

DATE: September 25, 1973
TO: Distribution
FROM: J. W. Gintell
SUBJECT: Disk/Tape Software Project

Progress on software checkout of BOS and Multics modifications for the MTS500 is considerable in spite of several diversions by Noel for emergencies in other areas. All of BOS except for the code to perform SAVE and RESTOR has been completed and made operational, the SAVE/RESTOR portion is being coded now. All of Multics has been converted to run with the MTS500; the Multics Standard Tape DSM has not yet been modified to take advantage of the MTS500. We are awaiting a decision from the Multics Software Review Board to determine whether we can increase the standard record length as we had planned.

As soon as BOS has been completed, a new BOS can be installed and this new SAVE/RESTOR can then be used on Service to help insure that it and the hardware is bugfree and also to speed up the operation of the SAVE every morning. (Initially to be safe, SAVE's should be alternately done on the MTS500 and MTS400 subsystems.) As soon as the Multics software has been completed it should be used on the development machine for extra seasoning. All of this software should be installed as soon as possible because it has been modified for the MTS400's as well so that we would have only one version of each tape software program.

Dual channel disk software has been completed (static configuration only) and has been put in operation in a special system in Phoenix for the last month. It also will run with a two dual channel controller configuration.

Modifications to the DSS270 software are being made to run a DSS190 so that we can meet the 32 drive 190 requirements. The system will be configured into two separate DSS190 subsystems, each with its own MPC (two MPC's are needed for 32 drives) and the second subsystem will appear in CONFIG cards and messages to be a DSS270 subsystem. This means that Multics will no longer support a DSS270 configuration.

Modification to BOS to support the DSS191 subsystem is progressing. This was a significant change because the DSS191 drive contains more sectors than could fit into the 18 bit field allocated in BOS for it. The changes to Multics are simple and will be made after the BOS modifications are complete.

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All three of these changes are partially overlapping and will have to be integrated at completion. This integration is being postponed to allow for any of the frequently changing special requirements that change the relative priorities in this project.

TASK DESCRIPTION	PERSONNEL	START	FINISH	M-M	CHANGES-STATUS
Design and code BOS iom loader and LOADDM	Morris			13	Done
Test MTS-500 hardware with TSTCHN	Morris			12	Continuing task
Checkout iom loader and LOADDM	Morris		IFW 3-35	12	Done
Design and code BOS density selection mechanism	Morris			12	Done
Modify TAPED,LABEL,PRINT & BOOT for new mechanism	Morris		IFW 3-35 IFW 3-38	14	Done
Modify tape writing facility in DUMP	Morris		IFW 3-33	12	Recode done, checkout needed
Design changes to NTAPE package (incl large records (8K))	Morris		IFW 3-34 IFW 3-35 IFW 3-37	14	Done
Modify NTAPE package, SAVE, RESTOR, & CORE	Morris		IFW 3-35 IFW 3-36 IFW 3-39 IFW 3-40	12	
Modify LOADDM,SETUP,UTIL for 24-bit device address for 191's	Morris		IFW 3-33 IFW 3-33	14	Done
Modify DUMP, PATCH, & APND for 24-bit	Morris		IFW 3-32 IFW 3-33 IFW 3-33	12	Done
Modify SAVE, RESTOR, CORE, TEST, & NTAPE for 24-bit address	Morris		IFW 3-34 IFW 3-35 IFW 3-40	14	Integrated with MTS-500 changes
Modify rest of BOS for 24-bit address	Morris		IFW 3-36	12	Done
Activate D191 code in BOS	Morris		IFW 3-41	12	Remove comments and reassemble all modules

PROJECT Disk and Tape software AREA Enhancements

TASK DESCRIPTION	PERSONNEL	START	FINISH	M-M	CHANGES-STATUS
Checkout DSS191 in Phoenix	Morris	EM 3-42	EM 3-42	1	
Changes to Bootstrap1 for MTS-500, incl var record length	Morris	EM 3-32	EM 3-37	15	Done
Design and code tape_reader changes	Morris	EM 3-33	EM 3-35	1	In progress
Design and code tape_io changes	Morris	EM 3-33	EM 3-35	1	Done
Integrate and checkout tape_reader and tape_io	Morris	EM 3-35	EM 3-35	2	Done
Audit iom_manager for proper special int handling, fix if required	Morris	EM 3-38	EM 3-38	2	Done
Design and code tape DCM changes -larger records, more buffer space, PSIA operation	Morris	EM 3-37	EM 3-37	2	Done
Design and code tape DSM changes (larger recs, density selection)	Silver	EM 3-40	EM 3-43	4	
Integrate and checkout tape DCM and DSM	Silver Morris	EM 3-44	EM 3-45	3	
Modify nsfd_	Silver	EM 3-46	EM 3-47	2	
Modify disk initialization for 2 dual channel controller operation	Morris	EM 3-35	EM 3-35		Done, running in Phoenix
Modify disk dim and page ctl for D191 operation	Morris	EM 3-39	EM 3-41	3	Mostly done
Modify disk DIM for better error recovery	Morris				

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PROJECT Disk and Tape software AREA Enhancements

TASK DESCRIPTION	PERSONNEL	START	FINISH	M-W	CHANGES-STATUS
Fix bad device address problem	Morris				
Statistic gathering code in disk dim for MPC counters	Morris				
Dynamic D190 dual channel reconfiguration	Morris			2	bits are there for DIM, need only to set them
Modify trace package for MTS-500					Will be done when needed
Accomodate a shared MPC					awaiting for MPC modification position from PCO
Dual channel MTS-500					
Integration with tape reel management	Morris Silver Capps			2	Schedule for completion of PDD project unknown
Multics and BOS modifications to run 270's as 190's to support 32 drives	Morris	EM 3-37 FM 3-37	EM 3-40	3	Multics coding done, BOS in progress
Integrate 0276 kludge and 191 system	Morris	EM 3-43	3-44	2	

