April 21, 1991

To: John Lohmeyer, Chairman, X3T9.2

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Subject: Mode Select error detection

Paul Hammann pointed out in 91-019 that several targets are inconsistent in the way they check for errors in non-changeable fields on a mode select. The March working group meeting agreed on a clarification of the target’s error detection. I have added a second option that goes even further. The second option specifies when the target may change some parameters and when it may not.

Section 7.2.8 MODE SELECT(6) Command
and
Section 7.2.9 MODE SELECT(10) Command

Change first paragraph, last sentence from

Initiators should issue MODE SENSE prior to MODE SELECT ...

to

Initiators should issue MODE SENSE prior to each MODE SELECT ...

OPTION 1

Bottom of page 7-31 (rev 10c), between (1) and (2) add

NOTE: The target shall check all non-changeable parameters in all pages sent by the initiator before any changes take effect.
OPTION 2

Bottom of page 7-31 (rev 10c), remove last sentence of (1).

Top of page 7-32 (rev 10c), add new paragraph to end of 7.2.8.

The target shall check for certain of the above errors in the MODE SELECT command before any parameters are updated. The target shall terminate the MODE SELECT with CHECK CONDITION status, set the sense key to ILLEGAL REQUEST and set the additional sense code as specified above. The target shall not update any parameters:
   (1) Before all fields in the command descriptor block have been checked.
   (2) Before all fields in the Mode Parameter Header have been checked.
   (3) Before all fields in each Mode Parameter Block Descriptor have been checked.
   (4) Before all fields in each mode page header have been checked.
   (5) Before mode page length in each page has been checked.
   (6) Before all non-changable fields in each page have been checked.

The target may update zero or more pages for any other MODE SELECT error.