

Accredited Standards Committee*

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Reply to: John Lohmeyer

To: T10 Membership
From: Ralph Weber and John Lohmeyer
Subject: SCSI Commands, Architecture, & Protocol Working Group Meeting -- September 14, 2005
Vancouver, BC Canada

Agenda

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 - 5.3.1 SBC-2: Proposal for USB Solid State Drive Mode Sense specification (04-362) [LaVarre]
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 - 5.5.3 OSD-2 Multi-Object LIST and LIST COLLECTION command enhancements (05-316) [Weber]
 - 5.5.4 OSD-2 Four New Multi-Object Commands (05-328) [Weber]

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6. SCSI Protocol Topics
 - 6.1 Fibre Channel Protocol
7. Old Business
 - 7.1 Style Guide (05-085) [Penokie]
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10. Review of Recommendations to the Plenary
11. Meeting Schedule
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Results of Meeting

1. Opening Remarks

John Lohmeyer called the meeting to order at 9:00 a.m. Wednesday, September 14, 2005. He thanked Rachelle Trent and Kelly Pollock of PMC-Sierra for hosting the meeting.

As is customary, the people attending introduced themselves.

2. Approval of Agenda

The draft agenda was approved with no additions or changes.

No items were added/revised during the course of the meeting.

3. Attendance and Membership

Attendance at working group meetings does not count toward minimum attendance requirements for T10 membership. Working group meetings are open to any person or organization directly and materially affected by T10's scope of work. The following people attended the meeting:

Name	S	Organization
Ms. Pat Thaler	P	Agilent Technologies
Mr. Ron Roberts	A	Broadcom Corp.
Mr. Kevin Marks	P	Dell, Inc.
Mr. Gary S. Robinson	P	EMC Corp.
Mr. Kenneth Hirata	A	Emulex
Mr. Ralph O. Weber	P	ENDL Texas
Mr. Walt Hubis	V	Engenio Information Tech.
Mr. Mike Fitzpatrick	P	Fujitsu
Mr. Nathan Hastad	P	General Dynamics
Mr. Michael Banther	V	Hewlett Packard Co.
Mr. Wayne Bellamy	V	Hewlett Packard Co.
Mr. Rob Elliott	P	Hewlett Packard Co.
Mr. Steven Fairchild	V	Hewlett Packard Co.
Mr. Dan Colegrove	P	Hitachi Global Storage Tech.
Mr. George O. Penokie	P	IBM / Tivoli Systems
Mr. Robert Sheffield	P	Intel Corp.
Mr. Martin Furuholm	A	Lexar Media, Inc.
Mr. Brad Besmer	V	LSI Logic Corp.
Mr. Brian Day	V	LSI Logic Corp.
Mr. Steve Johnson	V	LSI Logic Corp.
Mr. John Lohmeyer	P	LSI Logic Corp.
Mr. Avraham Shimor	P	M-Systems
Mr. Mark Evans	P	Maxtor Corp.
Mr. Mark Overby	P	Nvidia Corp.
Mr. James Williams	AV	Oracle
Mr. Craig W. Carlson	A	QLogic Corp.
Mr. Greg Elkins	V	QLogic Corp.
Mr. Paul Entzel	P	Quantum Corp.
Dr. Paul Suhler	A	Quantum Corp.
Mr. Jim Coomes	A	Seagate Technology
Mr. Gerald Houlder	P	Seagate Technology
Mr. William Martin	P	Sierra Logic, Inc.
Mr. Vit Novak	P	Sun Microsystems, Inc.
Mr. Erich Oetting	A#	Sun Microsystems, Inc.
Mr. Roger Cummings	P	Symantec
Mr. Curtis Stevens	P	Western Digital
Mr. Jeff Williams	P	Xiotech Corp.
Mr. Rich Ramos	V	Xyratex

38 People Present

Status Key: P - Principal
 A,A# - Alternate
 AV - Advisory Member
 L - Liaison
 V - Visitor

4. SCSI Architecture Model Topics

4.1 SAM-4: Converting to UML part 1 (04-023) [Penokie]

George Penokie presented the latest revision of the proposal to model SAM-4 in UML (04-023r2). The group identified several needed corrections and George agreed to prepare a new revision for consideration at the next meeting.

4.2 SAM-4 iSCSI allows portal group tag of zero (05-301) [Elliott]

Rob Elliott presented a proposal to update SAM-4 Annex A to match the RFC 3720 iSCSI identifiers and names (05-301r0).

Rob Elliott moved that 05-301r0 be recommended for inclusion in SAM-4. Bill Martin seconded the motion. In the absence of any objections, the motion passed unanimously.

5. Command Set Topics

5.1 Reservations Proposals

5.1.1 Persistent Reservations PREEMPT AND ABORT Clarification (05-296) [Weber]

Ralph Weber presented a proposal to clarify wording in the PREEMPT AND ABORT definition (05-296r0). The change was motivated by confusing wording in the current text as reported by the ANSI Editor.

Ralph Weber moved that 05-296r0 be recommended for inclusion in SPC-4. Rob Elliott seconded the motion. In the absence of any objections, the motion passed unanimously.

5.1.2 Persistent Reservation Issue #346 (05-346) [Cummings]

Roger Cummings presented a proposal to add a level-count field to the INQUIRY command CDB (05-346r0). The motivation for the change was detecting old-technology bridges and their ill effect on Persistent Reservations commands.

The group offered several alternatives to the INQUIRY change most of which Roger felt would not be implemented by older bridges. Roger stated that the resistance to the INQUIRY changes was not substantial and stated that he would bring a detailed proposal to the next meeting.

5.2 SCSI Primary Commands Proposals

5.2.1 SPC-4: Log Page-Subpages (04-389) [Butt]

Because Kevin Butt was unable to attend this meeting, George Penokie asked that discussion of this topic be deferred to the next meeting.

5.2.2 SPC Security Commands proposal (05-157) [Houlder]

Gerry Houlder presented the latest revision of the Trusted Out and Trust In commands definitions (05-157r4). Concerns were raised regarding the new definitions proposed for Transfer Length and Allocation Length. Gerry agreed to prepare a new revision of the proposal. Several other corrections were requested.

Gerry stated that the next revision will be presented during the November meeting week and he will probably request approval of the proposal at that time.

5.2.3 SPC-4: Log Command Corrections (05-232) [Penokie]

Because Kevin Butt was unable to attend this meeting, George Penokie asked that discussion of this topic be deferred to the next meeting.

5.2.4 SPC-4, Combinations of bits and fields in the LOG SELECT CDB and log parameters (05-242) [Evans]

Because Kevin Butt was unable to attend this meeting, George Penokie asked that discussion of this topic be deferred to the next meeting.

5.2.5 SPC-4 Create well known LUN for security commands (05-252) [Houlder]

Gerry Houlder reviewed a proposal to define a well-known logical unit for processing Trusted Out and Trusted In commands that affect an entire SCSI device (05-252r1). No significant issues were raised regarding the content of the proposal. Gerry stated that the proposal will be presented again during the November meeting week and he will probably request approval of the proposal at that time.

5.2.6 SPC-4: Statistics and Performance Log Pages (05-248) [Penokie]

Because Kevin Butt was unable to attend this meeting, George Penokie asked that discussion of this topic be deferred to the next meeting.

5.2.7 SPC-4: Update reference to ANSI/IEEE 1212-1994? (reflector message) [Weber]

Ralph Weber reminded the group of a note from the ANSI Editor reporting that IEEE 1212-2001 has replaced IEEE 1212-1994. He stated that Peter Johansson failed to respond to an e-mail message sent on 13 July requesting advice on mirroring the change in SPC-4.

Ralph Weber moved that T10 be asked to instruct the SPC-4 editor to replace the IEEE 1212-1994 reference with a reference to IEEE 1212-2001. Gerry Houlder seconded the motion. In the absence of any objections, passed unanimously.

5.2.8 SPC-4: Self Describing Command Timeouts (05-284) [Butt]

Because Kevin Butt was unable to attend this meeting, George Penokie asked that discussion of this topic be deferred to the next meeting.

5.2.9 Correct Log Page Format Tables in SPC-4 & SBC-3 (05-299) [Weber]

Ralph Weber presented a proposal to clarify that all log page code values are six bits, not eight bits (05-299r0). Rob Elliott noted that a SAS log page was omitted from the proposal and Ralph agreed to prepare a new revision.

Ralph Weber moved that 05-299r1 (r0 as modified) be recommended for inclusion in SPC-4, SBC-3, and SAS-2. Michael Banther seconded the motion. In the absence of any objections, the motion passed unanimously.

5.2.10 SPC-4 Remove restriction on counting log parameters (05-308) [Banther]

Michael Banther presented a proposal to allow the other log parameters in a log page to not stop counting when one log parameter in the log page overflows (05-308r0). The proposal defined control over the new behavior in a mode page and concerns were raised about the data returned by a MODE SENSE command. Michael responded that the MODE SENSE behavior would be vendor specific.

Because vendor-specific MODE SENSE behavior concerned several of those present, efforts were made to find a way to represent the behavior in the log parameters instead of the mode parameters. An idea for defining a new field based on a combination of LBIN and LP bits in the common log parameters byte seemed promising but detailed study was deemed necessary.

Mark Evans offered to incorporate the necessary changes in his log page rewrite proposal (see agenda item 5.2.4). Michael agreed to work with Mark to make the next revision of 05-242.

5.2.11 SPC-4: Allow Mode Sense Through Read Only Persistent Reservation (05-331) [Penokie]

George Penokie presented a proposal to allow Mode Sense through Read Only Persistent Reservations (05-331r1). The group discussed allowing Mode Sense through other types of reservations. Reporting how reservations are handled was also discussed.

George Penokie moved that 05-331r1 be recommended for inclusion in SPC-4. Vit Novak seconded the motion. In the absence of objections, the motion passed unanimously

5.2.12 SMC-3 & SPC-4: Remove Attached Media Changer model (05-317) [Entzel]

Paul Entzel reported that the SMC-3 group was not able to discuss this topic and asked that discussing the proposal in this working group should be deferred to the next meeting.

5.3 SCSI Block Commands Proposals

5.3.1 SBC-2: Proposal for USB Solid State Drive Mode Sense specification (04-362) [LaVarre]

On behalf of Pat LaVarre, Martin Furuholm asked that discussion of this topic be deferred to the next meeting.

5.3.2 SBC-3, SPC-4: Application ownership of protection information Reference Tag (05-156) [Penokie]

George Penokie presented a proposal to extend the usage of the protection information reference tag in SBC-3 (05-156r5).

George asked the group to consider whether to keep or remove the XLB Invalid bit in the 32-byte CDBs and noted that if the bit is removed support from the 32-byte CDBs will be removed from the new mode. No one present could defend the need for the XLB Invalid bit and several attempts to find uses failed. Therefore, it was agreed that the XLB Invalid bit definition needs to be removed.

Based on this decision, George agreed to prepare a new revision.

The group requested several other changes.

George stated that he expected to request a vote on the proposal during the November meeting week.

Gerry Houlder presented an un-posted proposal to replace table 3 in 05-156r5. George stated that the changes would not be incorporated in the next revision of his 05-156.

5.3.3 More clarification of Application Tag Behavior (05-240) [Houlder]

Gerry Houlder asked that discussion of this topic be removed from future agendas.

5.3.4 SBC-3: Change to background medium scan (05-313) [Houlder]

Gerry Houlder presented a proposal to revise the definition of the BMS Interval Time field so that variations in behavior based on system load would be less of a factor (05-313r0).

Gerry Houlder moved that 05-313r0 be recommended for inclusion in SBC-3. Vit Novak seconded the motion. In the absence of any objections, the motion passed unanimously.

5.3.5 SBC-3 SPC-4 Background scan additions (05-340) [Elliott]

Rob Elliott presented a proposal to enhance the background media scan function (05-340r0). The group suggested several changes and offered advice regarding the eight questions in the proposal.

Rob agreed to prepare a revised proposal for consideration at the next meeting.

5.4 SCSI Enclosure Services Proposals

5.4.1 SES-2 Display element enhancements (05-011) [Elliott]

Rob Elliott requested that discussion of this topic be deferred to the next meeting.

5.5 Other Proposals

5.5.1 OSD-2 REMOVE PARTITION Security Controlled by Root Attributes (05-311) [Weber]

Ralph Weber presented a proposal to clarify that the Root Security Attributes specify the restrictions on processing of REMOVE PARTITION commands (05-311r0). The group found no errors in the proposal.

Ralph requested that discussion of this topic be removed from future agendas.

5.5.2 OSD-2 No Capability can have a Vendor Specific integrity check value algorithm (05-314) [Weber]

Ralph Weber presented a proposal to change supported integrity check value algorithm code values so that vendor-specific algorithms can be represented (05-314r0). Rob Elliott noted that there is a level of indirection in the definitions that makes the current nomenclature correct. Ralph expressed fears that the indirection is not represented throughout OSD. He decided to review the proposal and re-present it to the SNIA OSD TWG.

5.5.3 OSD-2 Multi-Object LIST and LIST COLLECTION command enhancements (05-316) [Weber]

Ralph Weber presented a proposal that allows LIST and LIST COLLECTION commands to return attributes in addition to object IDs (05-316r0). The group found no errors in the proposal.

Ralph requested that discussion of this topic be removed from future agendas.

5.5.4 OSD-2 Four New Multi-Object Commands (05-328) [Weber]

Ralph Weber presented a proposal to define GET MEMBER ATTRIBUTES, QUERY, REMOVE MEMBER OBJECTS, and SET MEMBER ATTRIBUTES commands (05-328r0). The group noted several areas needing corrections and enhancements. Ralph agreed to prepare a new revision of the proposal.

6. SCSI Protocol Topics

6.1 Fibre Channel Protocol

The working group agreed that this topic should be removed from future agendas.

7. Old Business

7.1 Style Guide (05-085) [Penokie]

George Penokie asked that conference calls be scheduled to discuss the style guide.

8. New Business

8.1 SAS-2 Zoning (05-144) [Liao, Gorshe and Grieff]

John Lohmeyer reported that this item was probably entered on this agenda by a error in the use of the web site document number assignment tool. The group agreed and asked that this topic be removed from future agendas.

9. Review of Working Drafts

No requests were made to review working drafts at this meeting.

10. Review of Recommendations to the Plenary

Ralph Weber noted that the following recommendations have been made to the T10 plenary:

For SAM-4:

05-301r0 (iSCSI allows portal group tag of zero) [Elliott]

For SPC-4:

05-296r0 (Persistent Reservations PREEMPT AND ABORT Clarification) [Weber]

05-331r1 (Allow Mode Sense Through Read Only Persistent Reservation) [Penokie]

05-337 (Change IEEE 1212-1994 reference to IEEE 1212-2001) [Weber]

For SBC-3:

05-313r0 (Change to background medium scan) [Houlder]

For SPC-4, SBC-3, and SAS-2:

05-299r1 (Correct Log Page Format Tables in SPC-4, SBC-3, & SAS-2) [Weber]

11. Meeting Schedule

The next meeting of the SCSI Commands, Architecture, and Protocols Working Group will be Wednesday, November 9, 2005 from 9 a.m. to 8 p.m. (or until all agenda items are completed). The meeting will be in Austin, TX at the Diskill Hotel (512-474-5911) hosted by Dell, Inc.

12. Adjournment

The meeting was adjourned at 5:55 p.m. on Wednesday September 14, 2004.