TO: Distribution

FROM: Gary C. Dixon

DATE: August 12, 1974

SUBJECT: ANSI Standard Tape I/O Module - Project Status

I. SIGNIFICANT EVENTS

Testing of Version 2 of the ANSI Standard Tape I/O Module, and Version 1 of the IBM Standard Tape I/O Module is nearing completion. These two ios_ compatible I/O Modules should be ready for installation in the Installation-Maintained Library around the first of September. A small group of MIT users (and anyone at CISL or MAC who is interested) will be asked to checkout and use the I/O module, and to supply comments on its operation. Anyone interested in participating in this checkout should contact Gary Dixon, Room 39-584, X3-3224.

II. TASK STATUS

tapeio_ (Ross Klinger)

Ross Klinger has finished some last minute coding and cleanup of the tapeio_ subroutine, which is the I/O modules' interface to tdcm.

ANSI Tape I/O Module - Version 2 (Janice Phillipps)

Jan's testing of the ANSI I/O Module is well underway. She is testing an integrated version of the I/O module which includes the ANSI I/O Module's write-around for the Tape Mount Package, and the cleaned-up version of tapeio_. Testing should be complete during August.

The transition of the I/O Module to the MTS500 tape drives went smoothly, with one MTS400 problem (unreliable set density operation) disappearing on the MTS500s.

IBM Tape I/O Module - Version 1 (Janice Phillipps)

The IBM Tape I/O Module has been coded, and will be checked out during this week. We do not anticipate problems with this I/O module, because it shares much of the ANSI I/O Module's code.

Subsystem Integration and Tape Interchange Testing (Janice Phillipps and Ross Klinger)

During the last part of August, Jan and Ross will perform final tests on Version 2 of the ANSI I/O Module and Version 1 of the IBM I/O Module. These tests will include tape interchange between Multics and OS/370 MVT for both ANSI and IBM tape formats.

Subsystem Documentation (Janice Phillipps and Ross Klinger)

During the last half of August, Jan and Ross will write MPM documentation for the ANSI and IBM I/O Modules. This documentation will describe the user interface to the two I/O modules (their ios_ interface), and will satisfy the documentation requirements for installing the I/O modules in the Installation-Maintained Library. PLM documentation will get underway early in September for both the ios_ and the iox_ versions of the I/O modules.

tape_in/tape_out (Ross Klinger)

Version 1 of the tape_in/tape_out command has been documented, and is under trial use by several MIT users. This version uses the nstd_ simulator for the tapeio_ subroutine, and the record blocking/de-blocking package of the ANSI/IBM I/O Modules. However, it does not interface with the actual I/O modules, and therefore can write only non-labelled tapes.

Recently, about 10 man hours per week of Ross's time have been required to support tape_in/tape_out users. This support must be continued until the command is installed. However, we hope that the user support needs will decline in the near future.

We plan to install the command in the Installation-Maintained Library when its next version is complete. Version 2 will perform tape I/O operations via the ANSI and IBM Tape I/O Modules, and file operations via vfile_ (we hope).

tape_ioi_ Error Handling Strategy (Ross Klinger)

In conjunction with Bill Silver's design work on the tape_ioi_ subroutine (an interface subroutine between tape I/O modules and the I/O Interfacer), Ross is trying to group the myriad combinations of tape status which can be returned by the MTS500s into categories of errors. His goal is to provide groups of errors which most tape I/O modules (including all system tape I/O modules) can recover from with a single error recovery strategy. The number of error categories will be limited for each particular tape operation (at most, 5 or 6 categories per operation). The error recovery strategies for a particular error category may differ among the various I/O modules, according to the needs of the I/O module. The grouping of errors should reduce the amount of error recovery code in each I/O module (thus simplifying I/O module code), while still distinguishing between errors which require different recovery strategies. If Ross's grouping is adopted as part of the tape_ioi_ design, it will be reported in the upcoming MTB on tape_ioi_.

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PROJECT_____ANSI Standard Tape I/O Module_____ AREA_____ANSI I/O Module: Version 2_____

	TASK DESCRIPTION	PERSONNEL	START	FINISH	M-W	CHANGES-STATUS	
	ANSI I/O Module: temporarily modify ANSI attach/detach code to perform trm_ functions without switchable gate environment	Phillipps	04/08/74 04/08/74	04/11/74 04/11/74		Done	
*	tapeio_ simulator: use sync_tapeio_ to simulate operation of tapeio	Klinger Phillipps	04/25/74 04/25/74	05/03/74 05/03/74	1.5 1.5	Done	
	trm_ (Tape Mount Package) simulator: simulate mount, mount_check, dismount, & error_log entries; call tapeio_$attach to create control seg	Phillipps	05/14/74 05/14/74	05/16/74 05/16/74	.5	Coding done. mount and mount_check entries checked out.	
	ANSI I/O Module: create routine to parse attachment options for all tape record formats	Phillipps	05/09/74 05/09/74	05/13/74 05/13/74	1	Done	
*	ANSI I/O Module: merge attach/detach/order code with logical record blocking/read-write code	Phillipps Klinger	04/24/74 04/24/74	05/10/74 05/14/74	4	Done	
*	ANSI I/O Module: convert code supporting attach/detach/volume labelling to call label entries in ansi_lrec_io_	Phillipps	05/06/74 05/06/74	05/09/74 05/09/74	.8	Done	
*	ANSI I/O Module: convert code supporting order requests to use tapeio	Phillipps	05/13/74 05/17/74	05/17/74 05/24/74	1	Done	
	ANSI I/O Module: change attach/detach/volume labelling code to do order requests through tapeio_	Phillipps	06/24/74 05/10/74	07/12/74 05/15/74	3	Done. Uses trm_ simulator.	

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PROJECT_____ANSI Standard Tape I/O Module_____ AREA_____ANSI I/O Module: Version 2_____

TASK DESCRIPTION	PERSONNEL	START	FINISH	M-W	CHANGES-STATUS	
lrec_error_handler_: identify all possible tape errors; implement strategies for handling them	Klinger	05/13/74 05/13/74	05/17/74 05/17/74	.8	Done	
ANSI I/O Module: create an error_table_ containing new codes used by ANSI I/O Module	Phillipps Klinger	05/17/74 05/17/74	05/17/74 05/17/74	.1	Done	
ANSI I/O Module: checkout all features of Version 2 I/O Module, using simulators; test all record formats	Phillipps Klinger	05/13/74 05/13/74	06/03/74 08/19/74	1.5	3/4 complete; End-of-Tape handling yet to checkout	*
IBM I/O Module: extend code in ANSI I/O Module to support IBM OS/370 tape label and data formats; provide new user interface, ibm_tape_, to this I/O Module	Phillipps	05/20/74 07/08/74	05/24/74 08/09/74	.5	Done	*
ANSI/IBM I/O Modules: when version of trm_ which uses tapelo_ is installed, test I/O Modules without use of simulators	Phillipps Klinger	07/15/74 07/08/74	07/19/74 08/16/74	1	Final testing in progress	*
ANSI/IBM I/O Modules: reduce number of temp segments used from 3 to 1 per tape drive	Phillipps	07/22/74	07/26/74 08/09/74	1	Done	

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PROJECT_____ANSI Standard Tape DIM_____ AREA_____Miscellaneous Tape Activities_____

TASK DESCRIPTION	PERSONNEL	START	FINISH	M-W	CHANGES-STATUS	
tape_io_ error recovery enhancements	Klinger	07/17/74 07/17/74	07/31/74 07/31/74	2.0 2.0	Done	*
tape_ioi_ error analysis and categorization	Klinger	08/02/74 08/02/74	08/12/74 08/13/74	1.2	75% done	*

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PROJECT_____ANSI Standard Tape I/O Module_____ AREA_____ANSI/IBM I/O Module Extensions_____

TASK DESCRIPTION	PERSONNEL	START	FINISH	M-W	CHANGES-STATUS
ANSI/IBM I/O Modules: convert to iox_ interfaces					
ios_: support use of iox_ versions of ANSI/IBM I/O Modules thru ios					
ANSI/IBM I/O Modules: support multi-volume files					
trm_: provide remount entrypoint to support ANSI/IBM multi-volume files					
ANSI/IBM I/O Modules: support reading & writing of user labels					
ANSI/IBM I/O Modules: allow attach modes to override (or specify missing) HDR2 label information					
IBM I/O Module: support non-labelled tapes					must be able to supply missing label information thru attachment modes
IBM I/O Module: support DOS tape formats					must be able to supply missing HDR2 label information thru attachment modes
ANSI/IBM I/O Modules: support processing of binary data or data in character code different from code used in labels					

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PROJECT_____ANSI Standard Tape I/O Module_____ AREA_____ANSI/IBM I/O Module Extensions_____

TASK DESCRIPTION	PERSONNEL	START	FINISH	M-W	CHANGES-STATUS
ANSI I/O Module: support reading & writing of ANSI block prefixes					

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PROJECT_____ANSI Standard Tape I/O Module_____ AREA_____Documentation_____

TASK DESCRIPTION	PERSONNEL	START	FINISH	M-W	CHANGES-STATUS	
ANSI I/O Module: provide MPM documentation	Phillipps Klinger	08/19/74	08/29/74			*
IBM I/O Module: provide MPM documentation	Klinger Phillipps	08/19/74	08/29/74			*
ANSI/IBM I/O Modules: provide PLM documentation for I/O Modules	Klinger Phillipps					
tapeio_: provide PLM documentation	Klinger	09/01/74	10/15/74	1		*