TO: Distribution

FROM: Gary C. Dixon

DATE: October 7, 1974

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

I. SIGNIFICANT EVENTS

Work on Version Three of the ANSI Standard Tape I/O Module is progressing well. Coding is ahead of our original schedule, and it now appears that the correction of deficiencies in the Version Two ios_ DIM and conversion to iox_ will be completed and tested by October 31.

II. TASK STATUS

Correction of deficiencies in the Version Two DIM and conversion to an I/O module with iox_ interfaces are going on concurrently. Code for the iox_$attach interface is complete, including the actual attachment module, a mount controller with volume switching capabilities, and an attachment option parser. The parser was written to be the universal tape attachment option parser, to be called by all tape I/O modules participating in the tape_file_ generalized attachment scheme.

The code supporting the iox_$read_record and iox_$write_record interfaces is complete.

The code supporting the iox_$open interface has been designed, and coding is underway. This code comprises the bulk of the I/O module. The design allows for a future volume switching capability.

The code supporting the iox_$control, iox_$close, and iox_$detach entry points remains to be done.

An MTB will be written describing the Version Three ANSI Tape I/O Module interfaces, and outlining the installation plan for Version Three. We hope to have Version Three installed in time to make the Multics Release II shipment date.

III. INTERESTING INSIGHTS

A new fact about the MTS-500 Tape Subsystem hardware has come to light. When writing in 9-mode, the left-most bit of each 9-bit byte must be zero; it is not ignored, as stated in the MTS-500 documentation. When the left-most bit is non-zero, it is or'ed with the Peripheral Subsystem Interface Adapter's (PSIA's) parity bit, possibly causing a channel status of "111"b to be returned. Since the channel status is ignored by existing tape DIMs and I/O modules and since the major and minor status report that all is well, this channel status results in an unexplained hardware error. The tape FEs from Oklahoma City report that the PSIA is operating according to specifications, and cannot be changed to handle this condition reasonably. Therefore, users of Multics tape I/O modules must use them under the new restriction that all characters being written in 9-mode must have their left-most bits off.

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PROJECT_____ANSI Standard Tape I/O Module_____ AREA_____ANSI Tape Module: Version Three_____

TASK DESCRIPTION	PERSONNEL	START	FINISH	M-W	CHANGES-STATUS	
ANSI Tape Module: correct Version Two deficiencies	Klinger	09/11/74 09/11/74	10/16/74 10/18/74	5.2 5.4	On schedule - 60% complete	*
ANSI Tape Module: convert to iox_ interfaces	Klinger	10/17/74 10/07/74	10/28/74 10/18/74	1.6	work integrated with the deficiency correction task shown above	*
ANSI Tape Module: test iox_ version (without volume switching)	Klinger	10/21/74	10/31/74	1.4		*
ios_: support use of iox_ versions of ANSI Tape Module thru ios	Klinger					
Tape Mount simulator: support volume switching	Klinger	10/29/74 11/04/74	10/30/74 11/05/74	.2		*
ANSI Tape Module: support multi-volume files	Klinger	10/31/74 11/06/74	11/06/74 11/15/74	1		*
ANSI Tape Module: support iox_$position entry point						
ANSI Tape Module: support processing of EBCDIC data in tape files						
ANSI Tape Module: support reading/writing of user file labels						

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PROJECT_____ANSI Standard Tape I/O Module_____ AREA_____IBM Tape Module_____

TASK DESCRIPTION	PERSONNEL	START	FINISH	M-W	CHANGES-STATUS
IBM Tape Module: support IBM Standard Labeled Tapes	Klinger				
IBM Tape Module: allow attach options to supply information from a missing HDR2 label					
IBM Tape Module: support DOS tape formats					must be able to supply missing HDR2 label information thru attachment options
IBM Tape Module: support non-labelled tapes					must be able to supply missing label information thru attachment options
IBM Tape Module: support processing of ASCII data in tape files					

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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 08/19/74			Documentation for Version Two complete
IBM I/O Module: provide MPM documentation	Klinger Phillipps	08/19/74 08/26/74			Documentation for Version One almost complete
ANSI/IBM I/O Modules: provide PLM documentation for I/O Modules	Klinger				