To: INCITS T10 Committee

From: Paul Entzel, Quantum

Date: 31 May 2007

Document: T10/07-235r1

Subject: ADC-2: resolution for letter ballot comment HPQ-87

1 Revision History

Revision 0:
Initial revision posted to the T10 web site on 7 May 2007.

Revision 1:
Modified as requested by the ADI working group at the 30 May 2007 teleconference.

2 Reference

T10/ADC-2 revision 7
T10/ADC-2 revision 7d
T10/06-475r4, ADC-2 letter ballot resolution

3 General

HPQ-87 letter ballot comment against the second sentence in the third paragraph of subclause 4.2.3.4 in ADC-2 states:

This sentence presents some difficulties. 1. How does the queue mentioned interact with the local SMC logical unit's task set? I would much prefer seeing this concept expressed in the language of task sets and tasks as those are well-defined entities. 2. Although one can infer that the commands mentioned by this sentence are only those commands that result in a task routed to the local SMC logical unit, the sentence doesn't actually say that. The sentence only qualifies 'commands' with 'received via the DT device primary port.' Changing the sentence to include the task concept allows the inclusion of text limiting the sentence to tasks routed to the local SMC device server.

The paragraph in question reads as follows in ADC-2 revision 7d:

The bridging manager shall operate in a single threaded fashion (i.e., not issue more than one command at a time to the remote SMC device server). Commands received via a DT device primary port shall be queued in the local SMC device server and issued to the bridging manager one at a time. If processing a single command by the local SMC device server requires issuing multiple commands to the remote SMC device server, then those commands shall be issued one at a time to the bridging manager.

At the May 2007 working group meeting on ADI, the group decided that the second sentence should be reworded as:

Commands routed to the local SMC device server shall be added to the task set of the local SMC device server and issued to the bridging manager one at a time.

However, this still has a couple of problems:
1. The local SMC device server is "issuing commands" to the bridging manager.
2. The standard defines where the commands are queued which should be an implementation detail (and is untestable).
3. The standard uses the phrases "not issue more that one command at a time" and "commands shall be issued one at a time". All commands are issued one at a time. What we are trying to do

is require the bridging manager to avoid issuing a command to the remote SMC device server while an unfinished command is outstanding to that logical unit.

4 Changes to ADC-2

Replace the paragraph in question with the following paragraph:

After issuing a command to the remote SMC device server, the bridging manager shall not issue another command to remote SMC device server until the previous command completes or is aborted.