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NOTICE OF CHANGES TO THE SYSTEM

KRONOS Changes

The following changes become effective on Thursday, 11 May.

Tim Salo installed unspecified changes to SUPIO, 1RF, 1SU and COMSSIO.

NOS Changes

Tom Lanzatella repaired an error in RESEX processing of express data. Previously,
RESEX was not processing permit data.

Don Mears installed the following changes:

1) PDPMUX - reinstalled repairing processing of the high-speed index field.

2) ASCII - reinstalled to make commercial at and circumflex print on the 580
    in EC=A9 mode.

3) The ROTARY CHECK was altered to use the port number from byte 4 of VUMT rather
    than the terminal number.

4) 1TOHNG - a mod from PSR summary 466 which causes 1TO to hang if attempting
    to write zero words to CM.

5) 1ROMSG - a mod from PSR summary 466 which prevents 1RO from messing up the
    SRU XXXXXX.XXX message.

6) 1IORSI - a mod from PSR summary 466 which causes 1IO to clear a memory
    request if not immediately honored.

7) 1TAREC - a mod from PSR summary 464 repairing a problem in 1TA processing
    of RECOVER.

8) 1IOACC – a mod to 1IO which deletes a redundant second call to COMSACC.

9) CIOSS – a mod from PSR summary 466 which prevents 1CJ from hanging when evicting a deferred, routed file.

10) QACSS – a mod from PSR summary 466 which corrects QAC processing of disk errors while reading system sectors.

11) 1ROOFL – a mod from PSR summary 466 which adds a missing overflow check to 1RO.

12) 1MACM – a mod from PSR summary 466 which prohibits 1MA from bashing low core.

13) CHKPORT – converted from KRONOS, this mod inserts the 1TD idle loop address into low core and facilitates checking for hung ports.

14) Mods TXGN01, MNFSYS, SNOSYS, COBSYS, PASSYS and TXXCOM were reinstalled with corrections to field length management.

15) The program CHKPORT was converted to run under NOS.

Tim Salo deleted the DISPOSE command from NOS. In addition, BLOCKER was converted to run under NOS.

Tim Hoffmann installed a mod from PSR summaries 460-467 (the bug was reported several times) which repairs GETFNT processing of file length when current track is not present. Tim also added a RFL= entry point to LIBEDIT.

Brian Hanson installed changes to DSP which allows a SSJ= program to submit a system origin job. This feature is critical to CALLPRG.

Jeff Drummond installed the following changes:

1) PFILES processing of the CLEAR command was corrected for the case when the primary file is execute only. Previously, the user got the message: I/O ON EXECUTE ONLY FILE.

2) PFILES was corrected so that CT=L actually produces a public file rather than a private file.

3) File Protection (FP) was restored to PFILES commands.

4) The NA option now works properly on the RETAIN command.

PROPOSED CHANGES TO THE SYSTEM

Two Proposals – by E. Schleske

1. I propose that a user program be allowed to select the character set it requires. For example, CALLS which requires reading the back-space character could then select TERM,BARROWD even if the default terminal type were TTY. Thus, CALLS would run correctly whatever the default terminal type, without requiring the user to select it. This could be implemented by yet another control byte, or by adding the option to the TLX request. The latter is, in my view, preferable. Unfortunately, the implementation of TLX is a solution for a specific case and not a general case. Whereas, had TLX been designed to cover the general case, control bytes would then have been unnecessary. The current problem lies in the fact that there is no general

interface between a user program and TELEX. For example, it is impossible for a user program to select the rub-out count, terminal type, duplex, and other such TELEX commands. Some user-program-accessible TELEX commands have been specifically added (e.g.,

```
CSET   ASCII    (via the TLX request)
CSET   NORMAL   (via the TLX request)
BYE             (via the 0004b control byte)
```

The problem with this method of implementation is that a specific interface must be designed to handle each additional command added to TELEX. Whereas, had TLX been written to handle the general case, all commands would be automatically implemented. This could have been done, or could be done, by having the TLX request point to a coded line which contains the actual TELEX command.

2. I propose that the system do a PACK automatically when exiting text mode, because there is no case when the file should not be packed.

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A Minor Suggestion - T. J. Hoffmann

With my resubmission of DISSJ, secure memory will work as follows:

Any program with SSJ= has by default, secure memory. Also, any program with the SSM= entry point has secure memory status. This status cannot be cleared by the program if set by either entry point.

My change to DISSJ does the following: a DISSJ call will clear the SSJ= entry point, and set secure memory status (bit 59 in word DBAW). This bit can be cleared by the calling program using a SETSSM 0 call. However, this can only be cleared if there is no SSM= entry point, e.g., a program with both SSM= and SSJ= can issue a DISSJ, but cannot clear secure memory status.

What I would like to suggest is that CALLPRG issue first a DISSJ call and then a SETSSM 0 before completing the load of the user program, thus allowing CALLPRG protection when it runs, but not shafting the user program to follow. With regards to MODVAL and DISSJ1, MODVAL will disable its SSJ= privileges, while still holding its secure memory status.

SYSTEM MAINTENANCE: People and Procedures

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

1. The following proposals were rejected or accepted.

a) Jim Mundstock's proposal to alter CPUMTR so that a job with no PP's assigned and no tape activity would be aborted for attempting RECALL on a FET was accepted. No one knew, however, whether or not the change would have deleterious effects. Some individuals felt that K-display drivers, MSG and the RFL command may stop working if such a change were installed. These questions will be resolved before the change is permanently installed (see DSN 4, 2 p. 67).

b) Tom Lanzatella's proposal to make the CYBER LOADER the default loader under NOS was approved. We all agreed, however, that the default loader ought to be selectable and specified via SETVAL in the VALIDUZ file. This project will have to wait until after NOS is installed (see DSN 4, 8 p. 67).

c) Jim Fairweather's proposal to add user number to certain BATCHIO account file messages was agreed to in principle but rejected because major changes would have to be applied to SUPIO and EXPORT (see DSN 4, 8 p.67).

d) Rich Franta's proposal for user settable limits on such items as punched cards, control cards and lines printed was agreed to in principle but rejected for the following reasons: (1) These limits are currently kept as indices rather than as real numbers so that users would never be able to specify exact limits and (2) users would never be able to increase their index values, only decrease them. We decided that a punched card limit would be the easiest to implement (see DSN 4, 8 p. 67).

e) Marisa Riviere's proposal for terminal formatted writting files was rejected. We decided instead that all writeups should conform to a previously agreed upon standard of never beginning in column 1 (see DSN 4, 8 p. 68).

f) Tim Hoffmann's proposal to withdraw the DMPI command was accepted (see DSN 4, 8 p. 68).

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Callprg and Library Tape News - by M. Riviere

A) Callprg Files on the STF - SPL Packs

On April 28, all the Cyber 74 Callprg and Writeup files from the STF pack were placed on the Cyber 172 in the SPL pack. The Cyber 74 Callprg index was added to the bottom of the 172 index in order to make all the 74 Callprg products available on the new machine.

The 172 Callprg index is now in the process of being built and as old 74 products are tested and approved for the NOS System their entries should be placed in the new section of the index. The 74 section of the Callprg index on the 172 will not be modified and eventually will be dropped.

Please note that if you made or will be making any changes after April 28 to Callprg and Writeup files in the Cyber 74, you also have to make the change in the Cyber 172, since the files on the SPL pack are going to be the only ones that will remain available when SPL becomes the common pack for the two computers.

It is important to keep in mind that on June 1 the Cyber 74 will start running the NOS system. We are not yet sure if by that date the SPL pack will be common to both computers. In case of having to run the NOS system in the Cyber 74 without the SPL pack it could be necessary to transfer back all the Callprg directory from SPL to STF. This possibility is another important reason for you to assure that your Callprg file changes on STF also take place on SPL in order to prevent the loss of modifications made during the transition period.

B) What Do We Do About PAST, MNF, PAST, FTN and FT3LIB

The availability of all the 74 products on the 172 allows users access to old compilers such as PAST, FTN and PAST, MNF but the nonexistence of FT3LIB which is a Library Tape product on the Cyber 74-KRONOS system does not allow for execution of the binaries obtained from those compilers. Shall we make FT3LIB available as Fetch type and let the old compilers to be used as nonsupported products or shall we remove the entries for the compilers from the index?

C) Callprg and Library Tape Changes

During the last two weeks several modifications took place among the NOS Library Tape products and the NOS Callprg products and index.

The NOS Callprg index and products modifications consist of:

1) The inclusion of CDC level 460 products CDCTXT, COPY8P, ESTMATE, FORM, IXGEN, RMERTXT, SISTAT, SMTEXT, SORTMRG, SYMPL and TXT6RM, installed by S. Reisman.

2) The inclusion of DEBUG, a Fetch type product provided by B. Hanson.

3) The inclusion of the Cyber 74 ALGOL that on the Kronos system is available from the Library Tape.

4) The addition of the MFL= entry point in COBOLX.

The NOS Library Tape modifications consist of:

1) The replacement of SYSIO by a verion containing all the relocatables used by the new products installed by Steve Reisman.

2) The addition of FILE psr 460.

3) The inclusion of the old version of BASIC used on the 6400 prior to the Kronos System (assembled date, 1973). According to J. Mundstock, we should be using this BASIC until the level 3 CDC BASIC shows to be acceptable.

The Kronos Callprg index was modified only to include B. Hanson's entry for DEBUG.

From now on, modifications to the Cyber 74 Kronos Callprg index should be made only if strictly necessary and modifications for the NOS index as products are ready to be included. I am not setting any fixed scheduled dates for modifications and I will try to implement them as they are requested.

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Cyber 74 Deadstart Dump Analysis from Friday, 21 April through Friday, 5 May - by
K. C. Matthews

Friday, 21 April

13:00 (DD1) The Channel 26 disk channel hung with the channel full. We cannot
understand why but rumors indicate that this is the same controller which hung
every other month when it was on the 6400.

Friday, 28 April

15:21 (DD-2)
15:47 (DD-3)
18:45 (DD-4)

In all three of these crashes, something was wrong with the VALID64 file, which
is sent from the 6400 to the Cyber 74. These things happen occasionally when
SUPIO gets a little fouled up. The processing of the VALID64 file is being
rewritten for NOS, so this longstanding problem should be fixed. We have no
idea why it hung so often today.

Monday, 1 May

13:55 (DD-5) 1CJ hung. There was a disk error being processed by a copy of CIO.
1CJ hung trying to drop a track that had been dropped previously. There is
probably a problem with disk error processing that would be investigated in
less hectic times.

Thursday, 4 May

15:20 ECS failed. Fortunately the system disabled all ECS operations and the
6400 and the 172 limped along slowly. The CE's fixed the bad card on the fly
and then ECS was introduced into both systems without any problems. Unfortunately,
this capability probably won't exist in NOS.

Friday, 5 May

All systems down due to power problem.

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6400 Deadstart Dump Analysis (4/24 - 5/7) - by R. A. Williams

Date	Description	Tape
780429	The system was up late due to a serious power failure.	N.A.
780504	The scopes blanked with three PP's hung on channel I/O instructions. No cause has yet been isolated.	DDT-17
780504	IRI hung DTKM, probably as a result of the earlier problems.	DDT-16
780505	The system was down until midnight due to a power failure.	.
780506	A number of phone lines were out of service as a result of a phone cable being cut in Minneapolis somewhere.	.