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TO: X3T10 Committee (SCSI)

SUBJECT: SSC Partition Change Control

With the recent interest in partitions on tape, it has come to our attention that the time to format a tape with partitions usually exceeds the time that an initiator sets for the execution of a MODE SELECT command.

We propose that the actual partitioning change occur similar to what SBC does. That is, a MODE SELECT command establishes the new environment using Mode Pages x'11'-x'14', but it does not take effect unless a FORMAT MEDIUM command is executed to effect the change. SSC has added a FORMAT MEDIUM command which can be used in the same way as SSC.

However, unlike SBC, SCSI-2 has required that any change in partitioning take affect with the successful completion of the MODE SELECT command. The following is the proposed change to the model of behavior for SSC devices that support partitioning:

-       When the MODE SELECT command is executed, a Unit Attention for Mode Parameters Changed is reported to each initiator.
-       Add a bit to the Medium Partition page x'11', that when 1b indicates that a FORMAT MEDIUM command is required to effect the change. If supported (i.e., set to 1b), this would be a non-changeable field.

        -       If the bit is set to zero, as would now be the case, the formatting takes place during the execution of the MODE SELECT command (SCSI-2 behavior).

                -        A Unit Attention is returned to each initiator (other than the one making the change) indicating Mode Parameters Changed.

        -       If this bit is set to one, the formatting takes place during the execution of the FORMAT MEDIUM command.

                -       A Unit Attention is returned to each initiator (other than the one making the change) indicating Mode Parameters Changed.

-       If the FORMAT MEDIUM command and does not follow before the next motion-type command is received from any initiator, the mode parameters are reset to the prior state and a Unit Attention for Mode Parameters Changed is reported to each initiator. This encourages an initiator to use a RESERVE/RELEASE sequence to bound the format change, just as is recommended for disks.

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