To: Distribution

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Subject: Design Review Summary on tape_in, tape_out

    A design review on the commands tape_in, tape_out (MTB 235) was held Friday, December 5. These commands are designed for the unsophisticated Multics user who might be transfering files to Multics from OS, GCOS, or other Multics sites using standard tape formats. The more sophisticated Multics user will use the copy_file command (MTB 222) and exec_com to accomplish such a file transfer.

    The outcome of the review meeting was multi-fold.

I.   Essentially the design of tape_in, tape_out was deemed appropriate, with suggestions for a new control argument, a couple of modifications to the tcl language and some minor reorganization of the MPM section documentation to more strongly emphasize the simplest-case use of the commands.

    The new control argument will be "-check", an option to specify that only semantic checking be done on the tcl control file; no tapes will be mounted with this option.

    The tcl language changes that will be adopted are

        1) changing the IO_module <global-statement> to a Tape statement, a change which would make the statement more parallel to the Storage statement. It was felt that the naive Multics user should not have to know about an IO module, even nominatively. This modification of the IO_module statement obviates the No_labels <global-statement> if the keyword arguments to the Tape statement become something like IBMSL, IBMNL, IBMDOS, ANSI covering the four tape-types handled by tape_in, tape_out -- OS standard labeled tapes, OS non-labeled tapes, DOS standard labeled tapes, and ANSI standard labeled tapes.

        2) the tcl Number statement will become optional on output, meaning that unless the user specifies a tape file sequence number in a Number statement,

the output file will be written at the file-one
location on the tape and subsequent files in the
control file <file-group> will be written following
the file-one location. Should a tape file sequence
number be supplied via a tcl Number statement, the
output file will be written at that tape file
sequence location. Thus in order for the first
file in a given tcl <volume-group> to be appended
to a tape, the Number statement must be included in
that first <file-group>.

The tape_in, tape_out MPM documentation will be restructured
from its current two levels of explanation, into three levels
of explanation. The first of these three levels will deal
with only the simplest use of the commands, where every
possible default is in effect. Here, only the statements
Volume, File, Path and End will be discussed. The second
level of the new commands write-up will present the use of
the standard tape parameters such as format, record length,
block size, and recording mode. The statements of Density,
Number (tape file sequence number) will be described, as will
the Tape and Storage statements. The third level of
explanation will be essentially the same as the current MTB
section "ADDITIONAL OPTIONS AVAILABLE FOR THE TCL USER" now
stands. The extend <local-statement>, however, will be
divided into two statements, tape_extend for extending tape
files, and storage_extend for extending storage system files.

II. The tape_in, tape_out commands will be available in MR4.0.

III. It was decided at this meeting to begin work on an MPM
     Reference Guide section describing the use of tapes on
     Multics. This Reference Guide section will mention the tape
     IO modules which are supported by the system, covering which
     kinds of tape they deal with, and will explain the commands
     available for working with tapes on Multics, covering which
     commands the user should use for doing which tasks.