T10/07-132r0: Minutes
SCSI Media Changer (SMC) Working Group
for March 12, 2007, 2.30 PM - 8.10 PM EST

1. Introductions   Group

Michael Banther called the meeting to order at 2:30 PM CST. He thanked STA for hosting the meeting. Kevin Butt is serving as the secretary of this meeting.

2. Approval of the Agenda   Michael Banther

Michael Banther presented the agenda. Michael Banther made a motion to accept the agenda as modified. Rod Wideman seconded the motion. The group passed the motion unanimously..

3. Attendance and Membership   Michael Banther

Michael Banther reviewed the T10 attendance rules with the group and directed prospective new members to John Lohmeyer. The attendance report appears below.

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SMC-3 Working Group Attendance Report - March 2007


            Name                     S          Organization
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Mr. Noud Snelder                     V  BDT
Mr. Kevin Marks                      P  Dell, Inc.
Mr. Curtis Ballard                   V  Hewlett Packard
Mr. Michael Banther                  A  Hewlett Packard Co.
Mr. Kevin Butt                       A  IBM Corp.
Mr. Geoffrey Barton                  V  Overland Storage
Mr. Paul Entzel                      P  Quantum Corp.
Dr. Paul Suhler                      A  Quantum Corp.
Mr. Rod Wideman                      V  Quantum Corp.

9 People Present

Status Key:  P    -  Principal
             A,A# -  Alternate
             AV   -  Advisory Member
             E    -  Emeritus
             L    -  Liaison
             V    -  Visitor
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4. INCITS Patent Policy   Michael Banther

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

5. Approval of Previous Minutes   Group

Kevin Butt asked for any problems with the minutes of the January meeting (07-041r0), or the minutes of the 02/21/2007 conference call (07-093r0). No other problems were identified. Rod

Wideman made a motion to accept the January meeting minutes, and the 02/21/2007 conference call minutes as modified. Michael Banther seconded the motion. The group passed the motion unanimously.

6.   Review of Action Items   Kevin Butt

Kevin Butt reviewed the outstanding action items, and the status of each item was reported as listed below:

06-002 [Michael Banther] Reporting of virtual libraries / partitioning to host.

Carryover

06-004 [Roger Cummings] Change the 3rd paragraph of 5.3.1 to clarify addresses and volumes.

Done (07-122r0)

06-005 [Roger Cummings] Revise 05-271r2 and post as 05-271r3.

This proposal was entitled "SMC-3 Media Changer Component Model Proposal". Roger Cummings requests this to be marked as overtaken by events and closed. Roger does not have the source for this document, and does not have the bandwidth to recreate it, and he feels ill-equipped to do this work - it should come from a vendor of media changers.

Closed.

06-012 [Rod Wideman] Bring a proposal for a new command/framework per November 05 discussion item 7.4.

This has been overtaken by Report Element Information 06-272.

06-020 [Robert Payne] Define a philosophy for Write Exclusive Persistent Reservations in SMC.

Carryover

06-044 [Roger Cummings] Solicit additional vendor-specific sense codes from library vendors per June discussion item 4.4.

Carryover

06-051 [Noud Snelder] Update references in SMC-3 to point to SPC-3 and SAM-3.

Included in SMC-3r05.

06-063 [Halvard Eriksen] Investigate use of LOGICAL UNIT NOT READY, INITIALIZING COMMAND REQUIRED error code.

Carryover

06-065 [Michael Banther] Create and post 06-420r1 (r0 as revised at the November meeting).

Closed.

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

Included in SMC-3r5

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

Closed

07-001   [Kevin Marks] Create and post 06-394r2 (r1 as revised at the January meeting).

Done

07-002   [Kevin Marks] Create and post 06-395r3 (r2 as revised at the January meeting).

Done

07-003   [HP] Create a proposal to define the usage of the "Cleaning Requested" and "Cleaning Failure" error codes.

Carryover

07-004   [Kevin Butt] Create a proposal for the "Medium Magazine" error codes.

Carryover

07-005   [Noud Snelder] Create & post 06-397r2 (r1 as revised at the January meeting).

Done

07-006   [Rod Wideman] Define a new ASC/ASCQ for "Logical Unit Not Ready – Robotics Disabled".

Carryover

07-007   [Noud Snelder] Incorporate the approved definition of "Magazine" in the next revision of SMC-3.

Done. SMC-3r5

07-008   [Noud Snelder] Remove the approved definition of "Magazine" from the next revision of 06-397r1.

Done

07-009   [Noud Snelder] Define which commands can be processed during the Not Ready state.

Done 07-060r0

07-010   [Curtis Ballard] Create & post 06-272r2 (r1 as revised at the January meeting).

Done

07-011   [Michael Banther] Check if "Tape Alert" is an HP trademark.

Done. Yes it is.

07-012   [Michael Banther] Create and post 06-420r1 (r0 revised as per discussion at the February 21, 2007 conference call).

Carryover

7.   Old Business   Group

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

Kevin Butt presented and asked if his modifications were appropriate and can be fed back to

ISV's. A few changes were made.

AI - Kevin will send a note to the ISV's pointing them to "Working List for ISV feedback (SMC/SSC/ADC/SPC) (05-315r4)" if they desire status.

7.2   SMC-3: Element Statistics log page for SMC (06-394r2)   Kevin Marks

Kevin Marks introduced the changes in the new revision of his proposal.

Discussion resolved around how to represent the byte offset for the VENDOR SPECIFIC OFFSET. Should it used "n" or "32-n"? Decided it should be "n".

The next discussion is about what the value should be, an offset from byte 0 or from byte 8? there is also a problem with "in the log parameter that follows". Reworded to indicate the offset in this parameter.

Paul Entzel believes that we are asking for trouble if the intent is to allow growth of standard counters. A discussion ensued with suggestions to add a set of reserved bytes between the standards specified counters and the vendor specific. Rod and Kevin Butt suggested that we keep the current concept. There was discussion of using subpages to add the vendor specific information. Kevin Marks pointed out that since SMC-3 references SPC-3 there are no subpages. The group agreed to remove the vendor-specific portion.

There was a discussion of using a variable length PARAMETER LENGTH field. This means adding bytes 28-n Reserved to the bottom of the table and removing bytes 4 - 7. Paul Entzel, this forces the application client to parse this using the PARAMETER LENGTH field. Kevin agreed to make this change.

Discussed the "NUMBER OF DETERMINED VOLUME IDENTIFIERS" and the "NUMBER OF UNREADABLE VOLUME IDENTIFIERS" fields. There was a discussion of how to specify when to udpate the number. Also, there should be a statement, "if no barcode reader is installed the number shall be set to zero.

Kevin Marks moved that SMC-3: Element Statistics log page for SMC (06-394r2) (06-394r2 as revised) be included into SMC-3. Paul Suhler seconded the motion. The motion passed unanimously.

Kevin Marks accepted an Action Item to revise & post SMC-3: Element Statistics log page for SMC (06-394r2) (06-394r2 as revised).

Noud Snelder to incorporate SMC-3: Element Statistics log page for SMC (06-394r2) (06-394r2 as revised) into SMC-3.

7.3   SMC-3: Diagnostics Data log page (06-395r3)   Kevin Marks

Kevin Marks introduced the changes in the new revision of his proposal.

Kevin pointed out that Recovered Errors were not desired. Kevin asked why it was we asked him to review if he wanted NOT READY sense key reported.

Kevin Butt suggested to use the five error bit fields a coded value instead of bit fields. This shows that they are mutually exclusive and allows for growth. Kevin Marks liked the idea.

There was discussion of a need for definitions for "Pick" and "Place". Nobody volunteered and since they are already used in SMC-3, Kevin does not need to provide these definitions.

Rod Wideman suggested we remove the Vendor-specific field and propose a subpage usage to add

a Media Changer Diagnostic Data Vendor Specific Information page as a subpage. Kevin Marks agreed. Table z+4 was discussed and how there is no need to have the LSAV column. This is a general coment of how to use the valid bit in conjunction with the error values. Byte 46 becomes the error codes.

Kevin Marks accepted an Action Item to create & post a new revision of his proposal.

7.4   SMC-3 Error codes overview (06-397r2)   Noud Snelder

Noud Snelder described the changes in the latest revision of his proposal.

There was some discussion about where this list of error codes and when they are returned should be placed.

7.5   SMC-3, Report Element Information (06-272r2)   Curtis Ballard

Curtis Ballard described the changes in the latest revision of his proposal including some editorial comments added since it was posted.

Corrected the OpCode (Maintenance In).

Rod suggested that the reference to SPC-3 for a description of certain fields should be broken up such that the fields being referenced are in order of where they appear in the CDB. This will help with the ALLOCATION LENGTH and specifying that it does not require complete descriptors.

Kevin Butt stated he was concerned about having a field in the CDB with the same name as a field in the returned data. The suggestion was to use something like, "SELECTED ELEMENT TYPE CODE" instead of "ELEMENT TYPE CODE" Paul Entzel suggested that the only change that is needed is to move the description of the field in the CDB up to just under the CDB. Then this is clear as to what field is being described and there is no confusion. Rod Wideman also suggested that the description in the descriptor of the ELEMENT TYPE CODE just reference the existing table. Result is to reword to not reference the CDb field and to combine with the sentence just above table y+3.

Curtis mentioned there were some editorial changes but they were not interesting enough to take time on. Also dropped order of supported volumes types returned, because preferred volume type did not make sense. There was discussion of how forcing a specific order for return dis not seem to be any value add, but only a burden for test.

The descriptors should allow a grouping of contiguous elements with the same characteristics into the same returned descriptor. This should be specified by beginning element address and number of elements.

Kevin Butt asked what if any statement has been or needs to be made about precedence of this command vs. RES command. The answer is, this is a reporting not a setting so they should match and if they do not it is a code bug. It does not need to be specified.

Rod Wideman stated we should have an informative annex to map the RES command onto this Report Element Information command and the Report Volume Information command.

Kevin Butt asked why in the Element Location Descriptor there is both a parameter length and a parameters count. There were also concerns about the parameters count field being too

small, since the types field is twice as large.

There is a discussion about how many dimensions are needed to be able to define in a standardaized way the location that can be used by an operator to physically locate an element. Rod Wideman stated this does not seem possible. Drop attempt ot define any specific location in location type codes.

Crutis requested that the group look at the coment on page 12 and review characteristics that were reported in RES but no in this proposal.

Time was called for work on this proposal.

Curtis accepted an Action Item to create & post a new revision of his proposal.

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

Michael Banther requested that this item be deferred to the next meeting.

7.7   SMC-3 New Additional Sense Codes for Media Changers (06-110r0)   Rod Wideman

Rod Wideman requested that this item be removed as agenda item 7.12 replaces it.

7.8   SMC-3 Add PREVENT ALLOW MEDIA REMOVAL command (06-442r1)   Noud Snelder

Noud discussed this proposal with the group. The intent is to bring PAMR into SMC-3.

There was a need to reference SSC-3 for medium removal prevented in a data transfer device. however, since it currently references SPC-3 it is OK. However should just say data transfer device prevented medium removal - this is not related to PAMR.

Noud Snelder to revise and post SMC-3 Add PREVENT ALLOW MEDIA REMOVAL command (06-442r1)

7.9   SMC-3 Support column in mode page codes and subpage codes table (06-456r2)   Noud Snelder

Noud discussed the changes to this proposal.

Noud Snelder made a motion to incorporate SMC-3 Support column in mode page codes and subpage codes table (06-456r3) (06-456r2 as revised) into SMC-3. Michael Banther seconded the motion.

Noud Snelder to revise SMC-3 Support column in mode page codes and subpage codes table (06-456r2) and post as 06-456r3. Motion passed unanomously.

Noud Snelder to incorporate SMC-3 Support column in mode page codes and subpage codes table (06-456r3) into SMC-3.

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

Michael Banther request that that this item be deferred to the next meeting.

7.11   SMC-3 New Additional Sense Codes Usage (07-018r0)   Rod Wideman

This item was not addressed because of a lack of time.

7.12   SMC-3 Clarification of reporting drive prevented media removal (07-015r1)   Curtis Ballard

This item was not addressed because of a lack of time.

7.13 SMC-3 Medium transport element subclause correction (07-024r0)   Rod Wideman

Rod discussed this proposal.

Rod Wideman made a motion to incorporate SMC-3 Medium transport element subclause correction (07-024r0) into SMC-3. Noud Snelder seconded the motion. The motion passed unanimously.

Noud Snelder to incorporate SMC-3 Medium transport element subclause correction (07-024r0) into SMC-3.

7.14 SMC-3: RES - Incomplete descriptors (07-035r0)   Kevin Butt

Kevin presented this proposal and the group made changes. Kevin Butt moved that 07-035r1 (07-035r0 as modified) be included into SMC-3. Geoff Barton seconded the motion. The voting was unanimous.

Kevin Butt agreed to revise and post SMC-3: RES - Incomplete descriptors (07-035r0).

Noud Snelder has an action to incorporate SMC-3: RES - Incomplete descriptors 07-035r1 into SMC-3.

8.   New Business   Group

8.1   SMC-3 Processed commands during not ready state (07-060)   Noud Snelder

This item was not addressed because of a lack of time.

8.2   SMC-3: Clarifying Addresses and Volumes (07-122)   Roger Cummings

Deferred because Roger was not present.

9.   Next Meeting Requirements   Michael Banther

Subject to approval by the T10 Plenary, the group will hold a meeting on May 7, 2007 during the T10 plenary week in Seattle, WA beginning upon the completion of the ADI-2 Working Group and completing no later than 7PM PST. The group discussed the need for an interim teleconference, and concluded enough work had been deferred from this meeting to justify a call. A date of Wednesday April 11 at 8am PDT for two hours was selected, and HP volunteered to host the call.

10.   Review New and Outstanding Action Items   Kevin Butt

Kevin Butt reviewed the following items with the meeting:

06-002   [Michael Banther] Reporting of virtual libraries / partitioning to host.

06-004   [Roger Cummings] Change the 3rd paragraph of 5.3.1 to clarify addresses and volumes.

06-005   [Roger Cummings] Revise 05-271r2 and post as 05-271r3.

06-020   [Robert Payne] Define a philosophy for Write Exclusive Persistent Reservations in SMC.

06-044   [Roger Cummings] Solicit additional vendor-specific sense codes from library vendors per June discussion item 4.4.

06-063   [Halvard Eriksen] Investigate use of LOGICAL UNIT NOT READY, INITIALIZING COMMAND REQUIRED error code.

06-065   [Michael Banther] Create and post 06-420r1 (r0 as revised at the November meeting).

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

07-003   [HP] Create a proposal to define the usage of the "Cleaning Requested" and "Cleaning Failure" error codes.

07-004   [Kevin Butt] Create a proposal for the "Medium Magazine" error codes.

07-006   [Rod Wideman] Define a new ASC/ASCQ for "Logical Unit Not Ready – Robotics Disabled".

07-012   [Michael Banther] Create and post 06-420r1 (r0 revised as per discussion at the February 21, 2007 conference call).

07-013   [Kevin Butt] Kevin will send a note to the ISV's pointing them to "Working List for ISV feedback (SMC/SSC/ADC/SPC) (05-315r4)" if they desire status.

07-014   [Kevin Marks] accepted an Action Item to revise & post SMC-3: Element Statistics log page for SMC (06-394r2) (06-394r2 as revised).

07-015   [Noud Snelder] to incorporate SMC-3: Element Statistics log page for SMC (06-394r2) (06-394r2 as revised) into SMC-3.

07-016   [Kevin Marks] Revise and post SMC-3: Diagnostics Data log page, 06-395r4 (06-395r3 as revised).

07-017   [Group] Make sure the all the functionality of Read Element Status is covered by the Report Element Information command and the Report Volume Information command and examine if an informative annex to map the RES command onto these is appropriate.

07-018   [Kevin Butt] agreed to revise and post SMC-3: RES - Incomplete descriptors (07-035r0)

07-019   [Noud Snelder] has an action to incorporate SMC-3: RES - Incomplete descriptors 07-035r1 into SMC-3

07-020   [Noud Snelder] to revise SMC-3 Support column in mode page codes and subpage codes table (06-456r2) and post as 06-456r3.

07-021   [Noud Snelder] to incorporate SMC-3 Support column in mode page codes and subpage codes table (06-456r3) into SMC-3.

07-022   [Noud Snelder] to revise and post SMC-3 Add PREVENT ALLOW MEDIA REMOVAL command (06-442r1)

07-023   [Noud Snelder] to incorporate SMC-3 Medium transport element subclause correc-

tion (07-024r0) into SMC-3

07-024 [Curtis Ballard] revice and post SMC-3, Report Element Information (06-272r3) (06-272r2 as revised)

11. Adjournment   Group

Kevin Butt made a motion for adjournment. Rod Wideman seconded the motion. The group passed the motion unanimously. Michael Banther adjourned the group at 8:09 PM CST.