

Accredited Standards Committee*

InterNational Committee for Information Technology Standards (INCITS)

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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, 2006
Las Vegas, NV

Agenda

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3. Attendance and Membership
4. SCSI Architecture Model Topics
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 - 4.2 SAM-4 QUERY TASK TMF Extended Response (06-368) [Tuikov]
 - 4.3 SAM-4 SPC-4 Clear REPORTED LUNS DATA HAS CHANGED on any command (06-411) [Elliott]
 - 4.4 SAM-4 Time bounds of task states (06-460) [Tuikov]
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 - 5.1.8 Request for Additional Security Protocol Value Allocation (06-392) [Cummings]
 - 5.1.9 Alternative Proposal for Management Transport (06-465) [Cummings]
 - 5.1.10 SPC-4: Establishing a Security Association using IKEv2 (06-449) [Ball & Black]
 - 5.1.11 Clarifying Identifying Information Types Requirements (06-454) [Weber]
 - 5.1.12 Lost SET IDENTIFYING INFORMATION Parameter List Length requirement (06-455) [Weber]
 - 5.1.13 SPC-4 Encryption MAM Attribute (06-484) [Banther]
 - 5.1.14 Security Association Creation (06-492) [Black]
 - 5.2 SCSI Block Commands Proposals
 - 5.2.1 On-disk bitmap support (06-393) [Cummings]
 - 5.2.2 SBC-3 Mandate CAPACITY DATA HAS CHANGED unit attention (06-479) [Elliott]
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 - 5.4.1 Remove PREVENT ALLOW MEDIUM REMOVAL from OSD-2 (06-257) [Weber]
 - 5.4.2 OSD-2 REMOVE PARTITION Security Controlled by Root Attributes (05-311) [Weber]
 - 5.4.3 OSD-2 No Capability can have a Vendor Specific integrity check value algorithm (05-314) [Weber]
 - 5.4.4 OSD-2 Multi-Object LIST and LIST COLLECTION command enhancements (05-316) [Weber]
 - 5.4.5 OSD-2 Four New Multi-Object Commands (05-328) [Weber]
6. SCSI Protocol Topics
7. Old Business
8. New Business

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INCITS Secretariat, Information Technology Industry Council (ITI)

1250 Eye Street NW, Suite 200, Washington, DC 20005-3922

Email: incits@itic.org Telephone: 202-737-8888 FAX: 202-638-4922

9. Review of Working Drafts
10. Review of Recommendations to the Plenary
11. Meeting Schedule
12. Adjournment

Results of Meeting

1. Opening Remarks

John Lohmeyer called the meeting to order at 4:15 p.m. Tuesday, November 7, 2006. 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.

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
Mr. Chris Fore	P	Adaptec, Inc.
Mr. Robert Snively	P	Brocade Comm. Systems, Inc.
Mr. Gideon Avida	P	Decru
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. Walt Hubis	V	Engenio Information Tech.
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. Kevin Butt	A	IBM Corp.
Mr. George O. Penokie	P	IBM Corp.
Mrs. Vicky Duerk	V	Intel
Dr. Mark Seidel	A	Intel Corp.
Mr. Pak Seto	V	Intel Corp.
Mr. Joel Silverman	AV	Kawasaki Microelectronics Am
Mr. John Geldman	P	Lexar Media, Inc.
Mr. Graeme Weston-Lewis	V	LSI Logic
Mr. John Lohmeyer	P	LSI Logic Corp.
Mr. Avraham Shimor	P	M-Systems
Mr. David Peterson	P	McDATA
Mr. Larry Hofer	V	McDATA Corp
Mr. Frederick Knight	A	Network Appliance
Mr. Mark Overby	P	Nvidia Corp.
Mr. Craig W. Carlson	AV	QLogic Corp.
Mr. Matthew Ball	V	Quantum Corp.
Mr. Paul Entzel	P	Quantum Corp.
Dr. Paul Suhler	A	Quantum Corp.
Mr. Michael Rogers	AV	Samsung
Mr. Gerald Houlder	P	Seagate Technology
Mr. Stephen Finch	P	STMicroelectronics, Inc.
Mr. Erich Oetting	A#	Sun Microsystems, Inc.
Mr. Roger Cummings	P	Symantec
Mr. Anders Liverud	AV	Tandberg Storage
Mr. Jim Scott	P	Vitesse Semiconductor
Mr. Luben Tuikov	V	Vitesse Semiconductor
Mr. Mark Evans	A	Western Digital
Mr. Curtis Stevens	P	Western Digital
Mr. Rich Ramos	P	Xyratex

46 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 Response Fence for protocol services (06-341r0) [Elliott]

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

4.2 SAM-4 QUERY TASK TMF Extended Response (06-368) [Tuikov]

Luben Tuikov presented a proposal to add task management function responses to indicate the enabled state of a queried task (06-368r0). The group questioned the value of the information returned by the proposal as well as the difficulty for devices implementing the proposal.

Based on the group's opinion that any task in a device most probably will be in the task enabled state, Luben asked that discussion of this topic be removed from future agendas.

4.3 SAM-4 SPC-4 Clear REPORTED LUNS DATA HAS CHANGED on any command (06-411) [Elliott]

Rob Elliott presented a proposal to clear the REPORTED LUNS DATA HAS CHANGED Unit Attention condition upon the processing of any command (06-411r1). The group requested that discussion of target/initiator devices be removed from the proposal and other minor changes. Rob agreed to prepare a new revision.

Rob Elliott moved that 06-411r2 (r1 as modified) be recommended for inclusion in SAM-4. Fred Knight seconded the motion. The motion passed 6:4:10.

4.4 SAM-4 Time bounds of task states (06-460) [Tuikov]

This proposal was discussed as part of agenda item 4.2. Luben asked that discussion of this topic be removed from future agendas.

5. Command Set Topics

5.1 SCSI Primary Commands Proposals

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

George Penokie presented a proposal to remove the Log Commands Annex from SPC-4 (05-232r2). Ralph Weber moved that 06-232r2 be recommended for inclusion in SPC-4. Mark Evans seconded the motion. In the absence of any objections, the motion passed unanimously.

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

Kevin Butt presented a proposal for adding a method to recommend initiator command timeout values for any command (05-284r3). The group requested a statement be added to compare sizes of the two timeout values, the addition of a parameter data bit to indicate when timeout data is present, and other minor changes. Kevin agreed to prepare a new revision of the proposal.

Kevin Butt moved that 05-284r4 (r3 as modified) be recommended for inclusion in SPC-4. Erich Oetting seconded the motion. The motion passed 15:1:5.

5.1.3 SPC-4 WRITE BUFFER clarifications (06-282) [Elliott]

Rob Elliott presented a proposal to clarify when downloaded microcode takes effect (06-282r3). The group requested several changes and Rob agreed to prepare a new revision.

Rob Elliott moved that 06-282r4 (r3 as modified) be recommended for inclusion in SAM-4 and SPC-4. Kevin Marks seconded the motion. The motion passed 6:2:8.

5.1.4 SPC-4 Read debug data proposal (06-362) [Houlder]

Gerry Houlder presented a proposal to define a method for retrieving debug log information (06-362r1). The algorithm application clients would be required to use for retrieving the data was unacceptable to some in the group and Gerry stated that he would discuss the suggested changes in the algorithms with his engineers and bring the proposal back at the next meeting.

5.1.5 Security Association Model for SPC-4 (06-369) [Weber]

Based on the Key Definition Function changes agreed upon under agenda item 5.1.14, Ralph Weber noted that he and David Black will prepare a new revision of 06-369 for consideration at the next meeting.

5.1.6 SPC-4: Security Goals and Threat Model (06-388) [Black]

David Black presented the Threat Model subclauses for SPC-4 (06-388r2). The group requested numerous editorial changes and David agreed to prepare a new revision.

David Black moved that 06-388r3 (r2 as modified) be recommended for inclusion in SPC-4. Roger Cummings seconded the motion. In the absence of any objections, the motion passed unanimously.

5.1.7 SPC-4 Target Port Group disconnected state proposal (06-390) [Knight]

Fred Knight asked that consideration of this topic be deferred to the next meeting.

5.1.8 Request for Additional Security Protocol Value Allocation (06-392) [Cummings]

Roger Cummings presented a review of the issues with sending SMI-S over SCSI (06-503r0) including two alternative proposals for SPC-4 command definitions: 06-392 and 06-465.

At the request of the group, Roger withdrew the Security In/Out version of the management proposal (06-392r1) from further consideration by this group.

5.1.9 Alternative Proposal for Management Transport (06-465) [Cummings]

Roger Cummings presented a proposal to define Management Protocol In/Out commands (06-465r0). The group requested several changes and Roger agreed to prepare a new revision of the proposal.

Roger Cummings moved that 06-465r1 (r0 as modified) be recommended for inclusion in SPC-4. Kevin Marks seconded the motion. The motion passed 18:0:5.

5.1.10 SPC-4: Establishing a Security Association using IKEv2 (06-449) [Ball & Black]

David Black and Matt Ball stated that this topic did not need additional discussion based on the information gathered under agenda item 5.1.14. David and Matt stated that they will prepare a new revision of 06-449 for consideration at the next meeting.

5.1.11 Clarifying Identifying Information Types Requirements (06-454) [Weber]

Ralph Weber presented a proposal to clarify which identifying information types are mandatory or optional (06-454r0). Ralph Weber moved that 06-454r0 be recommended for inclusion in SPC-4. Rob Elliott seconded the motion. In the absence of objections, the motion passed unanimously.

5.1.12 Lost SET IDENTIFYING INFORMATION Parameter List Length requirement (06-455) [Weber]

Ralph Weber presented a proposal to restore a sentence that was removed by 06-221r3 (06-455r1). Ralph Weber moved that 06-455r0 be recommended for inclusion in SPC-4. Paul Entzel seconded the motion. In the absence of objections, the motion passed unanimously.

5.1.13 SPC-4 Encryption MAM Attribute (06-484) [Banther]

Michael Banther presented a proposal add a MAM attribute that indicates the first encrypted logical block (06-484r0). The group requested a few changes and Michael agreed to prepare a new revision.

Michael Banther moved that 06-484r1 (r0 as modified) be recommended for inclusion in SPC-4. Paul Suhler seconded the motion. In the absence of objections, the motion passed unanimously.

5.1.14 Security Association Creation (06-492) [Black]

David Black presented a review of Security Association efforts (06-492r1). The group provided David with advice regarding several issues note in 06-492r1.

The group agreed to remove this document/topic from future agendas.

5.2 SCSI Block Commands Proposals**5.2.1 On-disk bitmap support (06-393) [Cummings]**

Roger Cummings presented a proposal to add an ORWRITE command to SBC-3 (06-393r1) the purpose of which was setting bits in a block. Roger Cummings moved that 06-393r1 be recommended for inclusion in SBC-3. Bob Nixon seconded the motion.

Bob Nixon complained that the integrity data on the disk is not being checked when it should be. After the group sided with Bob, Roger withdrew the motion and agreed to prepare a new revision for consideration at the next meeting.

5.2.2 SBC-3 Mandate CAPACITY DATA HAS CHANGED unit attention (06-479) [Elliott]

Rob Elliott presented a proposal to change the 'should' to a 'shall' with respect to support for the CAPACITY DATA HAS CHANGED unit attention condition (06-479r0). The group requested a minor change and Rob agreed to prepare a new revision.

Rob Elliott moved that 06-479r1 (r0 as modified) be recommended for inclusion in SBC-3. Bob Nixon seconded the motion. The motion passed 5:2:12.

5.3 SCSI Enclosure Services Proposals

No SES-2 proposals were presented to the group.

5.4 Other Proposals

5.4.1 Remove PREVENT ALLOW MEDIUM REMOVAL from OSD-2 (06-257) [Weber]

Noting that the command no longer appears in SPC-4, Ralph Weber presented a proposal to remove support for the PREVENT ALLOW MEDIUM REMOVAL from OSD-2 (06-257r0).

Ralph Weber moved that 06-257r0 be recommended for inclusion in OSD-2. Kevin Marks seconded the motion. In the absence of any objections, the motion passed unanimously.

5.4.2 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).

Ralph Weber moved that 05-311r0 be recommended for inclusion in OSD-2. Kevin Marks seconded the motion. In the absence of any objections, the motion passed unanimously.

5.4.3 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 (05-314r1).

Ralph Weber moved that 05-311r0 be recommended for inclusion in OSD-2. Chris Fore seconded the motion. In the absence of any objections, the motion passed unanimously.

5.4.4 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 (05-316r1).

Ralph Weber moved that 05-316r1 be recommended for inclusion in OSD-2. Rich Ramos seconded the motion. The motion passed 10:0:9.

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

Ralph Weber presented a proposal to define the GET MEMBER ATTRIBUTES, QUERY, REMOVE MEMBER OBJECTS, and SET MEMBER ATTRIBUTES commands (05-328r1).

Ralph Weber moved that 05-328r1 be recommended for inclusion in OSD-2. Rich Ramos seconded the motion. The motion passed 10:0:9.

6. SCSI Protocol Topics

No SCSI Protocol topics were presented to the group.

7. Old Business

There was no old business.

8. New Business

There was no old business.

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 inclusion in SPC-4:

- 06-388r3 (Security Goals and Threat Model) [Black]
- 06-465r1 (Alternative Proposal for Management Transport) [Cummings]
- 05-284r4 (Self Describing Command Timeouts) [Butt]
- 05-232r2 (Log Command Corrections) [Penokie]
- 06-454r0 (Clarifying Identifying Information Types Requirements) [Weber]
- 06-455r1 (Lost SET IDENTIFYING INFORMATION Parameter List Length requirement) [Weber]
- 06-484r1 (Encryption MAM Attribute) [Banther]

For inclusion in SAM-4 and SPC-4:

- 06-411r2 (Clear REPORTED LUNS DATA HAS CHANGED on any command) [Elliott]
- 06-282r4 (SPC-4 WRITE BUFFER clarifications) [Elliott]

For inclusion in SBC-3:

- 06-479r1 (Mandate CAPACITY DATA HAS CHANGED unit attention) [Elliott]

For inclusion in OSD-2:

- 06-257r0 (Remove PREVENT ALLOW MEDIUM REMOVAL from OSD-2) [Weber]
- 05-311r0 (REMOVE PARTITION Security Controlled by Root Attributes) [Weber]
- 05-314r1 (No Capability can have a Vendor Specific integrity check value algorithm) [Weber]
- 05-316r1 (Multi-Object LIST and LIST COLLECTION command enhancements) [Weber]
- 05-328r1 (Four New Multi-Object Commands) [Weber]

11. Meeting Schedule

The next meeting of the SCSI Commands, Architecture, and Protocols Working Group will be Tuesday, January 16, 2007 from 4 p.m. to 7 p.m. and resuming Wednesday, January 16, 2007 from 9 a.m. to 7 p.m. (or until all agenda items are completed). The meeting will be in Lake Mary, FL at the Orlando Marriott Lake Mary Hotel (1-407-380-7724) hosted by Symantec.

12. Adjournment

The meeting was adjourned at 5:55 p.m. on Wednesday November 8, 2006.