: People and Procedures

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

- I. The following proposals were accepted or rejected.
 - A. Tim Salo's proposed change to the value of the KRONOS PMFT was accepted (see DSN 4, 1 p. 2). We discovered, however, a different method to affect permanent file compatibility between NOS and KRONOS--see NOS CHANGES in this issue of the DSN.
 - B. Marisa Riviere's proposed changes to WRITEUP were not discussed but will be discussed at the next meeting.
 - C. Tim Salo's proposed implementation of TID's under NOS was accepted. We all noted that because the TID will no longer be placed in the FNT for rollout files, then a utility must be provided which determines the terminal ID for all rollout files. This data is currently obtained through the H-display from SUPIO or from the Q-display in DSDSIM.
- II. L.A. Liddiard reported on the progress of the Steering Committee. Most of this data is published in the newest UCC contribution to the fourth estate, the CYBER 74/172 ENHANCEMENT NEWSLETTER by S.P. Nachtsheim.
- III. L.A. Liddiard announced that the Bid Review Committee had recommended the following changes in the bid for the C172.
 - A. that the 667-2 be substituted with 669-4.
 - B. that an additional 7152 be ordered for C74 while the 7154 be moved from C74 to C172.
 - C. 2 - DDP channels were included in the bid (one for C172 and one for the Network Systems adaptors).
 - D. CDC is offering an unsupported version of SIMULA in the bid--this is not yet resolved.
 - E. UCC will be under contract to install some enhancements in XEDIT.
 - F. The C172 will only have a single CPU initially.
 - G. 1 DDP will be late initially.

Larry also announced that some additional offices will be constructed in the northwest corner of the Lauderdale users' room and that someone will look into covering the storage racks in the users' room at Lauderdale.

- IV. Dick Folden displayed a blueprint of the machine room configuration once the C172 arrives. Notable changes: all unit record gear will be moving to the west end of the room.
- V. Larry Liddiard announced that we will try to accommodate two types of 1200 baud asynchronous modems on the C74. We will offer a 3 line rotary of Vadic modems and a 2 line rotary of Bell modems. Larry also announced that 4800 baud synchronous modem has been purchased so that we can test SUPIO and 1004's at a higher line speed. It was felt that line speed may be the current throughput bottleneck.

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Callprg and Library Tape Packages Conversion to NOS - by M. Riviere

The possibility that the current KRONOS binaries of the Callprg packages and Library Tape products will not run on the NOS System is rather large and that implies the need for a testing and conversion effort.

Starting January 28, a NOS System will be running on the weekend System time. During week days the System time System will not necessarily be NOS.

To facilitate debug and installation of Callprg and Library Tape products a block of time will be assigned on Saturdays from 8:00 p.m. to midnight (or 2:00 a.m. Sunday if needed) to run a "stable" NOS System. That is, during that time debugging of very dependent System utilities will be avoided.

For a better explanation about the conversion, I will be separately describing the updating-installation processes that I suggest for Callprg and Library Tape products.

Callprg Products

I will start by having an empty NOS Callprg System index. As products are tested or created on NOS I will be inserting entries in the NOS index, upon request.

The equivalent of CPOPL for NOS will be on file CPOPL on the KCM pack on the CALLPRG account number.

At the arrival of the Cyber 172 I will take care of transferring the NOS index and moving the by then available NOS Callprg packages to the Cyber 172 files. From then on it will be up to each programmer to update his index entries and files on the Cyber 172 as well as in the Cyber 74.

The configuration used in the 172 will be the one used, later on, for the 74 when installing definitively the NOS System in that machine.

Callprg files in the common NOS system planned for June will be residing in a pack accessed by both computers. Packages with copyright restrictions to be used only in one computer should reside on different packs, available only to one or the other machine, although they will be having their entries in the same System index.

I will be placing in the common pack all the products used by the NOS index, unless I am otherwise informed about copyright restrictions.

To transitory access the current KRONOS Callprg packages for testing purposes while running on the new NOS System time System a "A,CALLPRG/UN=CALLPRG" control statement has to be added to a job. This will make the current KRONOS Callprg index be

used as a local index file. (Note 1: This will work only after the permanent file incompatibility between NOS and KRONOS is solved. Note 2: This will not work for tape files, as it does not for any local index if the LB tape containing the requested package is not previously assigned to the job as a local file called T.)

I suggest using the NOS pack KCM for converted NOS Callprg packages in order to assure that the SP pack will remain with available space for current KRONOS packages.

Library Tape Products

We will start by having a NOS Library Tape composed of the CDC product set releases that are equivalent to the ones now included in the KRONOS Library Tape.

We only have binaries of those products for the time being but we hope to have their sources and locally installed versions by March 15.

There are also other CDC products from the CDC product set available that, if included in the Library Tape may create confusion for the initial testing times, since in our KRONOS installation they are available as Callprg products. Products of this kind are all the installation texts (IPTTEXT, IOTEXT, etc.), SORTMRG, SYMPL, etc.

I will have those products available, as well as our current KRONOS Library Tape products, on a magnetic tape for anyone to access for testing. Contact me for the tape VSN and format.

I will be replacing and adding products to the NOS Library Tape upon request.

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Callprg and Library Tape News - by M. Riviere

On January 31, Bart Johnson will be adding index entries for a future version of TEKLIB. The addition will be made on the 6400 as well as on the Cyber.

The next Callprg and Library Tape modifications for the current KRONOS system will be taking place on February 14. Modifications for that date should be submitted by 2 February at noon.

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Cyber 74 Deadstart Dump Analysis - by K.C. Matthews

Through Sunday, 22 January 1978

Our strange deadstart problems continued through 11 January. On that day (the latest recorded strange hang) 1SJ was assigned to a PPU but not doing anything inside of it. Analysis of the dump showed that 1SJ was never even loaded. The PPU had filled itself with TRT data leaving no real instructions. It was executing this data. In the process of executing this junk, it wrote a valid TRT word at various locations in low core. This caused TRT linkage errors on devices DN30, UCC, and STF. These devices had to be dumped and reloaded.

On Thursday, 12 January '78, ECS failed. This caused a level zero deadstart.

Since that time, there was a whole week with no deadstarts for mysterious or other reasons.

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6400 Deadstart Dump Analysis (1/9 to 1/22) - by R.A. Williams

<u>Date</u>	<u>Description</u>	<u>Tape</u>
780109	lTD hung channel 3. It was dropped, channel disconnected, and restarted successfully. A hardware problem is suspected.	N.A.
780110	lTD hung channel 3 full. It was dropped, channel disconnected, and restarted successfully. A hardware problem is suspected.	N.A.
780111	The system hung when a dayfile message "AIA not in PP LIB." was issued continuously. No dump could be taken as the operator couldn't get the system to deadstart.	N.A.
780120	The scopes went blank when a COPY. command was issued without 8 or 9 pointers set in 026. I was unable to duplicate the problem but it seems to be a software bug. 026 code was in low core.	DDT-15