T10/07-003r1: Minutes of
SCSI Media Changer (SMC) Conference call
for November 30, 2006, 8.06 AM – 10:00 AM PST

1. Introductions   Group

Michael Banther called the meeting to order at 8:05 AM PST. Roger Cummings agreed to serve as the secretary of the conference call.

Michael asked the people on the call to identify themselves, and the following people responded:

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         Name                               Organization
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Mr. Noud Snelder                    BDT
Mr. Curtis Ballard                  Hewlett Packard
Mr. Michael Banther                 Hewlett Packard Co.
Mr. Kevin Butt                      IBM Corp.
Mr. Roger Cummings                  Symantec
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2. Approval of the Agenda   Michael Banther

Michael Banther presented the agenda. Noud asked Michael if document 06-452r1 could be considered before 456r1 and 442r0, and Michael agreed and reordered the relevant items. With those changes Michael Banther made a motion to accept the agenda as modified. Roger Cummings seconded the motion. The group passed the motion unanimously.

3. INCITS Patent Policy   Michael Banther

Michael Banther directed the group to a reading of the T10 Short Summary of the INCITS Patent Policy.

4. Old Business   Group

4.1 SMC-3 Medium type codes (06-452r1)   Noud Snelder

Noud Snelder reviewed the latest revision of 06-452 with the group, and noted that the code for the Microcode image medium type had been included at the request of Rod Wideman of Quantum, who had indicated to Noud that this revision was acceptable.

Noud made a motion that 06-452r1 be included in the next revision of SMC-3, and Michael banther seconded that motion. The group approved the motion unanimously.

4.2 SMC-3 Support column in mode page codes and subpage codes table (06-456r1) Noud Snelder

Noud Snelder reviewed the latest revision of 06-456 with the group. The discussion began with consideration of whether page code 1Fh needed to be mandatory. Kevin Butt stated that his products did not support the page, and Noud commented that neither did his products but he thought the page needed to mandatory for SPC-3 to simplify support for the Prevent/Allow Medium Removal command. It was noted that a side effect of this would be to also make

support for subpage codes mandatory. Curtis saw the information in the page as helpful, but was not sure that it merited being made mandatory. Kevin stated in conclusion that he understood the motivation, but needed to review the subject with his experts before proceeding.

Noud also noted that he had copied the last the three rows of the table from SPC-3, and he asked if "all subpages" needed to be qualified by "available": The group consensus was that this was not needed.

There was some discussion of page code 1Eh, and a comment made that Microsoft software relies on the page. The sense of the group was that have page 1E defined as Mandatory was acceptable.

Kevin asked if the support status of other pages needed to be considered, and Noud noted that the Informational Exceptions Control related to Tape Alert, and Michael Banther qualified this by stating that this page would be mandatory if the Informational Exceptions message model for Tape Alert was being used. Kevin noted that the page was mandatory in SSC-3.

Curtis expressed interest in the Protocol Specific port page, and Noud noted that it is listed as mandatory in SSC-3 with an applicable note. Kevin thought that the defined support in this document should be editor's decision and Noud identified a further issue of LU-dependency, and thought that perhaps the page should be mandatory for LUN 0 only.

As a result of the above discussion, Noud accepted an Action Item to create a new revision of 06-456r1.

4.3   SMC-3 Add PREVENT ALLOW MEDIA REMOVAL (PAMR) command (06-442r0) Noud Snelder

Noud introduced his proposal 06-422r0 by noting that Bill McFerrin had made a proposal in document 06-248r1 that had been approved by T10 in May 2006 that removed the PAMR command from SPC-4, and thus it needed to be added into SMC-3. Noud stated that even though SMC-3 referenced SPC-3 and not SPC-4 it was prudent to add the command at this time.

Noud stated that he had taken the text that was formerly in SPC-3, and removed all references to, and dependencies on, the attached media changer model. He had also added text for bits in related mode pages.

There was considerable discussion about the PREVENT bit in byte 4, and Michael Banther noted that bit 1 also needed to be labeled as obsolete. An amendment to the third paragraph following the command table was proposed that deleted the leading "If possible", with Roger Cummings noting that advice is not typically included in standards. Noud reminded the group that the text came from SPC-3 where it had to deal with devices other that media changers. The group consensus was to remove the leading sentence in that paragraph.

Curtis asked if there needed to be a paragraph that defines both states of the PREVENT bit as is the normal convention elsewhere, and a long discussion concluded with a consensus to define a "prevention of medium removal" state and reference the bits settings to the state. Michael noted that there are references to something like this state in three different command clauses, and suggest that the state could therefore be appropriately defined in the model clause. Michael further noted that the command should refer to the Data Transfer Element, and it was noted that the current wording is in conflict with ADC-2.

Noud suggested that two paragraphs should be removed from this proposal in favor of text in the model clause, and there was consensus with this approach. Actions Items were therefore assigned to Noud to create and post 06-422r1 reflecting the consensus from this discussion, and to Curtis Ballard to address the subject of a prevent medium removal condition occurring in a data transfer device, with specific reference to section 4.2.2 of ADC.

4.4   SMC-3 Command table and INQUIRY clean-up (06-477r0)   Michael Banther

Michael Banther presented document 06-477r0, which is an update of Rob Elliot's proposal contained in 05-074r1 to deal with subsequent changes to SMC-3. Michael noted that the primary references for this proposal are SAM-3 and SPC-3. A suggestion was made to add a footnote referring to REPORT LUNS that stated that the command was only mandatory as specific in SPC-3, and Michael accepted this suggestion. Noud noted that references in revision 4 of SMC-3 had already been updated to point to SPC-3. Kevin Butt also noted that footnote c in Table 3 should referenced SSC-2, and not SCC-2. Michael Banther accepted an Action Item to create and post 06-477r1 containing the results of this discussion.

4.5   SMC-3 Discussion: Visibility of Volumes in Elements (06-421r1)   Curtis Ballard

Curtis introduced document 06-421r1 by stating that he wanted to introduce a concept rather than make a specific proposal, and that he had identified a number of questions that need to be resolved before he can move forward. The essence of the proposal is that there are media attributes that do not change with media use and that it should be possible to have a handle to the media that is independent of positioning. An issue is that the handle does not fit within a 16 byte CDB, and a number of suggestions were made to address this, such as defining "paired" commands or using a hash or a short handle. Curtis asked that the group consider this idea further, and return comments and suggestions to him directly.

4.6   SMC-3 TapeAlert Enhancements (06-420r0)   Michael Banther

This item was not addressed during the conference call because of a lack of time.

4.7   SMC-3, Report Element Information (06-272r0)   Curtis Ballard

This item was not addressed during the conference call because of a lack of time.

4.8   SMC-3 Error codes overview (06-397r0)   Noud Snelder

This item was not addressed during the conference call because of a lack of time.

4.9   SMC-3: Diagnostics Data log page (06-395r1)   Kevin Marks

This item was not addressed during the conference call because of a lack of time.

4.10   SMC-3: Element Statistics log page for SMC (06-394r1)   Kevin Marks

This item was not addressed during the conference call because of a lack of time.

4.11   Working List for ISV feedback (SMC/SSC/ADC/SPC) (05-315r3).   Kevin Butt

This item was not addressed during the conference call because of a lack of time.

5. New Business   Group

No new business was proposed during the conference call.

6. Review New Action Items   Roger Cummings

Roger Cummings reviewed the following new Actions Items with the meeting:

06-066 [Noud Snelder] Incorporate 06-452r1 into the next revision of SMC-3.

06-067 [Noud Snelder] Create and post 06-456r2 (r1 as revised at the November 30 conference call).

06-068 [Noud Snelder] Create and post 06-442r1 (r0 as revised at the November 30 conference call).

06-069 [Curtis Ballard] To address the subject of a prevent medium removal condition occurring in a data transfer device, with specific reference to section 4.2.2 of ADC.

06-070 [Michael Banther] Create and post 06-477r1 (r0 as revised at the November 30 conference call).

7. Adjournment   Group

Kevin Butt made a motion for adjournment. Noud Banther seconded the motion. The group passed the motion unanimously. Michael Banther adjourned the group at 10:00 AM PST.