

Accredited Standards Committee*

InterNational Committee for Information Technology Standards (INCITS)

Doc. No.: T10/06-232r0

Date: May 15, 2006

Reply to: John Lohmeyer

To: T10 Membership
From: Ralph Weber and John Lohmeyer
Subject: SCSI Commands, Architecture, & Protocol Working Group Meeting -- May 10, 2006
San Jose, CA

Agenda

1. Opening Remarks
2. Approval of Agenda
3. Attendance and Membership
4. SCSI Architecture Model Topics
 - 4.1 SAM-3: Converting to UML part 1 (06-116) [Penokie]
 - 4.2 SAM-4, SPC-4: making the basic task management model obsolete (06-198) [Evans]
 - 4.3 Making linked commands obsolete (no document) [Evans]
5. Command Set Topics
 - 5.1 SCSI Primary Commands Proposals
 - 5.1.1 SPC-4: Log Page-Subpages (06-113) [Butt]
 - 5.1.2 SPC-4: Log Command Corrections (05-232) [Penokie]
 - 5.1.3 SPC-4: Self Describing Command Timeouts (05-284) [Butt]
 - 5.1.4 SPC-4: Add security protocol and additional sense for tape encryption (06-108) [Entzel]
 - 5.1.5 SPC-4 Wrapping and saturating counter definitions (06-175) [Elliott]
 - 5.1.6 SPC-4 Persistent Reservation additional sense code changes (06-195) [Elliott]
 - 5.1.7 SPC-4 Persistent Reservation REGISTER AND MOVE from unregistered I_T nexus (06-196) [Elliott]
 - 5.1.8 SPC-4 New ASC/ASCQ for LOGICAL UNIT ACCESS NOT AUTHORIZED (06-219) [Shimor]
 - 5.1.9 SPC-4 Request for the reservation/assignment of Security Protocol value (06-191) [Shimor]
 - 5.1.10 SPC-4 Informational designator for Device Information VPD page (06-221) [Elliott]
 - 5.1.11 SPC-4: Change 'medium changer' to 'media changer' (06-224) [Entzel]
 - 5.1.12 Proposal to remove the PREVENT ALLOW MEDIUM REMOVAL command from SPC-4 (06-248) [McFerrin]
 - 5.2 SCSI Block Commands Proposals
 - 5.2.1 SBC-3 Physical blocks (06-034) [Elliott]
 - 5.3 SCSI Enclosure Services Proposals
 - 5.3.1 SES-2 Display element enhancements (05-011) [Elliott]
 - 5.3.2 SES-2 Internal/External Vendor Specific connectors (06-200) [Penokie]
 - 5.4 Other Proposals
 - 5.4.1 ADC-2, SPC-4, and SSC-3 Vendor-specific service actions for MAINTENANCE IN/OUT (06-223) [Banther]
6. SCSI Protocol Topics
7. Old Business
8. New Business
 - 8.1 Report about T11.5 SM-HBA draft standard [Krithivas/Nixon]
9. Review of Working Drafts
10. Review of Recommendations to the Plenary

*Operating under the procedures of The American National Standards Institute.

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

11. Meeting Schedule
12. Adjournment

Results of Meeting

1. Opening Remarks

John Lohmeyer called the meeting to order at 9:00 a.m. Wednesday, May 10, 2006. He thanked Mark Overby of Nvidia Corp. 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:

- 4.3 Making linked commands obsolete (no document) [Evans]
- 5.1.12 Proposal to remove the PREVENT ALLOW MEDIUM REMOVAL command from SPC-4 (06-248) [McFerrin]

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. Lawrence J. Lamers	A	Adaptec, Inc.
Mr. Robert Snively	P	Brocade Comm. Systems, Inc.
Mr. Gideon Avida	P	Decru
Mr. David Black	A	EMC Corp.
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. Rob Elliott	P	Hewlett Packard Co.
Mr. Steven Fairchild	V	Hewlett Packard Co.
Mr. Dan Colegrove	P	Hitachi Global Storage Tech.
Mr. Kevin Butt	A	IBM Corp.
Mr. George O. Penokie	P	IBM Corp.
Mr. Robert Sheffield	P	Intel Corp.
Mr. Robert Payne	P	Iomega Corp.
Mr. John Geldman	P	Lexar Media, Inc.
Mr. John Lohmeyer	P	LSI Logic Corp.
Mr. Jason Stuhlsatz	V	LSI Logic, Engenio Storage
Mr. Avraham Shimor	P	M-Systems
Mr. Mark Evans	P	Maxtor Corp.
Mr. Mark Overby	P	Nvidia Corp.
Mr. James Williams	P	Oracle
Mr. Takaharu Ai	A	Panasonic AVC Networks Co.
Mr. Matthew Ball	V	Quantum Corp.
Mr. Paul Entzel	P	Quantum Corp.
Dr. Paul Suhler	A	Quantum Corp.
Mr. Gerald Houlder	P	Seagate Technology
Mr. Gary D. Moorhead	V	Seagate Technology
Mr. William Martin	P	Sierra Logic, Inc.
Mr. Charles Binford	A	Sun Microsystems, Inc.
Mr. Vit Novak	P	Sun Microsystems, Inc.
Mr. Roger Cummings	P	Symantec
Mr. Kjartan Nesbakken Haugen	AV	Tandberg Storage
Mr. Wayne Gentry	V	Unisys Corporation
Mr. Curtis Stevens	P	Western Digital
Mr. Jeff Williams	P	Xiotech Corp.
Mr. Rich Ramos	P	Xyratex

40 People Present

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

4. SCSI Architecture Model Topics

4.1 SAM-3: Converting to UML part 1 (06-116) [Penokie]

George Penokie presented a proposal to convert SAM-4 to UML (06-116r1). The group requested numerous minor changes and George agreed to prepare a new revision.

George Penokie moved that 06-116r2 (r1 as modified) be recommended for inclusion in SAM-4. Curtis Stevens seconded the motion. In the absence of objections, the motion passed unanimously.

4.2 SAM-4, SPC-4: making the basic task management model obsolete (06-198) [Evans]

Mark Evans presented a proposal to make the basic task management model obsolete (06-198r0).

Mark Evans moved that 06-198r0 be recommended for inclusion in SAM-4 and SPC-4. Gerry Houlder seconded the motion. In the absence of objections, the motion passed unanimously.

4.3 Making linked commands obsolete (no document) [Evans]

Mark Evans presented a draft proposal to make linked commands obsolete. The group advised Mark regarding how to improve the proposal.

5. Command Set Topics

5.1 SCSI Primary Commands Proposals

5.1.1 SPC-4: Log Page-Subpages (06-113) [Butt]

Kevin Butt presented a proposal to add log sub-pages (06-113r1). The group requested several minor changes and Kevin agreed to prepare a new revision,

Kevin Butt moved that 06-113r2 (r1 as modified) be recommended for incorporation in SPC-4. Rob Elliott seconded the motion. In the absence of any objections, the motion passed unanimously.

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

George Penokie asked that discussion of this topic be deferred to the next meeting.

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

Kevin Butt asked that discussion of this topic be deferred to the next meeting.

5.1.4 SPC-4: Add security protocol and additional sense for tape encryption (06-108) [Entzel]

Paul Entzel presented a proposal to define a security protocol coded value, new security algorithm coded values, and several additional sense codes (06-108r2). The group requested several changes and Paul agreed to prepare a new revision.

Paul Entzel moved that 06-108r3 (r2 as modified) be recommended for inclusion in SPC-4. David Black seconded the motion. The motion passed 12:1:10.

5.1.5 SPC-4 Wrapping and saturating counter definitions (06-175) [Elliott]

Rob Elliott presented a proposal to clarify how counters are processed when they reach their maximum values (06-175r0). Concerns were raised about error counters such as 'number of bytes transferred', which current implementations do not wrap, and Rob agreed to modify the proposal to represent the current state of affairs.

Rob suggested that the revised proposal be reviewed at the next meeting.

5.1.6 SPC-4 Persistent Reservation additional sense code changes (06-195) [Elliott]

Rob Elliott presented a proposal to clarify that invalid fields in the parameter list should be reported with the correct additional sense code (06-195r0). George Penokie insisted that discussion of setting field pointers be removed from the proposal and Rob agreed to make the change.

Rob Elliott moved that 06-195r1 (r0 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 Persistent Reservation REGISTER AND MOVE from unregistered I_T nexus (06-196) [Elliott]

Rob Elliott presented a proposal to correct the definition of an error case in Persistent Reservations (06-196r0).

Rob Elliott moved that 06-196r0 be recommended for inclusion in SPC-4. Roger Cummings seconded the motion. In the absence of any objections, the motion passed unanimously.

5.1.8 SPC-4 New ASC/ASCQ for LOGICAL UNIT ACCESS NOT AUTHORIZED (06-219) [Shimor]

Avraham Shimor presented a proposal to define an additional sense code for use when a logical unit is not accessible for security reasons (06-219r0). The group agreed that the editor should assign the additional sense code value, guided by the recommendations in the proposal. George Penokie requested that the additional sense code recommendations and the discussion of the Test Unit Ready command be removed from the proposal and Avraham agreed to revise the proposal.

Avraham Shimor moved that 06-219r1 (r0 as modified) be recommended for inclusion in SPC-4. Gerry Houlder seconded the motion. The motion passed 10:1:13.

5.1.9 SPC-4 Request for the reservation/assignment of Security Protocol value (06-191) [Shimor]

Avraham Shimor presented a proposal to assign Security Protocol value EEh to IEEE 1667 (06-191r2).

Avraham Shimor moved that 06-191r2 be recommended for inclusion in SPC-4. Gerry Houlder seconded the motion. In the absence of any objections, the motion passed unanimously.

5.1.10 SPC-4 Informational designator for Device Information VPD page (06-221) [Elliott]

Rob Elliott presented a proposal to add user-specified data in VPD page 83 (06-221r0). The group requested that the Set/Report Device Identifier command be used instead of any VPD page and Rob agreed to revise the proposal for consideration at the next meeting.

5.1.11 SPC-4: Change 'medium changer' to 'media changer' (06-224) [Entzel]

Paul Entzel presented a proposal align the SPC-4 usage of medium changer terminology to SMC-3 (06-224r0). The group recommended removing the glossary entry for 'element' from SPC-4 and Paul agreed to revise the proposal accordingly.

Paul Entzel moved that 06-224r1 (r0 as modified) be recommended for inclusion in SPC-4. Roger Cummings seconded the motion. The motion passed 17:0:8.

5.1.12 Proposal to remove the PREVENT ALLOW MEDIUM REMOVAL command from SPC-4 (06-248) [McFerrin]

Bill McFerrin presented a proposal to address several MMC-5 Letter Ballot comments by removing the PREVENT ALLOW MEDIUM REMOVAL command from SPC-4 and placing it in other command set standards (06-248r0).

The group insisted the proposal explicitly list SBC-3, SSC-3, SMC-3, and OSD-2 as standards into which the removed SPC-4 text will be placed.

Bill McFerrin moved that 06-248r1 (r0 as modified) be recommended for inclusion in SPC-4, SBC-3, SSC-3, SMC-3, and OSD-2. Curtis Stevens seconded the motion. The motion passed 3:1:16.

5.2 SCSI Block Commands Proposals

5.2.1 SBC-3 Physical blocks (06-034) [Elliott]

Rob Elliott presented a proposal to add reporting actual sector size and managing such information using the FORMAT UNIT command, READ CAPACITY command, and related aspects of SBC-3 (06-034r3). The group requested several changes and Rob agreed to prepare a new revision for consideration at the next meeting.

5.3 SCSI Enclosure Services Proposals

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

Rob Elliott presented a proposal to add displaying characters on 7-segment LEDs to SES-2 (05-011r1). He noted that the previous discussion of this proposal produced requests that it be made more general and support larger numbers of characters. The intervening months have demonstrated no need for larger numbers of characters, whereas supporting small numbers of characters has become more important. Therefore, addressing large numbers of characters has been dropped as a goal for the proposal.

The group requested that the ordering of character delivery be rigorously related to the ordering of the displayed characters and Rob agreed to revise the proposal. Other changes were agreed to for the revised proposal.

Rob Elliott moved that 05-011r2 (r1 as modified) be recommended for inclusion in SES-2. Mark Overby seconded the motion. In the absence of any objections, the motion passed unanimously.

5.3.2 SES-2 Internal/External Vendor Specific connectors (06-200) [Penokie]

George Penokie presented a proposal to allow differentiation of internal and external vendor specific SAS connectors (06-200r0). The group requested modifications in the code values assigned and their meanings. George agreed to modify the proposal.

George Penokie moved 06-200r1 (r0 as modified) be recommended for inclusion in SES-2. Rob Elliott seconded the motion. The motion passed 12:2:7.

5.4 Other Proposals

5.4.1 ADC-2, SPC-4, and SSC-3 Vendor-specific service actions for MAINTENANCE IN/OUT (06-223) [Banther]

Michael Banther presented a proposal to define eight vendor specific service actions in the MAINTENANCE IN and OUT commands (06-223r0). Several people complained about assigning vendor specific uses where standardized uses might be more appropriate.

Michael Banther moved that 06-223r0 be recommended for inclusion in SPC-4, SSC-3, and ADC-2. Paul Suhler seconded the motion. The motion failed 2:2:13.

6. SCSI Protocol Topics

No SCSI Protocol topics were presented to the meeting.

7. Old Business

There was no old business.

8. New Business

8.1 Report about T11.5 SM-HBA draft standard [Krithivas/Nixon]

Bob Sheffield asked that discussion of this topic be deferred to the July SAS working group.

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:

06-113r2 (Log Page-Subpages) [Butt]

06-108r3 (Add security protocol and additional sense for tape encryption) [Entzel]

06-224r1 (Change 'medium changer' to 'media changer') [Entzel]

06-195r1 (Persistent Reservation additional sense code changes) [Elliott]

06-196r0 (Persistent Reservation REGISTER AND MOVE from unregistered I_T nexus) [Elliott]

06-219r1 (New ASC/ASCQ for LOGICAL UNIT ACCESS NOT AUTHORIZED) [Shimor]

06-191r2 (Request for the reservation/assignment of Security Protocol value) [Shimor]

For inclusion in SES-2:

05-011r2 (Display element enhancements) [Elliott]

06-200r1 (Internal/External Vendor Specific connectors) [Penokie]

For inclusion in SPC-4, SBC-3, SSC-3, SMC-3, and OSD-2:

06-248r1 (Proposal to remove the PREVENT ALLOW MEDIUM REMOVAL command from SPC-4)

For inclusion in SAM-4:

06-116r2 (Converting to UML part 1) [Penokie]

For inclusion in SAM-4 and SPC-4:

06-198r0 (Making the basic task management model obsolete) [Evans]

11. Meeting Schedule

The next meeting of the SCSI Commands, Architecture, and Protocols Working Group will be Wednesday, July 12, 2006 from 9 a.m. to 8 p.m. (or until all agenda items are completed). The meeting will be in Colorado Springs, CO at the Antlers Hilton Hotel (1-719-955-5600) hosted by LSI Logic Corp.

12. Adjournment

The meeting was adjourned at 5:50 p.m. on Wednesday May 10, 2006.