

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 -- January 16, 2002
Houston, TX

Agenda

1. Opening Remarks
2. Approval of Agenda
3. Attendance and Membership
4. SCSI Architecture Model Topics
 - 4.1 Names, Addresses, Identifiers, Oh my! (01-084) [Penokie]
 - 4.2 It's the I_T Nexus, Stupid (01-093) [Weber]
 - 4.3 SCSI MIB (01-163) [Krueger/Penokie]
 - 4.4 Liaison report on SCSI MIB activities (02-043) [Krueger]
 - 4.5 SCSI MIB UML Drawing, Version 00c (01-334) [Bakke]
 - 4.6 SCSI MIB UML model (02-031) [Bakke]
 - 4.7 SCSI MIB draft (02-030) [Michele Hallak-Stamler, Yaron Lederman]
 - 4.8 SAM-2 Data Transfer Ordering Requirements (01-309) [Gardner]
 - 4.9 Review of 01-318r1 Incorporation in SAM-2 r21 [Weber]
5. Command Set Topics
 - 5.1 SCSI Device Memory Export Protocol (00-312) [Barry]
 - 5.2 REPORT ADDRESSABLE TARGETS well-known LUN Function [Terrell]
 - 5.3 SPC-3 Letting persistent reservations ignore target ports (01-099) [Elliott]
 - 5.4 SPC-3 Letting persistent reservations ignore initiator ports (01-100) [Elliott]
 - 5.5 SPC-3 SBC-2 SSC-2 sense data changes (01-199) [Elliott]
 - 5.6 SBC-2 Long LBA PMI support for READ CAPACITY (01-246) [Elliott]
 - 5.7 Report Supported Operation Codes Command (01-253) [Penokie]
 - 5.8 Proposal for an additional Persistent Reservations Type in SPC-3 (01-204) [Cummings]
 - 5.9 SMC-2 INITIALIZE ELEMENT STATUS WITH RANGE command (01-308) [Elliott]
 - 5.10 SPC-3 TST field description (02-016) [Elliott]
 - 5.11 SPC-3 sense data size limit (02-017) [Elliott]
 - 5.12 SPC-3 Unit Attention interlock and Asynchronous Event Reporting (02-025) [Elliott]
 - 5.13 SPC-3 REQUEST SENSE during pending-enrolled state (02-026) [Elliott]
 - 5.14 Third-party command communication across different protocols [Penokie]
 - 5.15 Resolving ambiguity in sense data information for sequential buffered mode [Breher]
 - 5.16 LOCATE OPERATION FAILURE ASC/ASCQ [Weber]
 - 5.17 MSC Mannagement Command [Griswold]
 - 5.18 Logical Unit Unique Identifier/Type (02-035r0) [Peterson]
6. SCSI Protocol Topics
7. Old Business
8. New Business
9. Review of Documents
 - 9.1 SBC-2 Review [Elliott]

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NCITS Secretariat, Information Technology Industry Council (ITI)
1250 Eye Street NW, Suite 200, Washington, DC 20005-3922
Email: ncits@itic.org Telephone: 202-737-8888 FAX: 202-638-4922

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

Results of Meeting

1. Opening Remarks

John Lohmeyer, the T10 Chair, called the meeting to order at 8:15 a.m., Wednesday January 16, 2002. He thanked Rob Elliott of Compaq for hosting the meeting.

As is customary, the people attending introduced themselves and a copy of the attendance list was circulated.

2. Approval of Agenda

The draft agenda was approved with the following changes:

- 5.14 Third-party command communication across different protocols [Penokie]
- 5.15 Resolving ambiguity in sense data information for sequential buffered mode [Breher]
- 5.16 LOCATE OPERATION FAILURE ASC/ASCQ [Weber]
- 5.17 MSC Mannagement Command [Griswold]
- 5.18 Logical Unit Unique Identifier/Type (02-035r0) [Peterson]

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

- 5.18 Logical Unit Unique Identifier/Type (02-035r0) [Peterson]

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	Electronic Mail Address
Mr. Ron Roberts	P	Adaptec, Inc.	Ron_Roberts@adaptec.com
Dr. Claudio DeSanti	P	Andiamo Systems, Inc.	cds@andiamo.com
Mr. Brian Forbes	P	Brocade Comm. Systems, Inc.	bforbes@brocade.com
Mr. Kyle Walczak	V	Compaq	kyle.walczak@compaq.com
Mr. Robert C. Elliott	P	Compaq Computer Corp.	Robert.Elliott@compaq.com
Mr. Wayne Bellamy	V	Compaq Computer Corp.	wayne.bellamy@compaq.com
Mr. Robert Griswold	P	Crossroads Systems, Inc.	rgriswold@crossroads.com
Mr. Kevin Marks	P	Dell Computer Corp.	kevin_marks@dell.com
Mr. Ronald Stockford	A	Dell Computer Corp.	ron_stockford@dell.com
Mr. Gary S. Robinson	P	EMC	robinson_gary@emc.com
Mr. David Black	A	EMC Corp.	black_david@emc.com
Mr. Robert H. Nixon	P	Emulex	bob.nixon@emulex.com
Mr. Ralph O. Weber	P	ENDL Texas	roweber@acm.org

Mr. Joe Breher	P	Exabyte Corp.	joebre@exabyte.com
Mr. Eugene Lew	P	Fujitsu	elew@fcpa.fujitsu.com
Ms. Marjorie Krueger	A#	Hewlett Packard Co.	marjorie_krueger@hp.com
Mr. George O. Penokie	P	IBM / Tivoli Systems	gop@us.ibm.com
Mr. Kevin Butt	AV	IBM Corp.	kdbutt@us.ibm.com
Mr. Cris Simpson	P	Intel Corp.	cris.simpson@intel.com
Mr. Dennis Moore	P	KnowledgeTek, Inc.	dmoore@ix.netcom.com
Mr. John Lohmeyer	P	LSI Logic Corp.	lohmeier@t10.org
Mr. Mark Evans	P	Maxtor Corp.	mark_evans@maxtor.com
Mr. Charles Monia	P	Nishan Systems Inc.	cmonia@nishansystems.com
Mr. Edward A. Gardner	P	Ophidian Designs	eag@ophidian.com
Mr. Paul Entzel	P	Quantum Corp.	paul.entzel@quantum.com
Mr. Gerald Houlder	P	Seagate Technology	gerry_houlder@seagate.com
Mr. Paul Sweazey	AV	Seagate Technology	sweazeyp@cdg.stsv. seagate.com
Mr. Erich Oetting	P	Storage Technology Corp.	erich_oetting@stortek.com
Mr. Kenneth Moe	P	Sun Microsystems, Inc.	kenneth.moe@sun.com
Mr. Donald R. Getty	A	Texas Instruments	donald_getty@ti.com
Mr. Roger Cummings	P	Veritas Software	roger.cummings@veritas. com

31 People Present

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

4. SCSI Architecture Model Topics

4.1 Names, Addresses, Identifiers, Oh my! (01-084) [Penokie]

George Penokie presented the latest revision of the proposal that lists the names and identifiers used by various protocols (01-084r5). The group requested that the discussion of identifier and name usage be removed. The group requested other changes and George agreed to prepare a new revision.

George Penokie moved that 01-084r6 (r5 as modified) be approved for incorporation as an informative annex in SAM-2. Marjorie Krueger seconded the motion. In the absence of any objections, the motion passed unanimously.

4.2 It's the I_T Nexus, Stupid (01-093) [Weber]

Ralph Weber requested that discussion of this topic be deferred to the next meeting.

4.3 SCSI MIB (01-163) [Krueger/Penokie]

Marjorie Krueger requested that this item be removed from this and future agendas.

4.4 Liaison report on SCSI MIB activities (02-043) [Krueger]

Marjorie Krueger reviewed the current UML (Universal Modeling Language) diagrams that are used to develop the SCSI MIB (02-043r1). Roger Cummings reported that the minutes of the recent SCSI MIB meeting have been posted as 02-051r0.

4.5 SCSI MIB UML Drawing, Version 00c (01-334) [Bakke]

On behalf Mark Bakke, Marjorie Krueger requested that this item be removed from this and future agendas.

4.6 SCSI MIB UML model (02-031) [Bakke]

On behalf Mark Bakke, Marjorie Krueger requested that this item be removed from this and future agendas.

4.7 SCSI MIB draft (02-030) [Michele Hallak-Stamler, Yaron Lederman]

On behalf Yaron Lederman, Marjorie Krueger requested that this item be removed from this and future agendas.

4.8 SAM-2 Data Transfer Ordering Requirements (01-309) [Gardner]

Ed Gardner asked that discussion of this topic be deferred to the next meeting.

4.9 Review of 01-318r1 Incorporation in SAM-2 r21 [Weber]

Ralph Weber reviewed the CA and ACA changes edited into SAM-2 r21. Several corrections were requested and Ralph agreed to make them. On the topic of CA and ACA effects on dormant tasks, Ralph agreed to write a proposal for specific changes.

5. Command Set Topics

5.1 SCSI Device Memory Export Protocol (00-312) [Barry]

In the absence of Andrew Barry, discussion of this topic was deferred to the next meeting.

5.2 REPORT ADDRESSABLE TARGETS well-known LUN Function [Terrell]

In the absence of Bill Terrell, discussion of this topic was deferred to the next meeting.

5.3 SPC-3 Letting persistent reservations ignore target ports (01-099) [Elliott]

Rob Elliott presented a proposal to register all target ports with a single Register request (01-099r5). The group requested many changes and Rob agreed to prepare a new revision. Rob Elliott moved that 01-099r6 (r5 as modified) be recommended for inclusion in SPC-3. Roger Cummings seconded the motion. In the absence of any objections the motion passed unanimously.

5.4 SPC-3 Letting persistent reservations ignore initiator ports (01-100) [Elliott]

Rob Elliott agreed to defer discussion of this topic to the end of this meeting and since there was no extra time available at the end of the meeting discussion was deferred to the next meeting.

5.5 SPC-3 SBC-2 SSC-2 sense data changes (01-199) [Elliott]

Rob Elliott presented the latest revision of the sense data changes proposed to deal with the information field being too small (01-199r2). The group expressed concerns about the clarity of the descriptions of several fields cases where the description was proposed to move from SPC-3 REQUEST SENSE to the SBC-2 and SSC-2 command set standards. Other changes were requested and Rob agreed to prepare a revised proposal.

Rob Elliott moved that 01-199r3 (r2 as modified) be recommended for inclusion in SPC-3, SBC-2 and SSC-2. Dave Peterson seconded the motion. In the absence of any objections, the motion passed unanimously.

5.6 SBC-2 Long LBA PMI support for READ CAPACITY (01-246) [Elliott]

Rob Elliott presented a proposal for Long LBA support in the partial medium indicator (PMI) bit in the SBC-2 READ CAPACITY command (01-246r1). Rob Elliott moved that 01-246r1 be recommended for inclusion in SBC-2. Mark Evans seconded the motion. In the absence of any objections, the motion passed unanimously.

5.7 Report Supported Operation Codes Command (01-253) [Penokie]

George Penokie presented a proposal for a new command to report supported operation codes (01-253r2). The group requested changes and George agreed to prepare a new revision. George Penokie moved that 01-253r3 (r2 as revised) be recommended for inclusion in SPC-3. Rob Elliott seconded the motion. The motion passed on a vote of 15:2:1 with Ed Gardner and Mark Evans voting in opposition.

5.8 Proposal for an additional Persistent Reservations Type in SPC-3 (01-204) [Cummings]

Roger Cummings presented a proposal to add two "unowned" reservation types to SPC-3 (01-204r2). Roger Cummings moved that 01-204r2 be recommended for inclusion in SPC-3. Erich Oetting seconded the motion. In the absence of any objections, the motion passed unanimously.

5.9 SMC-2 INITIALIZE ELEMENT STATUS WITH RANGE command (01-308) [Elliott]

Rob Elliott presented proposal to add an INITIALIZE ELEMENT STATUS WITH RANGE command to SMC-2 (01-308r1).

Joe Breher proposed that the proposed command be enhanced to include a bit to disable the checking of barcodes during the initialization. The group agreed that the enhancement would be useful. Erich Oetting, Rob Elliott, and Joe Breher discussed how to incorporate the enhancement in the proposal.

Rob Elliott moved that 01-308r2 (r1 as revised) be recommended for inclusion in SMC-2. Erich Oetting seconded the motion. In the absence of any objections, the motion passed unanimously.

5.10 SPC-3 TST field description (02-016) [Elliott]

Rob Elliott presented a proposal for clarifying the description of the TST (Task Set Type) Control mode page field (02-016r0). The group requested the addition of a "the" in the table and Rob agreed. Rob Elliott moved that 02-016r1 (r0 as revised) be recommended for inclusion in SPC-3. Joe Breher seconded the motion. In the absence of any objections, the motion passed unanimously.

5.11 SPC-3 sense data size limit (02-017) [Elliott]

Rob Elliott reviewed a proposal to limit the number of bytes of sense data to 252 (02-017r0). Rob Elliott moved that 02-017r0 be recommended for inclusion in SPC-3. Ed Gardner seconded the motion. In the absence of any objections, the motion passed unanimously.

5.12 SPC-3 Unit Attention interlock and Asynchronous Event Reporting (02-025) [Elliott]

Rob Elliott presented a proposal to revise the wording of the Control mode page description of the AER bits to make it consistent with the interlocked unit attention conditions (02-025r0). Ralph Weber raised concerns about the specific wording and offered to edit it during incorporation of the proposal. Rob Elliott moved that 02-025r0 be recommended for inclusion in SPC-3. Ralph Weber seconded the motion. In the absence of any objections, the motion passed unanimously.

5.13 SPC-3 REQUEST SENSE during pending-enrolled state (02-026) [Elliott]

Rob Elliott presented a proposal to except REQUEST SENSE commands from the CHECK CONDITION status required by access controls in the pending-enrolled state (02-026r0). Questions were raised about the handling of pending sense data and Rob Elliott agreed to revise the proposal accordingly. Rob Elliott moved that 02-026r1 (r0 as revised) be recommended for inclusion in SPC-3. Gerry Houlder seconded the motion. In the absence of any objections, the motion passed unanimously.

5.14 Third-party command communication across different protocols [Penokie]

George Penokie noted that third-party RESERVE/RELEASE do not work for devices that support two SCSI protocols. Solutions offered were adding alias support to RESERVE/RELEASE and restricting third-party RESERVE/RELEASE to single protocol devices. The sense of the room was that restricting third-party RESERVE/RELEASE to a single protocol would be more agreeable.

5.15 Resolving ambiguity in sense data information for sequential buffered mode [Breher]

Joe Breher stated that revisions Rob Elliott agreed to make in 01-199r3 (see item 5.5) addressed the concerns he was planning to raise as a separate issue.

5.16 LOCATE OPERATION FAILURE ASC/ASCQ [Weber]

Ralph Weber moved that ASC/ASCQ 14h/07h be assigned to LOCATE OPERATION FAILURE for tapes. Bob Griswold seconded the motion. In the absence of any objections, the motion passed unanimously.

5.17 MSC Management Command [Griswold]

Robert Griswold presented an introduction to the kinds of commands that are being proposed to for the MSC (Management Server Commands) standard. Concerns were raised about how the proposal relates to the MIB's it proposed to retrieve. The proposal appeared to have a problematic relationship to SNMP (Simple Network Management Protocol), where MIBs are normally used. The relationship between SNMP security and this proposal was also raised as an issue.

Bob agreed to revise the proposal for consideration at the next meeting.

5.18 Logical Unit Unique Identifier/Type (02-035r0) [Peterson]

Dave Peterson presented a proposal to add a new Device Identifier VPD page identifier (02-035r0). Dave stated that his goal was to see how well the proposal would be accepted by the group. The group liked the proposal but had numerous suggestions on how to improve it. George Penokie offered to discuss specific ideas for improvements privately with Dave. Dave agreed to prepare a new revision for consideration at the next meeting.

6. SCSI Protocol Topics

No SCSI Protocol topics were brought before the meeting.

7. Old Business

All old business was handled on the topic scheduled agenda.

8. New Business

No new business was brought before this meeting.

9. Review of Documents

9.1 SBC-2 Review [Elliott]

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

10. Review of Recommendations to the Plenary

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

- SMC-2 INITIALIZE ELEMENT STATUS WITH RANGE command (01-308r2) [Elliott] (r1 as revised)
- SBC-2 Long LBA PMI support for READ CAPACITY (01-246) [Elliott]
- SPC-3 SBC-2 SSC-2 sense data changes (01-199r3) [Elliott] (r2 as revised)
- Assign ASC/ASCQ 14h/07h to LOCATE OPERATION FAILURE for tapes [Weber]
- SPC-3 sense data size limit (02-017r0) [Elliott]
- SPC-3 Unit Attention interlock and Asynchronous Event Reporting (02-025r0) [Elliott]
- SPC-3 REQUEST SENSE during pending-enrolled state (02-026r1) [Elliott] (r0 as revised)
- SPC-3 TST field description (02-016r1) [Elliott] (r0 as revised)
- SPC-3 Letting persistent reservations ignore target ports (01-099r6) [Elliott] (r5 as revised)
- Report Supported Operation Codes Command (01-253r3) [Penokie] (r2 as revised) 15:2:1
- Proposal for an additional Persistent Reservations Type in SPC-3 (01-204r2) [Cummings]
- Names, Addresses, Identifiers, Oh my! (01-084r6) [Penokie] (r5 as revised) — for incorporation as an informative annex in SAM-2

11. Meeting Schedule

The next meeting of the SCSI Commands, Architecture, and Protocols Working Group will be Wednesday, March 13, 2002 from 9 a.m. to 7 p.m. (or until all agenda items are completed). The meeting will be in Dallas, TX at the Crowne Plaza Suites (972-233-7600), hosted by Texas Instruments.

12. Adjournment

The meeting was adjourned at 6:10 p.m. on Wednesday January 16, 2002.