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NOTICE OF CHANGES TO THE SYSTEM

NOS 460 Changes

The following changes will be effective on Thursday, 26 April.

One annoying aspect of the release 4 upgrade is that the deadstart panel setting for R4 is different from the R3 setting. Kevin Matthews alleviated this inconvenience by changing PRL, the deadstart preloader to accept either the R3 or the R4 panel setting.

Don Mears firmed up Decwriter processing in 110 in order to prevent 110 from hanging on an illegal operator request from the Decwriter.

Tim Hoffmann repaired a long-standing error in PFILES wherein a CHANGE command with either SS or UC specified would force write mode on the file.

Jeff Drummond altered program BLANK to write an EOF after load point whenever aborting an attempt to blank label a tape. This has the effect of erasing any fractional labels which may have been written. This is an important change because MAGNET/LMT become very confused when they encounter partial tape labels. Jeff also installed the NOS 485 version of the newly developed DSD R-display into NOS 460.

Brad Blasing installed some PSR code which allegedly prevents IAJ/CIO from hanging when encountering a negative FET pointer in the RA+2 file list. Brad also repaired the KCL MMF flag. The MMF flag should be true when we are running a multi-mainframe environment, i.e., a link device is defined. Additionally, Brad installed the long awaited usability enhancements to the SETASL and SEJSL commands (see DSN 5, 5 p. 35).

Steve Collins converted to NOS the extensive CPORT enhancements installed into KRONOS last month.

NOS 485 Changes

Tom Lanzatella converted the following changes.

FRSTTK - A mod to COMPSEI which installs a check for empty first track on entry.

IMSERR - A mod which ensures that all but SYOT jobs are aborted for calling IMS.

ISFPJ - The mod which adds the SID CMRDECK directive. This feature was changed slightly in conversion. The SID command remains the same. CDC installed new parameters SP and SJ which work almost like our old P and J options. Tom changed ISF so that SP and SJ work exactly like P and J. Additionally, the Release 4 CMS code which causes ISF to be unconditionally called after each LO deadstart was deleted. We found this to be impractical since we occasionally have to manipulate validation files before they become fast-attach. We will continue to use the DSD command in the IPRDECK to call ISF.

RECALL - A correction to lRO which could sometimes clear the FNT entry for a primary file even though the routine was recalling for a FNT full situation.

REQFIX - A change to SFP which causes SFP to return status if a file is present on a REQ request. This feature is used in local tape system enhancements.

SOQUIK - A change to LDS which causes console origin jobs to be scheduled the service priority.

TTYACC - The mod which installs the CPAK bit in the access word and which disallows access to tape from TXOT for all but CSOJ users.

OVJ029 - A change which ensures that OVJ handles default keypunch mode properly.

ISFONE - The mod which checks the current date against the last access date of the VALIDUM file. The operator is cued if the difference between the two dates is more than 24 hours.

Kevin Matthews installed a new version of GENMMF. The new version places the R4 ECS FNT in the same location as the R3 version.

Don Mears installed the following changes.

TXGN01 - A change to generalize TELEX subsystem.

TXGN04 - A change to generalize terminal types.

APLUM - The mod which installs the APLUM command.

BARROW - The mod which installs the BARROW terminal type.

BRIEF - The mod which installs the well-known BRIEF mode.

CHKPRT - The change which causes the LTDT idle loop address to be placed in TELEX low core.

DRPPOT - A mod which repairs a variety of dropped pot problems.

ECMD - The change which allows E to mean the same as ENQUIRE.

GAME - The mod which adds the GAME command.

HLPCMD - The change which installs the HELP command.

LIBCMD - The mod which changes the TELEX LIBRARY command to LIB in order to avoid confusion with the loader directive LIBRARY.

LOGIN - A change to TELEX which causes the TELEX user count to reflect only logged-in users.

MASTER - the mod which installs master user access capability.

MNFSYS - The mod which installs the MNF subsystem.

MONLOG - A change which repairs some small problem with monitor mode.

PASSYS - The change which installs the PASCAL subsystem.

PDPMUX - The mod which allows LTD to talk to a PDP-11.

POTPAK - A repair is TELEX usage of pack and unpack pots.

RECDUP - A change to TELEX which causes the RECOVER command to recover the duplex flag.

SNOSYS - The mod which installs the SNOBOL subsystem.

STSMOD - A change which adds CSET and MID to the STATUS report.

TLXMID - A change which makes TELEX dumps more readable.

TLXHDR - A change which insures that a subsystem and a file name appear in the output of a LIST or RUN command.

TLXHNG - A change which causes TLX to check the abort flag when waiting for an inactive terminal.

TLXSTS - Install the famous extended suspended mode commands.

TLXSUB - Repair misleading diagnostic in TELEX processing of the SUBMIT command.

TXACWD - A change which expends the number of accounting words sent to TELEX by lTA.

TXCDLT - A change which reduces the minimum number of characters per TELEX command to two.

TXDROP - A correction to RUN command processing in lTA.

TXDUTL - The change which reduces the TELEX default user time limit to 20B seconds.

TXD001 - Corrects minor driver problems in LTD.

TXFSCD - A change to speed up command input time.

TXJNAM - A change which causes the jobname to be included in the TELEX logoff message.

TXNULM - A mod which adds new messages for null command input to TELEX.

TXSW1 - Change to default to onsw 1 in TELEX so that users are always recovered after L3 deadstart.

TXXCOM - The mod which extends X.CCCCC to all subsystems.

USERS - Change the USER command to call a CPU program USERS when called.

WRITEUP - The mod which installs the Writeup command.

XEDCMD - The mod which installs the XEDIT command.

1TDCR - A correction which keeps 1TDT from ignoring characters during carriage return processing.

1TDEQV - A fix to 1TDT conversion of 63 to 64 character set.

1TDKLG - A change which causes 1TDT to inform operators when a 255G port is hung.

1TDMSG - A mod to 1TDT and TELEX which causes operators to be informed when channels are hung.

1TDOVF - A repair to overflow checking in 1TDT.

TELEU1 - A repair to TTADD macro address computation in TELEX.

SREMU2 - A fix which keeps low core from being bashed after a TELEX abort.

1TDU1 - A change to use MNCT symbol to compute delay in 1TDT.

1TDBEL - The mod which causes a bell at login.

1TOHNG - A fix to prevent 1TO write of zero words.

HNGPRT - Fix assorted TELEX hung port problems.

BASSYS - A change which causes the BASIC compiler to be called directly by TELEX.

TLXDDT - The direct data transfer facility.

TID - Resubmitted to cause DSP to write EOI after trailing banner.

Don also provided changes to DDF rendering the routine functional on R4.

Tim Hoffmann installed the following changes.

ACCBIT - Installs COPE, CTLX, CNTX and CSTF.

CAC2 - Installs the CAC2 AW bit.

TLXFL - Installs time-sharing field length.

SUBUSR - Installs the /USER SUBMIT directives.

NODRP - Installs the NODROP command.

S02498\$ - A PSR to make WRITECW set a correct PRU count.

LFMSH - Provide ASSIGN,SH... facility.

S02480\$ - A PSR to correct DSDI when no CEJ/MEJ is present on the dump file.

PL - Installs the PL parameter on PFILES and CATLIST.

Jeff Drummond installed the following changes.

BLNKUL - A change to BLANK which causes BLANK to erase any partially written labels after an aborted blank label attempt.

DSDB - The mod which installs our DSD B-display.

DSDR - The mod which installs over DSD R-display.

SYSMSA - A mod to reformat and intensify system control point messages.

SUBSYS - The mod which installs our local subsystems.

Brad Blasing installed the following changes.

BINW - The mod which installs bin number processing into CPM.

S02513\$ - A PSR to correct LAJ buffer flushing.

S02510\$ - A PSR to correct lines per page when titles are printed in DAYFILE.

LEVEL - A change to correct level numbers in the VER70 and VER170 macros.

SETSL - The converted version of the above-mentioned change to SETASL and SETJSL.

#### PROPOSED CHANGES TO THE SYSTEM

Just When You Thought It Was Safe To Come To A System Meeting . . .  
XMIT/SEND IV, or is it V. - by R. A. Williams

"UCC Help Line, may I help you?"

"Yes, I want to submit a job to send a file to the Cyber 74 with output routed to site EA from the 6400."

"Do you want to ASEND a permanent file or AROUTE an output file?"

"I want to use XMIT/SEND."

"XMIT's gone. You can use SEND, ASEND, AROUTE, ROUTE, SUBMIT, or shared packs."

"If I want to print I use ROUTE?"

"No, AROUTE."

"But I heard AROUTE's gone away."

"Yes, on the Cyber."

"Which Cyber?"

"Both, but not the 6400."

"Maybe I'll just list the file on my Decwriter. By the way, what's the default keypunch mode these days?"

"Where's the default keypunch mode what, you mean? You see on the West Bank...."

Of course, we're being facetious? But in fact the situation regarding shipment of files and jobs between machines is somewhat puzzling. To reduce this confusion I propose that the current ASEND/SEND distinction be eliminated by consolidating the two functions into one package. This means that the method used to transfer permanent files from the Cyber 74 or 172 to the 6400 would be identical to the transfer from 6400 to Cyber. DAYFILE's returned and validation needed (CXMT) on receiving machine as well as parameters would be standardized.

Following this change, SUBMIT will transfer jobs from any machine to any other, AROUTE will move output files from the 6400 to the Cyber 74, ROUTE will place output files in the Cyber queue from the Cyber 74 or 172, and SEND will transmit permanent files between the 6400 and either Cyber. Following approval of this proposal a complete newsletter article and writeup will be developed. Any questions?

//////////

Master User: Your Wish Is My Command Control Statement - by R. A. Williams

My pencil has been conspicuously absent from these hallowed pages for some time. I have not been idle. This DSN includes a plethora of proposals (see the other one regarding SEND elsewhere in this issue) that have come to mind during the past few months.

The current situation regarding the use of ACCOUNT, or USER, cards is unconscionable. The present scheme calls for validation of master users (those with stars in their numbers - asterisks in the IDs) for CACC. In this way they can supervise all users within their jurisdiction by ACCOUNTing over to the subordinate number and purging all files or taking care of whatever business they have. Unfortunately CACC allows one to ACCOUNT anywhere so even if a user is not subordinate, a master user can wreak havoc (rape, pillage, plunder) on a user number that he or she has no business with.

While true master users have credentials beyond reproach, they might make a typing error or their user number might leak to some unscrupulous character, resulting in a discomfoting situation.

In view of this I propose doing what was mentioned eons ago, when the CMUC (master user) access word bit was born. As you all recall a proposal at that time, relating to the system consolidation of 6400 and Cyber (what a clever plan) suggested that CTPC (TELEX privileged commands, like MONITOR and LOG-OFF) be applicable only to subordinates, allowing implementation of the revolutionary master user concept. A conflict developed as some staff indicated the need existed to monitor any user from certain staff numbers (why?) despite their lack of master user (star) qualities.

A clever, resourceful fellow resolved the conflict by suggesting that a new bit (CMUC) be installed on which several master user permissions would be keyed. The first would be this MONITOR, LOGOFF, etc., of subordinates with others to follow. CTPC



would remain unchanged and master users would be given the new bit. All agreed, lived happily ever after, and anxiously awaited the addition of new powers to CMUC.

Now years later, I propose that CACC remain as is. Master users should lose the CACC permission and the CMUC they already hold should allow them to ACCOUNT (or USER - sure, two forms for the same function is perfectly sensible) to subordinate user numbers, assuming CAC2 isn't set on the subordinate.

Now that the ball is rolling, perhaps others will join in coming up with new uses for CMUC (CPWC perhaps).

//////////

The State of CONTROL (or, Who's in Control of the State) - by B. E. Blasing

Here is a summary of our local modifications to CONTROL:

#### Control Cards

- 1) ECS(nnnn) - request ECS
- 2) GOFO(stmt) - forward only GOTO
- 3) Z. - quick form of CALL
- 4) PRINT(exp)comments - same as DISPLAY, but goes to OUTPUT.

#### Variables and Functions

- 1) FL - sets or returns the jobs RFL value.
- 2) TL - sets or returns the job step time limit.  
These previous two can be set via SET(XX=exp).
- 3) CET - returns current elapsed CPU time.
- 4) MMF - returns boolean multi-mainframe status.
- 5) MID - returns machine ID in display code.
- 6) PD,PT,DW - returns packed date, packed time, day of week.
- 7) SYSTIME,ENGR,DEBUG,LOWRATE - returns boolean values for these various statuses.
- 8) LIT(string) - returns literal value of the string of display code characters, right-adjusted, zero filled.
- 9) ID(string1,string2) - returns true if string1 = string2.
- 10) SIZE(lfn) - returns size in PRU's of a local file.
- 11) PFILE(pfn,attribute) - returns value of attribute of a permanent file.

Now, when CDC introduced CCL, this is what happened. SET and DISPLAY moved from CONTROL to CCL, and IF remained in CONTROL. IFE was introduced in CCL as the counterpart to IF. CCL also introduces WHILE, SKIP, etc. Here is what I propose to do with out local mods to CONTROL:

#### Control Cards

- 1) ECS - leave in CONTROL since we are using our ECS instead of CDC's.
- 2) GOFO - leave in CONTROL.
- 3) Z. - Z is moving to NOTE/ENTER.
- 4) PRINT - move this to CCL since DISPLAY is now there.

#### Variables and Functions

Since SET and DISPLAY are now in CCL, but IF remains in CONTROL, I propose to install all the expression/functions mods back into CONTROL and duplicate the following ones into CCL:

MID, DW.  
MMF, SYSTIME, ENGR, DEBUG, LOWRATE.  
TL, CET.  
PFILE(), SIZE().  
SET(FL=exp)

PD and PT will not be in CCL since it already has a variable called TIME which is similar to PT and I propose to add one called DATE which would return the date as: mmdd.

LIT() and ID() will not be moved to CCL since it already has these features. The ability to set your time limit with the SET command will not be converted to CCL since we are de-emphasizing the use of time limit.

//////////

For the Next 60 Seconds... - by J. J. Drummond

I propose removing the TEST processor from the TAPES utility under NOS (460 & 485). Currently, in order to get a tape that's in the UCC tape library tested, the user is required to do the following (according to WRITEUP(TAPEUSE) or "Guide to Magnetic Tape Usage"):

- 1) Send a signed "request to have tape tested" slip to the tape librarian.
- 2) Execute a TAPES(TEST,VSN=SNnnnn) request.

I would like to remove the second step of this procedure for the following reasons:

- 1) It is redundant to require two actions to get a tape tested, especially in view of the fact that operations only requires the signed slip. The two separate mechanisms are confusing to users and pain to maintain from an operations standpoint.
- 2) It makes it more difficult to have library tapes tested than transient tapes.
- 3) The TEST processor in TAPES disables access to the tape until the tape is tested (this makes it difficult to access the tape if the user changes his/her mind and decides not to send the signed slip to the tape librarian).
- 4) The TEST processor is used very rarely.

//////////

LIMITS and "Where Are We?" - by T. J. Hoffmann

I would like to add the machine ID to the LIMITS output. Currently, it is possible to have three different reports for the same user number, but no indication of what machines generated the report. I would also extend this to any of the other MODVAL Reports which contain header information.

//////////

LIMITS and L= - by T. J. Hoffmann

Following from MJF's suggestion, I would like to add an L= parameter to LIMITS for Release 4. It would make it alot easier to XEDIT the output to find certain values. Currently, one must ASSIGN,MS,OUTPUT. LIMITS. RENAME,X=OUTPUT. XEDIT,X. to find out details.



New Access Word Bits - by G. Jensen

With raw dayfile information there is no way of determining:

- 1) SRU rates
- 2) Connect time rates
- 3) Whether user is student or not.

This information will be needed in order to implement profile/project control, therefore:

- 1) We need 3 bits in the access word to be set. ON = external rate

AW = CSRC        (SRU)  
AW = CTRC        (Connect time)  
AW = CSTD        (Student bit)

- 2) And an Account Day file message with some rate code reflecting connect time and SRU rate

.ABRC,  $x_1, x_2$ .  
RC = Rate Code  
 $x_1$  = 0 internal SRU rate  
      1 external SRU rate  
 $x_2$  = 0 internal connect rate  
      1 external connect rate

The student access bit will be used for deleting student numbers after quarter or at the end of year, maybe?

//////////

UC - by J. Larsen

This proposal concerns extending the usefulness of the "UC" parameter on the CATLIST control card. When the user enters the following control card:

'CATLIST,UC=XXX\*\*\*\*.'

I suggest the UC parameter only try to match the non-starred portion of the user control word. This will allow general categories to be split up into several specific types of the general category. If no stars are used the UC word should be matched as it is now.

#### SYSTEM MAINTENANCE: People and Procedures

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

The following proposals were rejected or accepted.

Tim Hoffmann's proposal to install an archived file report generator was approved with the stipulation that the name be changed to ARCLIST and that a UN parameter be included in the parameter string.

Tim's proposal to add a CPM PACKINFO request was approved.

Larry Liddiard announced that a solution had been reached to the office move problem. A description of the new office/terminal room/conference room layout is available from TWL on request.

//////////

Callprg and Library Tape News - by M. Riviere

On April 19, Steve Lai changed the Callprg index entry for GPSS in order to remove the field length parameter used by that package. The entry used an MF parameter which was smaller than the program's size.

Also on April 19, Tim Hoffmann introduced ARCLIST. ARCLIST, a utility used for listing information about archived files was announced in the previous issue of the DSN. Documentation about ARCLIST is available on Writeup.

Another modification that also took place on April 19 was the introduction of the Fetch type package FORSIM, requested by Michael Frisch. FORSIM is a simulation package to be used for the solution of partial and ordinary differential equations.

On April 24, Steve Reisman modified the Callprg index introducing several CDC products for level 485. Steve set up as future packages the ones that have a current version already available on level 460 (CDCSTXT, COBOL, COBOL5, COPYCL, COPY8P, CRM, DDL, ESMATE, FILE, FORM IOTEXT, IXGEN, QU, SISTAT, SMTEXT, SORTMRG, SRTLIB and SYMPL) and as current the ones not used on the current level (CRMEP, C5TDMP, FLSTAT, FMS, MIPDIS, and MIPGEN). The newly introduced current products are control card callable. Also on April 24, Steve removed the index entry for an old and unused version of S2KIND.

On April 24, the CDC 6400 Library Tape was modified by request of Steve Reisman. The modification consisted of the introduction of COBERTX, a COBOL4 text, as a System's text. The version of COBERTX is the same one that is used on the Cybers.

On May 1, the 6400 Callprg index will be modified by request of Bill Sackett, to introduce RWF. RWF is a local file utility and it is requested to be control card callable.

The next set of Callprg and Library Tape modifications will be taking place on May 15. Modifications for that date should be submitted by noon on May 3.

//////////

Cyber 74/172 Deadstart Analysis from Monday, 9 April through Sunday, 22 April -  
by K. C. Matthews

Friday, 13 April

16:14 (DD6)

Cyber 172

The PP program PFM hung while attempting to purge a permanent file. The permanent files tracks eventually linked into an unreserved track. We have no idea how the file got into this state.

19:11

Cyber 74

The Cyber 74 hung with a CPUMTR error exit. Deadstart attempts were unsuccessful, and tests revealed a solid memory error. The problem was fixed by the engineers.

Sunday, 15 April

The Cyber 74 was late coming up because we thought that there was a hardware problem. It seems that one version of our CUI diagnostic has an error in it which generates a MODE 1 exit. This error has been in at least since we have been running NOS. It is not in the version UMCUI which runs periodically as part of our maintenance diagnostics.

Anyway, the machine was brought up at 19:40 after Bob Williams and Murray DesRosier had worked quite a while to uncover the CUI error.

When both machines were up, there was a problem with the RESEXES fast attach file. We are not sure when the problem began, but attempts to get a good working version of RESEXES by changing things in memory failed. Finally at 21:20 both the 172 and 74 were deadstarted. This cleared up the fast attach problem.

Thursday, 19 April

12:25

Cyber 74

Numerous disk errors appeared on disk DN16. The system could not even read the pack label. A level 0 was performed with the pack moved to the UCC drive.

//////////

6400 Deadstart Dump Analysis (4/9 - 4/22) - by R. A. Williams

<u>Date</u>	<u>Description</u>	<u>Tape</u>
790412	844 disk unit 3 malfunctioned, causing downtime near the end of this operating day and delayed beginning of operations the following day.	Fixed

//////////

TELEX and TELEX PDP11 Crash Analysis (4/7 to 4/20) - by D. W. Mears

4/10 14:10 Channel 4 on the Cyber 74 (the TELEX PDP11 channel) hung empty due to a link malfunction. The PDP11 was reloaded after the channel was disconnected although the PDP11 was probably OK. The operators have since been given better instructions on how to handle these link failures. The link problem has not reoccurred since and the diagnostics do not fail on this link.

//////////

Plotter PDP11 Crash Analysis (4/7 to 4/20) - by D. W. Mears

There is a problem with the plotter where it drops every other 1/200 inch raster dot when paper movement stops and starts. On 4/19 ICD was changed to attempt to keep the paper moving. Field engineering continues to investigate the problem.

There has been a problem with people getting plot files containing other people's input files and other random data. This was caused by an error in QFM which created a file with no EOI sector--when PLOT31 requested QFM to assign a file to a queue device. This was fixed on 4/22.

There were 14 reloads after the plotter went not ready.

There were 8 crashes where the interrupt vectors were clobbered.

There were 4 reloads after plots were RERUN or ENDED.

There was 1 reload after the Decwriter was set to the wrong speed.

There was 1 reload after BATCHIO went down.

There were 2 crashes caused by junk plot files. I have a fix for this but have not had a chance to put it in.