TO: Distribution

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SUBJECT: Installation of MSS 21.3 and 21.3a

The hardcore systems MSS 21.3 and MSS 21.3a were combined and
installed at 15:24 on Thursday, November 15,1973. These systems
contained a partial change for MTS 500 support: the addition of APL
mode to the TTY DIM: a new segment needed to support the new PL/I
version of the Basic compiler: a new procedure for handling certain
illegal procedure faults; the addition of multiple interrupt cell
assignment checking: a temporary change to trace tty events in order
to find a 355 problem; and bug fixes in the area package, IMP DIM,
Network Control Program, and segments syserr_real, backup_load,
wired_fim, page_fault and pxss. The hardcore system libraries were
updated at 09:40 on Friday, November 16,1973.

I. System Change Log

Change #   Change

1177   Bug fixes for 1) pd rethreading problem (page_fault), 2)
            set_proc_required crashes (pxss), 3) set cpu timer using
            real_cpu_time verses virtual (pxss), and 4) allowing
            deac_proc changes for the Initializer wait fix.

1178   Addition of new error_table_ codes for the flagging of the
            deletion of cacls.

I. System Change Log (continued)

Change #	Change
1179	Addition of a new segment consisting of a vector of pointers to operator segments to be used by Basic.
1180	Addition of a new procedure (illegal_procedure) which gets called when "other illegal procedure" type IPR faults occur. This procedure will check to see if the IPR is one of the EIS generated IPR's which we want to ignore and if so ignores it by patching the SCU data. Fix signalling of illegal_opcode and illegal_modifier.
1181	Have scs_init detect multiple assignments of interrupt cells and attempts at assigning interrupt cells numbered 32 or greater which do not exist.
1182	Fix the syserr_io_lock bug in syserr_real (i.e. use stacq verses stz).
1183	Include MTS-500 support in Multics Initialization. Fix iom_manager bug which crashes the system when receiving system fault interrupts.
1184	Add new mode to TTY DIM for APL by adding "nndlquit" which controls automatic resetread and automatic typing of a new line upon the quit key being pressed.
1185	Fix bugs and improve performance in IMP DIM and Network Control Program.
1186	Allow 256k areas to work properly.
1187	Fix bug in pxss preventing 2-cou operation.
1188	Provide for the saving and restoring of EIS pointers and links while handling connect and timer runout faults.
1189	Allow 256k segments to be reloaded by means of a temporary kludge.
1190	Implement a change to trace tty events in an attempt to locate a 355 problem.

II. Segment Change Log

Segment Name	Bound Segment	Change #
alloc_.pl1	bound_sss_active_	R 1186
area_.pl1	bound_sss_active_	R 1186
backup_load.pl1	bound_reloader_	R 1189
bootstrap1.alm	-	R 1183,1190
dn355.pl1	bound_355_wired	R 1190
error_table_.et	-	R 1178
fault_error.alm	bound_error_active	R 1180
flm.alm	-	R 1180
freen_.pl1	bound_sss_active_	R 1186
hcs_.mexp	-	R 1180
illegal_procedure.pl1	bound_error_wired	A 1180
imp_data.alm	-	R 1185
imp_dcm_init.pl1	bound_imp_dim_	R 1185
imp_input_processor.pl1	bound_imp_status	R 1185
imp_read.pl1	bound_imp_dim_	R 1185
imp_status.pl1	bound_imp_status	R 1185
imp_status_driver.loc	bound_imp_status	R 1185
iom_data_init.pl1	bound_temp_1	R 1183
iom_manager.alm	bound_iom_wired	R 1183
ncp_.pl1	bound_network0_	R 1185
ncp_main_.pl1	bound_network0_	R 1185
ncp_tbop_.pl1	bound_network0_	R 1185
net_db_.alm	-	R 1185
operator_pointers_.alm	-	A 1179
page_fault.alm	bound_page_control	R 1177
pds.alm	-	R 1180
pxss.alm	-	R 1177,1188
scs_init.pl1	bound_temp_1	R 1181
syserr_real.pl1	bound_error_wired	R 1182
system_trace.pl1	bound_iom_wired	A 1190
tape_checksum_.alm	bound_init_1	R 1183
tape_checksum_.alm	bound_tape_	R 1183
tape_io.pl1	-	R 1183
tape_reader.alm	bound_init_1	D 1183
tape_reader.pl1	bound_init_1	A 1183
trace_init.pl1	bound_temp_1	R 1190
tty_ctl.loc	-	R 1184
tty_index.pl1	bound_tty_active	R 1184
tty_inter.pl1	bound_iom_wired	R 1190
wired_flm.alm	-	R 1188
wired_utility_.alm	bound_sss_wired_	R 1190

II. Segment Change Log (continued)

Segment Name	Change #

Include Files

equ.incl.loc	R 1184
iom_data.incl.alm	R 1183
slt_init.incl.alm	R 1183
slt_template.incl.alm	R 1183
tape_record.incl.pl1	A 1183
tty.incl.pl1	R 1184,1190

Bind Files

bound_error_wired.bind	R 1180
bound_init_1.bind	R 1183
bound_iom_wired.bind	R 1183
bound_iom_wired.bind	R 1190

III. Bound Segment Change Log

Bound Segment	Change	
bound_355_wired	Replaced	dn355
bound_error_active	Replaced	fault_error
bound_error_wired	Added	illegal_procedure
	Replaced	syserr_real
bound_imp_dim_	Replaced	imp_dcm_init
		imp_read
bound_imp_status	Replaced	imp_input_processor
		imp_status
		imp_status_driver
bound_init_1	Added	tape_reader
	Replaced	tape_checksum_
	Deleted	tape_reader
bound_iom_wired	Added	system_trace
	Replaced	iom_manager
		tty_inter
bound_network0_	Replaced	ncp_
		ncp_main_
		ncp_tbop_

III. Bound Segment Change Log (continued)

Bound Segment	Change
bound_page_control	Replaced page_fault
bound_reloader_	Replaced backup_load
bound_sss_active_	Replaced alloc_ area_ freen_
bound_sss_wired_	Replaced wired_utility_
bound_tape_	Replaced tape_checksum_
bound_temp_1	Replaced iom_data_init scs_init trace_init
bound_tty_active	Replaced tty_index

IV. Header Change Log

Change #1179 added the segment operator_pointers_; #1180 added the name illegal_procedure to the entry for bound_error_wired; and #1190 added the name system_trace to the entry for bound_iom_wired and added a fabricate entry for a segment called system_trace_seg.