T10/04-259r0

To	From	Subject	Date
INCITS T10 Committee	Michael Banther, HP	ADT – Mode pages not supported	10 August, 2004

Revision history

Revision 0 – Initial proposal.

Background

ADC letter ballot comment HP-182 (see 04-197r1) adds the Disconnect-Reconnect, Protocol-Specific Port, and Protocol-Specific Logical Unit mode pages to ADC. The working group does not want ADT to support these mode pages. However an application client may find the pages supported by an ADC device server when accessed over a transport layer other than ADT.

ADTr12 is silent regarding the mode pages potentially leading to confusion when reading ADT in conjunction with ADC. This proposal adds normative text making it clear that an ADT target port shall not support these mode pages.

SPC-2 (SPC2r20) contains text that governs the behaviour of a device server that receives a MODE SELECT(6), MODE SELECT(10), MODE SENSE(6), MODE SENSE(10) command for a page it does not support. The text is pretty straightforward for a MODE SENSE command but somewhat convoluted for MODE SELECT. I've included examples of the relevant text below.

From 7.8 MODE SENSE(6) command:

> If an application client issues a MODE SENSE command with a page code value not implemented by the target, the device server shall return CHECK CONDITION status and shall set the sense key to ILLEGAL REQUEST and the additional sense code to INVALID FIELD IN CDB.

From 7.6 MODE SELECT(6) command:

> The device server shall terminate the MODE SELECT command with CHECK CONDITION status, set the sense key to ILLEGAL REQUEST, set the additional sense code to INVALID FIELD IN PARAMETER LIST, and shall not change any mode parameters for the following conditions:
>
> a) If the application client sets any field that is reported as not changeable by the device server to a value other than its current value;
> b) If the application client sets any field in the mode parameter header or block descriptor(s) to an unsupported value;
> c) If an application client sends a mode page with a page length not equal to the page length returned by the MODE SENSE command for that page;
> d) If the application client sends a unsupported value for a mode parameter and rounding is not implemented for that mode parameter; or
> e) If the application client sets any reserved field in the mode parameter list to a non-zero value.

I cannot find text in SPC-x or elsewhere that specifically mentions how a device server shall (or may) behave when it receives a MODE SELECT command whose parameter data contains an unsupported mode page. However I interpret point c) above to cover this case since any page length sent with an unsupported page will not match the page length returned by the MODE SENSE command for that page. Based on this interpretation, ADT need only state that it does not support the Disconnect-Reconnect, Protocol-Specific Port, and Protocol-Specific Logical Unit mode pages.

Proposed changes

8.4 SCSI mode parameters

8.4.1 Disconnect-Reconnect mode page

An ADT target port shall not support the Disconnect-Reconnect mode page.

8.4.2 Protocol-Specific Port mode page

An ADT target port shall not support the Protocol-Specific Port mode page.

8.4.3 Protocol-Specific Logical Unit mode page

An ADT target port shall not support the Protocol-Specific Logical Unit mode page.