TO: Distribution

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SUBJECT: Instructions for operating the Datanet-355

This MOSN obsoletes MOSN-217.

This document provides the information necessary to run the Datanet-355.

Information is presented in two sections, <u>switch settings</u> and <u>operational</u>

<u>data.</u>

Switch Settings

There are four places where switches must be set to enable the 355 to run

correctly. The first is the low address memory on the 645. The port to which

the 355 is attached on this memory must be enabled.

The next place where switches must be set is on the LSLA. There is an area

on the LSLA maintenance panel labeled "CONFIGURATION SECTION". Here, the

TEST/NORMAL switch should be set to NORMAL, the 2400/4800 switch should be

set to 4800, and the SHORT/LONG switch should be set to LONG.

Attached to the 355 is a console which must be powered up and in the online

mode.

The final place where switches must be set is on the 355 itself. The 355

maintenance panel is divided into 4 sections. The uppermost of which is

where the switches of interest are all located. First, there 4 sets of switches,

one set for each memory to which the 355 may be connected. If the low-order

645 memory is memory C, the port enable switch for port A must be enabled

(up) while the system initialize and interlace switches for Port A must be

disabled (down). If the low-order 645 memory is D, the same switch settings

apply for port B while port C switches are to be set in the same way if the

memory is E. Port D on the 355 is not currently attached to anything. Next,

the 645 mailbox address must be set in the switches to 5600 octal and the

interrupt cell must be set to 16 octal. Make sure that the memory size switches

(there are four of them) are all set to 128K. What follows now is a list of

remaining switches and their settings:

DISABLE MEMORY TIMER	DOWN
DISABLE MEMORY WRITE	DOWN
RESTRICTED ADDRESSING	DOWN
MEMORY PROTECT	DOWN
DISABLE POWER FAULTS	UP
8K OFFSET	DOWN
DISABLE ELAPSED TIMER	DOWN
DISABLE ALARM	DOWN
TEST	UP

Operation of the 355

When it is desired to bring up Multics, the 355 must be loaded first. This is done by running a BOS command called "LD355". This must be done before typing the boot command. The LD355 command will initialize and load the 355. If there are no problems with the load, the message "BOOT SUCCESSFUL" will be typed out on the BOS console. If there are problems, there are several messages which might be typed out on the BOS console. If the message

"ILL MEM CMD. MAKE SURE MEMORY PORT NUMBER 5 FOR 355 IS ENABLED"

is typed out, you have forgotten to enable the 355 port on the low address memory. If the message

"NO RESPONSE FROM 355"

is typed out, check the console which is attached directly to the 355. If it is powered off make sure it is powered up and in the online mode and try again. If it is powered up, and a check of the configuration information specified above finds no error, a member of the Multics staff should be notified. If the message

"355 REPORTS ERROR IN READING 355 CORE IMAGE"

is printed out, try the LD355 command two more times. If this message continues to print out, check the configuration and if it is ok, notify FED that the 355 has apparent ICA (inter computer adapter) problems. If the message

"CONFIGURATION ERROR REPORTED BY 355 BOOTLOADER"

prints out, you have made an error in the configuration setup. If the

message

"CONFIGURATION ERROR REPORTED BY 355 INITIALIZATION"

is printed out, go to the 355 console and there should be a description of

what the problem is printed out on the console. If the message

"D355 CONFIGURATION CARD NOT FOUND"

is printed out, check the configuration deck for the presence of the D355

card. If the message

"BAD PORT NUMBER ON D355 CONFIGURATION CARD"

or

"BAD CELL NUMBER ON D355 CONFIGURATION CARD"

is printed out, check the contents of the port and interrupt cell fields on

the D355 configuration card for correctness. Finally, if the message

"EMERGENCY INTERRUPT FROM 355"

is printed out, check the 355 console for a configuration error message and

check the configuration check list described above for correctness. If every-

thing appears to be ok, try again and if the problem persists, contact a member

of the Multics staff.

After the 355 is loaded successfully, Multics may be bootloaded and operations

will proceed as normal. If there are any other configuration conflicts,

appropriate self-explanatory messages will be printed out on the BOS console.

If for some reason the 355 should die, the message

"EMERGENCY INTERRUPT FROM 355"

should be printed out on the BOS console before Multics returns to BOS.
In this case, the 355 should be dumped using the BOS command "DUMP3".
This command will dump the contents of 355 memory on the printer. In
addition, the contents of the segment "tty_buf" should be dumped to allow
Multics staff personnel to determine why the crash occurred (this in addition
to whatever segments are normally dumped after a crash). If for some reason
the 355 appears to be down, although no message has been printed, this may
be determined by going to the LSLA configuration panel and examining the two
lights labeled "SYN SRH" and "RCV OFF". If these lights are on solidly, the
355 is down and should be dumped as described above.