MULTICS TASK REPORT   MTR-038

DATE: April 19, 1974

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SUBJECT: STATUS OF ON-LINE T&D PROJECT

On April 1, 2, and 3 a series of meetings was held concerning the design of on-line T&D for Multics. The following items were discussed at these meetings:

1.   The ideas concerning the use of multiple processes and the message coordinator were scrapped in favor of a simplified scheme whereby separate processes, each with its own terminal, will be used for each test. If practical, this scheme will be extended to allow multiplexing several tests in one process, but no provisions will be made to allow more than one terminal per process. The software for this scheme will be developed in Phoenix.

2.   A means must be provided to allow synchronization of typewriter I/O with the test in progress. The usual write-behind is not acceptable. A change to the TTY DIM will be designed and coded at CISL to allow this synchronization. An order call will be provided to set a switch causing an IPC event to be sent after the termination of each message sent from the DataNet 355 to the typewriter. This order call will also return the event channel ID to be used in waiting for this event.

3.   CISL agreed to look into the problems associated with running magnetic tape through the I/O Interfacer. A separate tape multiplexer with an interface similar to that of the I/O Inter-facer will probably be designed and implemented. A fix to MTS500 firmware is needed before any implementation of tapes using the I/O Interfacer can be safely installed.

4.   CISL will provide a mechanism to allow T&D to take over the operator's console. The logging mechanism will be used to deliver operator's console messages to the system control process while T&D is being run. Part of this mechanism has already been designed. Some changes to the system control process are still needed.

5.   T&D may need a facility to allow them to get temporary control if a process terminates (in order to wrap up). It is hoped that the I/O Assignment Module invoked through the I/O Interfacer will meet this need. Phoenix will have to prove the need for any other facility.

6. A combination of a special process overseer and special search rules will be used to prevent misuse of a POLTS process. This facility will be designed and coded at CISL.

7. CISL must provide a means for T&D programs to access printer train images. This will probably be easy once the printer DCM is recoded to use the I/O Interfacer.

8. T&D must issue special controller commands to the URMPC. Since this cannot be permitted to the normal I/O Interfacer user, a privileged connect entry will be provided by CISL.

9. In order to meet schedules, it is hoped that CISL will have its development machine in time to facilitate integration and checkout of the POLTS system.

TASK DESCRIPTION	PERSONNEL	START	FINISH	M-W	CHANGES-STATUS
Implement POLTS overseer	Silver	FW 4-18	FW 4-18	1	
Specify changes to PRPH cards	Morris	FW 4-10	FW 4-10	1	Done, MTB published, (MOH needs update)
Code PRPH card changes	Morris	FW 4-11	FW 4-13	2	Done
Checkout PRPH card changes	Morris	FW 4-11	FW 4-15	1	Done
Write detailed spec for I/O interfacer	Morris	FW 4-11	FW 4-13	3	Done
Code iom_manager changes for I/O interfacer	Morris	FW 4-13	FW 4-13	1	Done
Code I/O interfacer	Morris	FW 4-18	FW 4-20	3	
Modify printer DCM to checkout I/O interfacer	Silver	FW 4-20	FW 4-21	2	
Design core management for I/O Interfacer	Greenberg Morris Silver	FW 4-16	FW 4-17	1	In progress
Implement and integrate core management	Greenberg Morris	FW 4-18	FW 4-22	2	
Checkout I/O interfacer	Morris	FW 4-22	FW 4-25	4	
Integrate I/O interfacer with T&D	Morris Silver T&D-group	FW 4-26	FW 4-33	8	To be done on CISL machine
Implement TTYDIM modification to send wakeup upon output completion	Snyder	FW 4-19	FW 4-20	2	

TASK DESCRIPTION	PERSONNEL	START	FINISH	M-W	CHANGES-STATUS
Analyze Operator Console DIM interaction with I/O interfacer	Silver Morris	FW 4-17	FW 4-17	1	
Modify Operator Console DIM mechanism	Silver	FW 4-18	FW 4-23	4	
Analyze tape DCM interaction with I/O interfacer, design replacement	Morris Silver	FW 4-16	FW 4-19	3	In progress
Implement tape multiplexor for TDCM replacement	Morris Silver	FW 4-28	FW 4-39	6	Vacation in middle, lower priority to keep above tasks on schedule
Design writearound to simulate TDCM calls	Silver	FW 4-28	FW 4-30	3	
Implement and integrate TDCM writearound	Silver	FW 4-31	FW 4-39	8	