

Roach

FROM: Janice Phillipps
SUBJECT: ANSI Tape DIM Progress Report
DATE: October 1, 1973

This month has been devoted to testing the code which deals directly with the tape DCM. The first approach for testing this code was to use Dennis's switchable gate and fake DCM, making an attachment through tape_. Since this part of the ANSI DIM being checked out is to be called by the tape mounting protocol package to verify volume labels and to create labels for volumes not yet written, it seemed that using the code that was to call it was a good way to check it out. However, this approach was abandoned when none of the ANSI code seemed to work after a reasonable amount of time working with the fake DCM.

The next approach to testing was to put together a minimum tester DIM which would use the real DCM and call the basic tape functions (sync_tapeio_) which are to make up the DSM-DCM interface. This approach has worked out satisfactorily.

CURRENT STATUS

When attached through the tester DIM it is possible to write the contents of a segment onto tape in 9mode, using iocall, and then to read that data on the tape into a segment. "Files" can be created from the contents of this segment by writing tape marks to separate the data. The tape can be moved, with order calls, forward or backward both files and records; tape can be erased with an order call -- either in part, for 8.5 inches, or in total. It is possible to set recording density with an order call to 200bpi, 556bpi, 800bpi, or 1600bpi. The tape handler status can be reset with an order call (that which is resettable can be reset), and the tape can be rewound or rewound and unloaded with order calls. Finally, the tester DIM can write out on an attached tape, an ANSI formatted label followed by a tape mark which is automatically backed over ready to append the ANSI file label. Unfortunately, at this writing, the tester DIM cannot quite read that label back as a recognizable ANSI label. The function of reading completes ok, even to the correct number of elements, but the contents is garbage characters. The label can be examined with an attachment through nstd_ and looks ok but a bug in the reading side of the volume labeler routine is still outstanding.

PROBLEM AREAS

The documentation on the tape DCM and the tape drives has been inadequate for debugging this part of the ANSI DIM. A lot of empirical verification seems required. The use of the DCM asynchronous mode is difficult without knowing what drive operations send special interrupts. One case in particular, is the rewind/unload order. According to the MTS500 manual, which is reported to be modeled after the current drive specifications and the most up to date documentation, a special interrupt is sent on completion of this order, but code that waits for this interrupt never gets it. On referring to an existing implementation of rewinding, nstd_, I found that asynchronous mode of the DCM is not used--looping in the hardware is done until the rewind is completed.

MTR - 007

It would be nice to have some sort of program logic manual when, for example, trying to get past a status code of handler standby state (awaiting operator intervention) while trying to backspace a tape.

WORK PLANNED NEXT

The next phase of the ANSI DIM development will be to set up a mechanism for reading and writing blocks of data to and from tape. The initial blocking will be a VB scheme. Using the tester dim, an nstd_ like DIM, data will be fed into the blocker which will compose a VB record (initial maximum record size will be 272 words) and put it out onto tape. Then a logical record reader/maker will be set up and fitted in front of the blocker.

PROJECT ANSI Tapes AREA Initial version of DIM

TASK DESCRIPTION	PERSONNEL	SIARI	FINISH	M-W	CHANGES-SIARIUS
VOL1_labeler_\$nst_lol_ck	JP	07/25/73	08/07/73		Done.
VOL1_labeler_\$read_lol	JP	07/09/73	08/07/73		Done.
VOL1_labeler_\$write_msl_insert	JP	07/23/73	08/22/73		Done.
VOL1_labeler_\$write_lol	JP	07/23/73	08/22/73		Done.
VOL1_labeler_!_adj code to identify and write DOS volume label.	JP	08/21/73	08/22/73		Done.
sync_tapeio_\$read	JP	07/16/73	08/22/73		Done.
sync_tapeio_\$write	JP	07/16/73	08/22/73		Done.
sync_tapeio_\$write_lol	JP	08/06/73	08/22/73		Done.
sync_tapeio_\$write_fm	JP	07/15/73	08/22/73		Done.
sync_tapeio_\$forward_one_record	JP	07/27/73	08/22/73		Done.
sync_tapeio_\$forward_one_file	JP	07/31/73	07/31/73		Done.
sync_tapeio_\$back_one_record	JP	08/06/73	08/22/73		Done.
sync_tapeio_\$back_one_file	JP	08/06/73	08/22/73		Done.

PROJECT ANSI Tapes AREA Initial version of DIM

TASK DESCRIPTION	PERSONNEL	SIARI	FINISH	M-W	CHANGES-SIARI
sync_tapeio_\$rewind_unload	JP	08/02/73 08/05/73	08/03/73 08/22/73		Done.
sync_tapeio_\$rewind_notunload	JP	08/13/73 08/05/73	08/05/73 08/22/73		Done.
sync_tapeio_\$reset_status	JP	08/06/73	08/22/73		Done.
sync_tapeio_\$erase_tape	JP	08/20/73	08/22/73		Done.
Establish an environment in which to check out all entries of sync_tapeio_ to test the moving of tape, reading and writing. Establish an environment in which to check out all entries of VOL1_label_ in the ASCII case only. This will be a check out of all the DIM's copy interface.	JP	08/23/73 08/23/73	09/05/73 09/30/73		Done.
cv_chrs	JP				Will be recoded using translate function and mode mode.
astd_cv_chrs_data\$a_to_e	JP		09/12/73		Coded and tested.
astd_cv_chrs_\$AI_to_A	JP				Yet to code.
Set up test for tape controller nine mode operation.	JP	08/03/73	08/08/73 09/15/73		Yet to do.
Create include files for ANSI volume and ANSI file labels.	JP		07/13/73		Done.
Create include files for OS and DOS volume labels.	JP	07/13/73 08/20/73	08/22/73		Done.

TASK DESCRIPTION	PERSONNEL	START	FINISH	M-W	CHANGES-SIAIUS
Create include files for OS and DOS file labels.	JP	08/1/73			OS labels 1/2 done. DOS labels yet to do.
make_labels_	JP	07/11/73			ANSI labels done. OS and DOS yet to do.
volume_control_module_sattach	JP			.40	Coding underway. Parsing of Identifiers yet to code.
volume_control_module_saetach	JP			.60	Module outlined. Coding underway.
file_control_module_sopen	JP			.40	Coding done. Yet to check out.
file_control_module_sclose	JP			1	Module designed. Yet to code.
lrec_control_module_sread	JP	08/03/73	09/11/73	1	Module outlined. Want to rework I/O such that one module is called to do all of the tape I/O.
lrec_control_module_swrite	JP	08/13/73	09/11/73	1	Module outlined. Again want to redo the I/O SECTION.
lrec_control_module_sorder	JP			1	Yet to code.
phys_record_ctrl_sread	JP	10/1/73		1	Designed out yet to code.
phys_record_ctrl_swrite	JP	10/01/73		1	Yet to code.
buffer_control_module	JP			1	Yet to code.

GROUP _____ MULTICS P30 _____ DATE 10/01/73 _____ PAGE 4 / 4 _____

PROJECT _____ ANSI Tapes _____ AREA _____ Initial Version of DIM _____

TASK DESCRIPTION	PERSONNEL	START	FINISH	M-W	CHANGES-SIAIUS
Final test of version 1 of the ANSI DIM in ASCII.	JP	10/01/73	12/25/73		
Documentation -- SPS and MPM sections.	JP				Continuing task.