

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 -- November 7-8, 2007
Las Vegas, NV

Agenda

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 - 4.2 SAM-4: Task Tag Length and FCP (07-139) [Peterson]
 - 4.3 SAM-5 SCSI Initiator and Target Port capability attributes (07-429) [Elliott]
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7. Security
 - 7.1 Capability based Command Security (07-454) [Penokie]
 - 7.2 SPC-4: Establishing a Security Association using IKEv2 (07-437) [Black/Ball/Weber]
 - 7.3 ESP-SCSI for Parameter Data (07-169r1) [Weber]
 - 7.4 SPC-4: UML model for CbCS (07-430) [Penokie]
 - 7.5 [SPC-4] Proposed Changes to 'Security algorithms codes' Table (07-499r0) [Ball]

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8. Old Business
9. New Business
10. Review of Working Drafts
11. Review of Recommendations to the Plenary
12. Meeting Schedule
13. Adjournment

Results of Meeting

1. Opening Remarks

John Lohmeyer called the meeting to order at 9:00 a.m. Wednesday, November 7, 2007. He thanked Dan Colegrove of Hitachi Global Storage Technology for hosting the meeting. As usual, the people present introduced themselves.

2. Approval of Agenda

The draft agenda was approved with no additions or changes.

The following items were added/revised during the course of the meeting:

- 4.6 SAM-4 Comment on UA Precedence list interaction for incorrect LUN selections (07-450) [Knight]

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
Mr. Noud Snelder	V	BDT
Mr. David Peterson	P	Brocade
Mr. Robert Snively	A	Brocade
Mr. Kevin Marks	P	Dell, Inc.
Mr. David Black	A	EMC Corp.
Mr. Gary S. Robinson	P	EMC Corp.
Mr. William Martin	P	Emulex
Mr. Robert H. Nixon	A	Emulex
Mr. Ralph O. Weber	P	ENDL Texas
Mr. Mike Fitzpatrick	P	Fujitsu
Mr. Michael Banther	A	Hewlett Packard Co.
Mr. Rob Elliott	P	Hewlett Packard Co.
Mr. Steven Fairchild	V	Hewlett Packard Co.
Mr. Christopher Williams	V	Hewlett Packard Co.
Mr. Eric Hibbard	V	Hitachi Data Systems
Mr. Dan Colegrove	P	Hitachi Global Storage Tech.
Mr. Glen Jaquette	V	IBM
Mr. Kevin Butt	P	IBM Corp.
Mr. George O. Penokie	A	IBM Corp.
Mr. Sivan Tal	V	IBM Corp.

Mr. Joel Silverman	P	Kawasaki Microelectronics Am
Mr. Dennis Moore	P	KnowledgeTek, Inc.
Mr. John Geldman	P	Lexar Media, Inc.
Mr. Walt Hubis	V	LSI Corp.
Mr. John Lohmeyer	P	LSI Corp.
Mr. Matthew Ball	V	M.V. Ball Technical Consulting, Inc.
Mr. David Burg	V	Microsoft Corp.
Mr. Robert Griswold	A	Microsoft Corp.
Mr. Subhash Sankuratripati	A	Network Appliance
Mr. Mark Overby	P	Nvidia Corp.
Mr. Tim Symons	P	PMC-Sierra
Mr. Craig W. Carlson	AV	QLogic Corp.
Dr. Paul Suhler	P	Quantum Corp.
Mr. Michael Rogers	A	Samsung
Mr. Dhaval Parikh	V	SanDisk Corporation
Mr. Avraham Shimor	P	SanDisk Corporation
Mr. Gerald Houlder	P	Seagate Technology
Mr. Sami Iren	V	Seagate Technology
Mr. David Deming	AV	Solution Technology
Mr. Erich Oetting	P	Sun Microsystems, Inc.
Mr. Raymond Gilson	A	Symantec Corporation
Mr. Halvard Eriksen	AV	Tandberg Storage
Mr. Mark Evans	P	Western Digital
Mr. Curtis Stevens	A	Western Digital

44 People Present

Status Key: P - Principal
 A - Alternate
 AV - Advisory Member
 E - Emeritus
 L - Liaison
 V - Visitor

4. SCSI Architecture Model Topics

4.1 SAM-4 Response Fence for protocol services (06-341) [Elliott]

Rob Elliott requested that discussion of the proposal to reflect transport layer ordering of commands and task management functions in SAM-4 (06-341r1) be deferred to the next meeting.

4.2 SAM-4: Task Tag Length and FCP (07-139) [Peterson]

Dave Peterson asked that this topic be removed from future agendas.

4.3 SAM-5 SCSI Initiator and Target Port capability attributes (07-429) [Elliott]

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

4.4 SAM-4 Letter Ballot comments resolution document (07-478) [Penokie]

Due to the late hour, discussion of this topic was deferred to the SAM-4 Letter Ballot comments resolution meeting and/or the next CAP meeting.

4.5 SAM-4 SPC-4 SBC-3 Unit attention condition queuing (07-459) [Elliott]

Rob Elliott presented a proposal to codify unit attention queuing (07-459r0). The group requested numerous changes, including changes which increased the flexibility devices have in their behavior.

Rob agreed to prepare a new revision for consideration at the next meeting.

4.6 SAM-4 Comment on UA Precedence list interaction for incorrect LUN selections (07-450) [Knight]

Due to the late hour, discussion of this topic was deferred to the SAM-4 Letter Ballot comments resolution meeting and/or the next CAP meeting.

5. Command Set Topics

5.1 SCSI Primary Commands Proposals

5.1.1 SPC-4: ASC/ASCQ Reservations for ATA REQUEST SENSE (07-081) [Overby]

Mark Overby asked that discussion of the proposal to define a range of additional sense codes for use by T13 (07-081) be deferred to the next meeting.

5.2 SCSI Block Commands Proposals

5.2.1 SBC-3 Reporting nominal form factor (07-472) [Elliott]

Rob Elliott presented a proposal to add VPD page reporting of drive nominal form factor (07-472r0). Kevin Marks moved that 07-472r0 be recommended for inclusion in SBC-3. Curtis Stevens seconded the motion. The motion passed 3:1:19.

5.2.2 SBC-3 WRITE LONG COR_DIS and WR_UNCOR interaction (07-451) [Elliott]

Rob Elliott presented a proposal to cleanup the specification of interactions between recently added WRITE LONG features (07-451r). The group requested that the proposal be modified to discuss the (non)effects of pseudo-uncorrectable errors on log page data, and Rob noted the needed changes. Additional changes were agreed to better align the SBC-3 definitions with those already in use by SATA.

Rob agreed to prepare a new revision for consideration at the next meeting.

5.2.3 SBC-3 Read-Write Error Recovery clarifications (07-447) [Elliott]

Rob Elliott presented a proposal to correct some recently discovered bugs in the Read-Write Error Recovery mode pages (07-447r0). The group requested a few changes, and Rob agreed to prepare a new revision.

Rob Elliott moved that 07-447r1 (r0 as revised) be recommended for inclusion in SBC-3. Mark Evans seconded the motion. In the absence of objections, the motion passed unanimously.

5.2.4 SBC-3 Mention that DIF equals protection information (07-481) [Elliott]

Rob Elliott presented a proposal to briefly define DIF and 'end-to-end data protection' in SBC-3 (07-481r0).

David Black moved that Rob Elliott be instructed to remove the last sentence in 07-481r0. Bob Griswold seconded the motion. The motion passed 7:2:14.

Rob Elliott moved that 07-481r1 (r0 as revised) be recommended for inclusion in SBC-3. David Black seconded the motion. The motion passed 14:1:9.

5.3 SCSI Enclosure Services Proposals

5.3.1 SES-2 Additional Element Status length field correction (07-428) [Elliott]

Rob Elliott presented a proposal to correct a field definition in the Additional Element Status descriptor (07-428r0). Kevin Marks moved that 07-428r0 be recommended for inclusion in SES-2. Rob Elliott seconded the motion. In the absence of objections, the motion passed unanimously.

5.3.2 SES-2 Clarify no null termination of strings (07-099) [Elliott]

Rob Elliott presented a proposal to modernize the definitions of ASCII strings and to prohibit null termination of ASCII strings (07-099r0). Rob Elliott moved that 07-099r0 be recommended for inclusion in SES-2. Mark Overby seconded the motion. In the absence of objections, the motion passed unanimously.

5.3.3 SES-2 Bypass reason code (07-457) [Elliott]

Rob Elliott presented a proposal to add a Reason field to the Fibre Channel Additional Element Status descriptor to report why a Fibre Channel port is bypassed (07-457r0). Rob Elliott moved that 07-457r0 be recommended for inclusion in SES-2. Bob Nixon seconded the motion. In the absence of objections, the motion passed unanimously.

5.4 Other Proposals

5.4.1 OSD-2 Security Enhancements (07-301) [Weber]

Ralph Weber briefly presented a proposal to add range-based object security and attribute number security capability formats to OSD-2 (07-301r4). The group requested several minor changes and Ralph agreed to prepare a new revision.

Ralph Weber moved that 07-301r5 (r4 as revised) be recommended for inclusion in OSD-2. Sami Iren seconded the motion. In the absence of objections, the motion passed unanimously.

5.4.2 OSD-2 Exceptions Management enhancements (07-378) [Weber]

Ralph Weber and Sami Iren presented a proposal to enhance OSD-2 error detection and recovery (07-378r1). Sami noted that the inaccessibility attributes could be removed as described in editor's note 1. The group requested several editorial corrections and Ralph agreed to prepare a new revision.

Sami Iren moved that 07-378r2 (r1 as revised) be recommended for inclusion in OSD-2. Ralph Weber seconded the motion. In the absence of objections, the motion passed unanimously.

6. SCSI Protocol Topics

6.1 USB Attached SCSI Proposals

6.1.1 Project Proposal: USB Attached SCSI (07-400) [Stevens]

Curtis Stevens asked that this topic be removed from future agendas.

7. Security

7.1 Capability based Command Security (07-454) [Penokie]

Sivan Tal and George Penokie reviewed the latest revision of the proposal to define capability-based command security (07-454r1). The group requested several changes and George agreed to prepare a new revision.

7.2 SPC-4: Establishing a Security Association using IKEv2 (07-437) [Black/Ball/Weber]

Ralph Weber, David Black, and Matt Ball presented a proposal for establishing a Security Association using the SECURITY PROTOCOL OUT and SECURITY PROTOCOL IN commands (07-437r3).

Significant changes were made in the assignments of algorithm code values, including incorporation of the concepts described in 07-499r0 (see agenda item 7.5). Numerous minor changes were also agreed upon. Ralph agreed to prepare a new revision.

David Black moved that 07-437r4 (r3 as revised) be recommended for inclusion in SPC-4. Matt Ball seconded the motion. In the absence of objections, the motion passed unanimously.

7.3 ESP-SCSI for Parameter Data (07-169r1) [Weber]

Ralph Weber led a discussion of this proposal to define a ESP-based parameter data feature for SPC-4 (07-169r3). The group noted that the proposal failed to properly cover combined-mode encryption algorithms, and Ralph agreed to prepare a new revision for consideration at then next meeting.

7.4 SPC-4: UML model for CbCS (07-430) [Penokie]

George Penokie presented a proposal to add UML drawings for Command-based Command Security (07-430r2). George Penokie moved that 07-430r2 be recommended for inclusion in SPC-4. Dennis Moore seconded the motion. In the absence of objections, the motion passed unanimously.

7.5 [SPC-4] Proposed Changes to 'Security algorithms codes' Table (07-499r0) [Ball]

Matt Ball presented a proposal which noted that SSC encryption algorithm usage differed from IKEv2-SCSI usage (07-499r0). During the discussion of 07-437r3 (see agenda item 7.2), Matt's changes were incorporated in the next revision of 07-437 proposal.

Matt asked that this topic be removed from future agendas.

8. Old Business

There was no old business.

9. New Business

There was no new business.

10. Review of Working Drafts

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

11. Review of Recommendations to the Plenary

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

For inclusion in SPC-4:

07-437r4 (Establishing a Security Association using IKEv2) [Black/Ball/Weber]

07-430r2 (UML model for CbCS) [Penokie]

For inclusion in SBC-3:

07-472r0 (Reporting nominal form factor) [Elliott]

07-447r1 (Read-Write Error Recovery clarifications) [Elliott]

07-481r1 (Mention that DIF equals protection information) [Elliott]

For inclusion in SES-2:

07-428r0 (Additional Element Status length field correction) [Elliott]

07-099r0 (Clarify no null termination of strings) [Elliott]

07-457r0 (Bypass reason code) [Elliott]

For inclusion in OSD-2:

07-301r5 (Security Enhancements) [Weber]

07-378r2 (Exceptions Management enhancements) [Weber]

12. Meeting Schedule

The next meeting of the SCSI Commands, Architecture, and Protocols Working Group will be Wednesday, January 16, 2008 from 9 a.m. until 7 p.m. and resuming Thursday, January 17, 2008 from 9 a.m. until noon. The meeting will be in Santa Ana, CA at the Embassy Suites Hotel (Reservations: 714-241-3800) hosted by Western Digital Corp.

13. Adjournment

The meeting was adjourned at 12:05 p.m. on Thursday November 8, 2007.