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NOTICE OF CHANGES TO THE SYSTEM

KRONOS Changes

A new KRONOS system will not be installed this Thursday, 23 March, due to a lack
of changes.

NOS Changes

The following changes comprise the NOS AF system which was finally working passably
on Sunday, 19 March.

Tom Lanzatella installed the following changes:

a) TAPSEC - the mod which installs most of our tape security features.

b) RSXROA - a mod to RESEX improving messages when duplicate VSN are present.

c) MINROL - a mod limiting user initiated rollouts to greater than 10 seconds.
    This mod was reinstalled.

d) UFML - a mod to UFM which eliminates use of the DJSM monitor function and
    renders UFM functional with the modset NOSA3 mentioned below.

Kevin Matthews installed the following changes:

a) NOSA3 - a modset from release 4 of NOS which installs full tracking. This
    mod is 9000 cards long and modifies about 70 decks.

b) DUMPPF was converted to run under NOS.

Don Mears installed the following changes:

a) MASTER - the mod which adds the CMUC access word bit and master user capabilities.

b) BRIEF - the mod which installs BRIEF mode for time sharing users.

c) BARROW - the mod which installs terminal types BARROW and BARROWD.

Don announced that the following modsets will not be converted to NOS:

a) CHARS - a mod to define micros for special TELEX characters. The characters defined do not work for all terminal types.

b) CHKPRT - a mod which places the 1TD idle address in TELEX low core. This value is already present in the terminal 1 terminal table entry.

c) DINMOD - a PSR repairing dial in processing in TELEX. CDC repaired this problem.

d) EOSFIX - a PSR repairing end-of-string byte processing in TELEX. CDC repaired this problem.

e) MUL1TD - a mod to allow TELEX to support multiple copies of 1TD. This feature is no longer required.

f) PDP11C - a mod which documents PDP-11 coding conventions. The new version of CODING is impossible to modify.

g) POTDMP - a PSR to prevent 1TO from blowing up. CDC fixed this problem.

h) TAPERR - a PSR to prevent accidental clearing of tape mode. CDC fixed this error.

i) TLFIX - a PSR repairing time limit processing. CDC completely rewrote time limit processing.

j) TLXCLR - a PSR to clear DISTC in the terminal table when LDR loads an SSJ= program. This is no longer required.

k) TXCPTM - a mod which changes SRU messages into CP messages at RUN and LOGOFF time. Not converted because we plan to change to SRUS.

l) TXLOC - a PSR which sets the logoff flag during 0004 byte processing. CDC fixed this.

m) UNHANG - a PSR to 1TD to prevent channel hangs during preset. Part of this mod was no longer needed; the other part was added to PDPMUX.

n) 1TAENT - a kludge to make PMS work. This is no longer needed.

o) 1TDASC - a PSR repairing extended mode processing in 61 character set. This was repaired by CDC.

p) 141TD - a TWX to prevent hung ports. This was installed into NOS by CDC.

q) 22TELE - a TWX to prevent hung ports. This was installed into NOS by CDC.

Tim Hoffmann installed the following changes:

a) GENCPM – a mod to generalize the CPM function table.

b) SYSEU1 – a mod to SYSEDIT installing use of control words.

c) SYSEU2 – a mod to SYSEDIT installing a Z parameter.

d) GENSOB – reinstalled because of new version of GENCPM.

e) SYSROL – a mod to SYSEDIT causing job to roll if another SYSEDIT is active.

f) Mods LOADBK, DMPI and 1AJU14 were reinstalled with minor changes because of the above change to GENSOB.

g) COPYU was added to MPLNOS.

h) The common decks COMCUDD, COMCUOD and COMCPSB were transferred to MPLNOS.

Brian Hanson converted the following modsets:

a) ULBED5 – a mod to LIBEDIT installing a Z parameter.

b) GENUID – a mod to generalize user access to special system ID's.

c) NODRP – the mod installing NODROP.

d) EXEC – the mod to 1AJ, EXU and LFM repairing most security problems associated with execute only files.

e) SNAP – reinstalled without the SNAPE macro.

f) CALLPRG – the mod to 1AJ which causes CALLPRG to be loaded. This is a temporary version of feature.

Hesung Byun installed the following changes:

a) CWPRT – the mod to install the TDUMP CW option.

b) HEXDMP – the mod which installs the hexadecimal TDUMP option (H).

c) L80MOD – a PSR correcting several bugs in LIST80.

d) 026MOR – the mod to 026 installing RDIS and RDROP.

e) RESU1 – a mod to RESEQ fixing several unspecified errors.

f) SOQUIK – a mod removing the SETPR command from console origin jobs.

g) SSJSUI – a mod allowing the SUI function to SSJ= jobs.

h) TDUMU1 – the mod to TDUMP installing all local output file line width options.

i) 026DGC – a mod inhibiting 026 from displaying illegal characters.

j) 1DSFL – a mod to 1DS limiting FL for 1DS submitted jobs to 20K.

Bill Sackett installed the following changes:

a) GEN008 - a mod generalizing the installation words in the MST.

b) TKLIM - the mod which installs local track limit processing.

c) BADROL - a modset which helps to recover from rollin file not on mass storage.

d) DAFLIM - a mod which installs direct access file size limits and checks.

e) 1RIU1 - a PSR to 1RI correcting system crash from a bad RLPW.

f) DSDQUE - a mod defining a macro for two character queue selectors.

g) PURGEM - the mod installing the ability to purge a rolled or running job with preset message.

h) CHANCE - a mod allowing 10 units after CC or DF limits are exceeded.

i) GENPFM - a mod generalizing local extensions to PFM.

j) PFMU1 - a mod to PFM which avoids updating the access date in certain situations.

k) PFMU2 - a mod to PFM causing a removable pack request to always roll.

l) PFMU3 - a mod to PFM rearranging DEFINE auxiliary code.

m) PFMU4 - a change to PFM correcting a test for length of catlist buffer.

n) PFMU6 - a mod adding pauses to PFM.

o) PFMU7 - the mod allowing non-CSPF users to replace to alternate user.

p) PFACT - the mod installing local permanent file accounting changes.

q) PFCTL - a mod which inserts track length in sectors into catalog entry returned by CATLIST function.

r) PROTCT - the mod which installs protected permanent files (a partial installation).

s) Program OPS was transferred to MPLNOS.

Jeff Drummond installed the following changes:

a) CATAU2 - a mod which installs the CATALOG BR option.

b) DSDB - a resubmitted version of the local mod which installs our local B-display.

c) DSPMSG - a PSR to DSP repairing an unspecified coding error.

PROPOSED CHANGES TO THE SYSTEM

The ROUTE Command Under NOS - by T. J. Salo

The NOS ROUTE control statement will, as proposed by Don Mears' committee, become the primary means of releasing files to the queue. There are, however, a number of changes which must be made to the ROUTE control statement to implement the University of Minnesota's queue file systems. The proposed format of the ROUTE control statement is:

    ROUTE(lfn,p1,p2,...,pn)

where the following stock parameters will be retained:

DC = xx	Disposition code
	IN - input
	PR - any printer
	P2 - any 512 printer
	LQ - same as P2
	LR - any 580-12 printer
	LS - any 580-16 printer
	LT - any 580-20 printer
	SB - punch system binary
	PB - same as SB
	P8 - punch 80-column binary
	PU - punch coded
	PH - same as PU
	SC - rescind prior routing
DEF	Set deferred routing
EX = xx	External characteristics
	For print files:
	A6 - 64 character ASCII
	A9 - 96 character ASCII
	For punch files:
	ASCII
	026
	029
	SB
	80COL
FC = xx	Forms code
IC = xx	Internal characteristics (not really used)
	DIS - display code
	ASCII - ASCII
	BIN - Binary
REP = xx	Repeat count
SC = xx	Spacing code
TID = C	Route to central site

The following parameters will be added:

TID = BC	Route to central site
BIN = xxxx	Route to bin xxxx
TID = xx	Route to terminal xx
MID = xx	Route to machine xx
DAYFILE	Append dayfile to print file

The following stock parameters will be deleted (most with a diagnostic message):

EC = B4		48 character display code
EC = B6		63/64 character display code
FID		NOS/BE compatibility
FM		Implicit remote routing
FM = xx		Family
ID = xx		Local device selection
ID		Implicit central routing
PRI		NOS/BE compatibility
ST		NOS/BE compatibility
UN		Implicit remote routing
UN = xx		Route to user number xx

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RSB Upgrade - by K. C. Matthews

The RSB system request can be used by subsystems and SSJ= jobs to read anywhere in central memory. At UCC, RSB can also be used by users with the CSTP access word bit. We propose to allow validated RSB users to be able to read ECS also. This facility will be needed when we keep queue file information in ECS.

RSB is also used for reading data from subsystem or from the job control point area. These calls will be unaffected. The current RSB call is:

$$24/4HRSBP, 18/SQP, 18/STAT$$

STAT is a status word address. SQP is the subsystem queue priority from which we wish to read. SQP = 0 means a control point area read or a low core read. We propose to have SQP = -1 mean an ECS read.

For a central memory read, the status word format is:

$$12/0, 12/WC, 18/ADDR, 18/BUFF$$

WC is the word count to be read. ADDR is the absolute address in CM from which words are read. BUFF is the address of the program's buffer to receive the data. The WC parameter must be 100 B at most. For an ECS read, we propose the following status word:

$$6/0, 12/WC, 24/ADDR, 18/BUFF$$

This is just like the CM case except that a 24 bit ECS address must be specified.

A reply is set in the top 6 bits of the status word for RSB requests. A 40B in the top 6 bits means that the transfer was completed. A 20B is documented to mean that the sub-system was not present. For ECS reads, a 20B will mean that errors were detected during the ECS read. The ECS RSB function will be illegal when ECS is down. It is up to the user to check whether ECS is up or down before trying to call RSB.

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Upper/Lower Case Writeups - by M. Riviere

The writeup list options will have to be extended to include upper and lower case printers as possible output media.

The list options for writeup are complex and the best way to describe them is by expressing them in the form of a table.

PARAMETER USED IN WRITEUP CALL	PARAMETER USED IN INDEX	OUTPUT MEDIA	ACTION
PT=LP	TR	Any one	Lists first character of line (*). (Text character, if no blank, acts as printer carriage control)
	No TR (Default, Equivalent to Printer Formated	Any one	Lists first character of line to be used as printer carriage control
	LC	Any one	Removes case shift characters (List has only upper case characters)
	No LC (Default, Equivalent to Upper Case Only	Any one	Lists all characters (List has only upper case characters)
PT=TT	TR	Any one	Lists first character of line
	No TR	Any one	Remove first character of line (Printer carriage control)
	LC	Any one	Lists all characters (List has upper and lower case characters)
	No LC	Any one	Lists all characters (List has upper case only characters)
PT DEFAULT	TR	Terminal (Equivalent to PT=TT	Lists first character of line
		Output or local file (Equivalent to PT=LP	Lists first character of line (*) (Text character, if no blank, acts as printer carriage control)
	No TR	Terminal (Equivalent to PT=LP	Removes first character of line (Printer Carriage Control)
		Output or local file (Equivalent to PT=LP)	Lists first character of line to be used as printer carriage control
	LC	Terminal (Equivalent to PT=TT	Lists all characters (List has upper and lower case characters)
		Output or local file (Equivalent to PT=LP)	Removes case shift characters (List has upper case characters only)

PARAMETER USED IN WRITEUP CALL	PARAMETER USED IN INDEX	OUTPUT MEDIA	ACTION
	No LC	Terminal (Equivalent to PT=TT)	Lists all characters (List has upper case characters only)
		Output or local file (Equivalent to PT=LP)	Lists all characters (List has upper case characters only)
PT=AS	TR	Terminal (Equivalent to PT=TT)	List first character of line
		Local file (L=File name)	Remove first character of line � (Not used for printer carriage control)
	No TR	Terminal (Equivalent to PT=TT)	Remove first character of the line (Printer carriage control)
		Local file (L=File name)	List first character of the line to be used as printer carriage control
	LC	Terminal (Equivalent to PT=TT)	List all characters (List has upper and lower case characters)
		Local file (L=File name)	List all characters (List has upper and lower case characters)
	No LC	Terminal	List all characters (List has upper case characters only)
		Local file (L=File name)	List all characters (List has upper case characters only)

The PT Parameter used in the Writeup call statement indicates print type for the
writeup list (LP = Line Printer, TT = Terminal, AS = ASCII Printer). When not
specified, the print type is selected by Writeup according to the current output
media.

The TR and LC parameters used on the index entry are used to describe the writeup
file. The TR parameter means that the writeup is formated for terminal output,
in the sense that the first character of the line is not a printer carriage
control character. The LC parameter means that the writeup includes upper and
lower case characters, that is that case shift codes (76 and 74) are included in
the text.

Before going into a discussion of the new ASCII print option I would like to
suggest a modification to the current way in which writeup prints TR type files
on the printer (see items marked with (*) in the table). For this type of file
Writeup assumes that the first character of the line is a blank character and
lists it on the printer. A TR type of file which does not fit this requirement
can produce very bad results.

I would like to modify Writeup to leave a left margin of 10 characters when
listing TR type of files on the line printer. The extra margin will not exceed
the printer line size since the size of the lines of the TR type of files are
(or should be) no more than 70 characters. (Note: Writeup does not check for

line width on TR type of files). This change will make the lines marked with an (*) in the action field of the table to read as "lists line after a left margin".

Now, for the upper and lower case printer Writeup lists, I suggest including a new option for the PT parameter (PT = AS). This option and the action taken by Writeup for the AS type of lists are described in the table on the PT = AS section (**). The AS option will cause Writeup to produce upper and lower case Writeups from LC type files (as for PT = TT) and list them on the printer with the existing carriage control characters (as for PT = LP).

I suggest leaving up to the user to dispose the listed Writeup to the ASCII printer. This should be enforced by making the AS option for batch jobs dependent upon the existence of the L paramter on the Writeup statement. If no L parameter is specified when creating AS type Writeups, Writeup should end the job without any output and issue an error message.

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Move DTIME to the System - by T. J. Hoffmann

Due to the relatively high usage that DTIME has been enjoying (approximately 12000/month), I am proposing that it be moved from CALLPRG to the Library Tape.

This is to reduce the overhead induced by many calls to CALLPRG (similar to why UNPAGE was moved last summer).

SYSTEM MAINTENANCE: PEOPLE AND PROCEDURES

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

The following proposals were rejected or accepted:

a) Don Mears' proposal for ROUTE, DISPOSE and XMIT under NOS was accepted (see DSN 4, 5 p. 36).

b) RNH T and U options were approved (see DSN 4, 5 p. 39).

c) Tim Hoffmann's proposal to install a CPM function which returns the status of a removable device was rejected. We all felt that it was too soon to add enhancements of this nature to NOS when NOS does not work right yet.

All other news items resulting from this meeting are now so out-of-date that mentioning them here would be a disservice.

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Callprg and Library Tape Changes - by M. Riviere

In order to make the Callprg and Library Tape changes scheduled for March 28 fit within the spring quarter break, I will be advancing the change's date to March 26. Anyone that could have problems with the new scheduled date should let me know before Friday, May 24, and I will reschedule that particular change for March 28.

The Library Tape modifications will consist of the replacement of FORTRAN, and the MNF package (MNF, MNFCLIB and ZZZZZPP) by their future versions. SYSLIB will also be replaced by an updated version.

Among Callprg packages the changes will be the following:

John Strait will be updating ARCHIVE by making the future version current and the current version past.

Burt Johnson will be updating PLOT31 and TECKLIB by moving the future version of PLOT31 to current and the current to past and by making the past version of TECKLIB to become Fetch type. The TECKLIB modification is taking place in the Cyber and in the 6400.

The next Callprg and Library Tape modifications will be taking place on April 18. Modifications for that date should be submitted no later than noon April 6.

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One More Time - by R. A. Williams

We are currently working with Operations to formulate a definite policy with regard to 6400 console use. To assist in this effort we plan to gather data detailing the uses and extent of console time during 6400 operating hours. A blue notebook is located on top of the console and we request that any 6400 console use be logged here that takes place during 6400 operations (thus this includes the time on Saturday when the Cyber 74 is on system time).

As always, console use is to be avoided where possible and daytime (9 a.m. - 6 p.m.) use that is not necessary for system operations is allowed only in very special cases and is by permission only.

Thank you for your help.

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New Pack for Callprg and Writeup Files - by M. Riviere

The SP pack is no longer used for Callprg and Writeup files. All the SP files are now combined with the old STF pack files in a new single density pack, also called STF.

Since this change was scheduled and took place between DSN editions, it was not possible to announce it ahead of time.

I sent a memo about the pack's change to all the Writeup and Callprg file owners. I hope that the change did not cause much inconvenience to anyone that missed it.

From now on, Callprg index cards, Callprg procedure files, RFM calls, Catlists, etc. should be using the STF pack for the PN parameter.

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6400 Deadstart Dump Analysis (3/6 – 3/17) – by R. A. Williams

Date	Description	Tape
780306	TELEX aborted due to a minor power fluctuation.	N.A.
780307	The system came up late since a tape unit would not work. The cables had been stretched to allow a disk drive move to take place.	N.A.
780307	The scopes went blank. Jeff Drummond has isolated a hardware problem in one scope blank case and we are working with the CE's on it.	DDT-5
780308	One of the 6676 multiplexers (in this case the one located next to the newly positioned Cyber 74 I/O controllers) quit working. It was discovered that a wire had broken loose for unknown reasons.	Fixed
780308	The scopes blanked when the console was hit by a table that was being moved as part of the 172 work.	DDT-6
780309	The system came up late due to work on disk space problems and the 6676 multiplexer.	N.A.
780310	The scopes went blank. Only DSD had stopped. This is the dump Jeff analyzed.	DDT-4
780310	The scopes went blank due to a timing problem caused by ECS going down when a motor generator stopped as a result of electrical work.	N.A.
780311	The system came up late because the scopes were not working. They had gone down the day before when they shorted out while being used to diagnose a Cyber 74 scope problem.	N.A.
780314	The system came up late when the move of the console took longer than expected.	N.A.

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Cyber 74 Deadstart Dump Analysis From Sunday, 5 March, through Sunday, 19 March – by K. C. Matthews

Monday, 6 March

There were three level zero and three recovery deadstarts this day. The dumps were hard to interpret. We believe that our obscure hardware error was at fault. PPU programs seemed sometimes to end up with the wrong P register after a jump.

Tuesday, 7 March

There were three deadstarts today accompanied again by strange circumstances.

Wednesday, 8 March

11:52 (DD-5) The scopes went blank for unknown reasons.

Friday, 10 March

The machine was down for several hours because the display console was down.
The display console went down when a motor generator circuit breaker was
tripped, bringing down the system for a few moments.

Saturday, 11 March

The machine was down from 7:45 a.m. - 4:00 p.m. so that the engineers could
try to correct our mysterious problem.

Wednesday, 15 March

16:10 (DD-15) The system hung up. Analysis revealed that PP30 (1RO) was
wrecked inside. An exchange jump to word 1 had taken place also.

Thursday, 16 March

16:00 (DD-17) PFM hung while trying to purge a file on pack SYSTEM. The TRT
showed that the first track for the file was unreserved. The TRT could have
been damaged long before, and the problem only occurred when the file was
accessed.

Friday, 17 March

11:27 The drive for disk DN17 went bad. Fortunately, the pack was not
damaged; but a level zero was required.

15:12 (DD-4) EXPORT hung while some export cables were being moved.