Multics Task Report

TO: Distribution

FROM: Gary C. Dixon

DATE: July 15, 1974

SUBJECT: ANSI Standard Tape DIM Project Status

I. SIGNIFICANT EVENTS

Most of the project members have been on vacation during June, so no status report was issued during June. However, we have made some significant progress.

Frank Canali has finish tapeio_, and this new interface to TDCM is now being used to check out the ANSI Tape I/O Module.

Ross Klinger finished Version One of the tape_in/tape_out command. This version accesses files via file_, and tapes via a subset of the ANSI and IBM Tape I/O Modules. It reads/writes non-labelled tapes consisting of files with ANSI or OS/370 standard records. tape_in reads tape files into the Multics Storage System, and tape_out does the reverse. Both operations are under the control of an ASCII control segment.

II. TASK STATUS

tapeio_ (Frank Canali)

As mentioned above, Frank has finished coding and debugging of tapeio_. Because Honeywell was uncertain about the tapeio_ interfaces documented in MTB-051, especially those associated with the Tape Mount Package which they are developing, Frank has implemented only the subset of interfaces in MTB-051 necessary to support the ANSI and IBM Tape I/O Modules.

Although Frank's work on tapeio_ is essentially complete (only some PLM documentation remains), Ross Klinger may put some additional error recovery and correction code into tapeio_, rather than performing this correction in several other subroutines of the tape I/O module.

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

    Jan has been testing out a version of the ANSI Tape I/O
Module which uses a simulator for the Tape Mount Package, which
uses Ross Klinger's record blocking/de-blocking code, and which
uses Frank Canall's tapeio_ as an interface to TDCM. The error
handling procedures at each level of the I/O module have not been
completely implemented as yet, and hardware errors have delayed
the checkout of the I/O module.

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

    Jan has begun work on the special entry point of the ANSI
Tape I/O Module which supports IBM (OS/370 and OOS/370) Standard
Tapes. Version 1 of the IBM Tape I/O Module will be complete,
along with Version 2 of the ANSI Tape I/O Module, in late July or
early August. Version 1 of the IBM Tape I/O Module will support
OS/370 Standard Labelled Tapes, using any OS/370 record format.
We anticipate about one week's delay in our schedule for
implementing Version Two of the ANSI Tape I/O Module.

Record Blocking/De-Blocking - (Ross Klinger)

    Ross completed his logical record blocking/de-blocking code
before leaving on a 5 week vacation. However, the error handling
interfaces between his code and Jan's were not well-defined, and
Ross will be spending some time with Janice reworking these
interfaces. The main portions of the code have been debugged (we
think) and are functioning well.

tape_in/tape_out (Ross Klinger)

    The first version of the tape_in/tape_out commands are
complete and have been tested. This first version uses file_
because the interface to vfile_ was not well documented when the
coding was done.

    The next version of these commands will use PL/I I/O (via
the ANSI and IBM Tape I/O Modules) to access tape files, and will
use PL/I I/O (via vfile_) to access disk files, once PL/I I/O
provides full support for processing unstructured files with
record I/O.

Project Coordination (Gary Dixon)

    I have written two MTBs describing our work on the tape I/O
modules. MTB-090 describes the ANSI Tape I/O Module, and MTB-096
(to be published shortly) describes the IBM Tape I/O Module.

While these MTBs do not provide a detailed description of our implementation of these two I/O modules, they do summarize the functional capabilities being implemented and our plan for the implementation. More detailed documentation will be provided before the modules are submitted for installation.

GROUP _____ PDO: MULTICS SUPPORT GROUP _____ DATE __07/15/74_____ PAGE __1___ / ___1___

PROJECT _____ANSI Standard Tape DIM_____ AREA _____Asynchronous Tape I/O_____

TASK DESCRIPTION	PERSONNEL	START	FINISH	M-W	CHANGES-STATUS
tapeio_: design asynchronous tape I/O interface for ANSI DIM	Canali	12/25/73	01/14/74	1.5	Design Review complete
		12/25/73	03/12/74	3.0	
tapeio_: code subroutine	Canali	04/01/74	04/30/74	4	Done with subset used
		03/13/74	06/25/74		by ANSI & IBM Tape I/O Modules *

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 al 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.

TASK DESCRIPTION	PERSONNEL	START	FINISH	M-M	CHANGES-STATUS
Trec_error_handler_: identify all possible tape errors; implement strategies for handling them	Klinger	05/13/74	05/17/74	.8	Done
		05/13/74	05/17/74		
ANSI I/O Module: create an error_table_ containing new codes used by ANSI I/O Module	Phillipps	05/17/74	05/17/74	.1	Done
	Klinger	05/17/74	05/17/74		
ANSI I/O Module: checkout all features of Version 2 I/O Module, using simulators; test all record formats	Phillipps	05/13/74	06/03/74	1.5	Underway
	Klinger	05/13/74	07/19/74		
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	05/24/74	.5	* Half of label checking code checked; attach/detach and error handling remain
		07/08/74	07/26/74		
ANSI/IBM I/O Modules: when version of trm_ which uses tapeio_ is installed, test I/O Modules without use of simulators	Phillipps	07/15/74	07/19/74	1	* Now testing I/O Module using real tapeio_ with trm_ simulator.
	Klinger	07/08/74	08/02/74		
	(Canali)				
	(Capps)				
	(Dixon)				
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	1	
			08/09/74		

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

TASK DESCRIPTION	PERSONNEL	START	FINISH	M-W	CHANGES-STATUS
ANSI DIM: provide MPM documentation	Phillips Klinger				
IBM DIM: provide MPM documentation	Klinger Phillips				
ANSI/IBM DIMs: provide PLM documentation for DIMs	Klinger Phillips				
tapelo_: provide PLM documentation	Canali	06/03/74	06/30/74 07/31/74	3	