Date: January 7, 1997
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 action be similar to what SBC does: a MODE SELECT command establishes the new environment using Mode Pages x'11'-x'14', but the partitioning does not take effect unless a FORMAT MEDIUM command is executed. SSC has added a FORMAT MEDIUM command which can be used in the same way as SBC to effect the partitioning change.

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:

-       Add a bit (PoFM, Byte 4, Bit 2) to the Medium Partition page x'11', that when 1b indicates that a FORMAT MEDIUM command is required to effect the change.

        -       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).

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

 -      Modify the Format field in the FORMAT MEDIUM command to include two new values:
        - 1 indicates Partitioning Change using Mode Parameter Data
        - 2 indicates Partitioning Change using Default Format
        - 0 should no longer be mandatory

-       If a FORMAT MEDIUM command does not happen before the medium in the device at the time of the MODE SELECT command is removed from the device, the Medium Partition page fields are changed to the appropriate values for a device with no medium. This allows discovery of the partitioning state of any new medium loaded into the device. It also encourages an initiator to use a RESERVE/RELEASE sequence to bound the format change, just as is recommended for disks.

-       The Unit Attention is returned to each initiator (other than the one making the change) indicating Mode Parameters Changed after the MODE SELECT command is executed.

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