

Accredited Standards Committee*
National Committee for Information Technology Standards (NCITS)

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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 -- May 2, 2001
Nashua, NH

Agenda

1. Opening Remarks
2. Approval of Agenda
3. Attendance and Membership
4. SCSI Architecture Model Topics
 - 4.1 Multi-Port Model Discussion (00-268) [Penokie]
 - 4.2 Definition of Well Known Logical Units (01-068) [Penokie]
 - 4.3 Names, Addresses, Identifiers, Oh my! (01-084) [Penokie]
 - 4.4 It's the I_T Nexus, Stupid (01-093) [Weber]
 - 4.5 Long Identifiers in SPC-3, SAM-2, SBC-2 and other XOR issues (00-425) [Hafner]
 - 4.6 SRP Protocol Identifiers (01-104r0) [Gardner]
 - 4.7 SAM-2, SBC-2, SPI-4 WAKEUP and reset cleanup (01-134) [Elliott]
 - 4.8 SCSI MIB (01-163) [Krueger]
5. Command Set Topics
 - 5.1 Asymmetrical SCSI Behavior (00-232) [Moe]
 - 5.2 Logical unit groups (01-004) [Elliott]
 - 5.3 Unit attention issue (00-359) [Gardner]
 - 5.4 SCSI Device Memory Export Protocol (00-312) [Barry]
 - 5.5 Media Serial Number Mode Page Proposal (01-027) [Hill]
 - 5.6 SAN Management & Mode Pages (01-046) [Cummings]
 - 5.7 REPORT ADDRESSABLE TARGETS well-known LUN Function [Terrell]
 - 5.8 SPC-3 letting persistent reservations ignore target ports (01-099) [Elliott]
 - 5.9 SPC-3 letting persistent reservations ignore initiator ports (01-100) [Elliott]
 - 5.10 Project Proposal for Management Server Commands (01-095) [Penokie/Elliott]
 - 5.11 CMD DT for Variable Length CDBs () [Elliott]
6. SCSI Protocol Topics
 - 6.1 SRP Initiator Inactivity Timeout (01-038) [Simpson]
7. New Business
8. Review of Documents
 - 8.1 SBC-2 Review []
9. Review of Recommendations to the Plenary
10. Meeting Schedule
11. Adjournment

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Results of Meeting

1. Opening Remarks

John Lohmeyer, the T10 Chair, called the meeting to order at 9:00 a.m., Wednesday May 2, 2001. He thanked Zane Daggett of Hitachi Cable Manchester 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:

- 5.10 Project Proposal for Management Server Commands (01-095) [Penokie/Elliott]
- 5.11 CMD DT for Variable Length CDBs () [Elliott]

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

- 9. Review of Recommendations to the Plenary

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. Charles Brill	P	AMP / Tyco Electronics	cebrill@ix.netcom.com
Dr. Claudio DeSanti	AV	Andiamo Systems, Inc.	cds@andiamo.com
Mr. Robert Snively	P	Brocade Comm. Systems, Inc.	rsnively@brocade.com
Mr. Dennis Lang	A	Circuit Assembly Corp.	dennisl@circuitassembly.com
Mr. Mark A. Bakke	V	Cisco Systems	mbakke@cisco.com
Mr. Robert C. Elliott	P	Compaq Computer Corp.	Robert.Elliott@compaq.com
Mr. John Tyndall	P	Crossroads Systems, Inc.	jtyndall@crossroads.com
Mr. Kevin Marks	A	Dell Computer Corp.	kevin_marks@dell.com
Mr. Gary S. Robinson	P	EMC	robinson_gary@emc.com
Mr. Jack Harwood	V	EMC	jharwood@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. Paul Congdon	V	Hewlett Packard	paul_congon@hp.com
Mr. Zane Daggett	P	Hitachi Cable Manchester, Inc	zdaggett@hcm.hitachi.com
Mr. George O. Penokie	P	IBM / Tivoli Systems	gpenokie@tivoli.com
Dr. Jim Hafner	V	IBM Corp.	hafner@almaden.ibm.com
Mr. Cris Simpson	P	Intel Corp.	cris.simpson@intel.com
Mr. John Lohmeyer	P	LSI Logic Corp.	lohmeier@t10.org
Mr. Mark Evans	P	Maxtor Corp.	mark.evans@quantum.com

Mr. Charles Monia	P	Nishan Systems Inc.	cmonia@nishansystems.com
Mr. Charles Binford	V	Pirus Networks	charles.binford@pirus.com
Mr. Paul Entzel	P	Quantum Corp.	paul.entzel@quantum.com
Mr. Larry Lamers	V	San Valley	ljlammers@ieee.org
Mr. Satish Malt	V	Stonefly Networks	satish@stoneflynetworks.com
Mr. Kenneth Moe	P	Sun Microsystems, Inc.	kenneth.moe@sun.com
Mr. Paul D. Aloisi	P	Texas Instruments	Paul_Aloisi@ti.com
Mr. Donald R. Getty	A	Texas Instruments	donald_getty@ti.com
Mr. Phil Shelton	V	UNISYS Corporation	phil.shelton@unisys.com
Mr. Roger Cummings	AV	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 Multi-Port Model Discussion (00-268) [Penokie]

George Penokie presented the latest revision of the multi-port model proposal (00-269r7). The group requested changes particularly in the glossary and George agreed to prepare a revised proposal.

George noted that the "hierarchy" diagram (or containment diagram) was going to be redrawn using UML (Unified Modeling Language) but that would be the subject of a separate proposal. Questions were raised about the readability of UML and George noted that the presentation by Marjorie Krueger (01-163r0) contains UML examples. In response to a question from Charles Binford, George also noted that definition of Target Reset behavior will be handled in another separate proposal.

George moved that 00-268r8 (r7 as revised) be recommended for inclusion in SAM-2. Rob Elliott seconded the motion. In the absence of any objections, the motion passed unanimously.

4.2 Definition of Well Known Logical Units (01-068) [Penokie]

George Penokie reviewed the latest revision of the Well Known Logical Units proposal (01-068r2). The use of the Well Known Logical Units was discussed. Noting that more work is needed, George agreed to bring a revised proposal to the next meeting.

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

George Penokie reviewed uses of names, addresses and identifiers in the SCSI model (01-084r1) noting differences from the previous revision of the proposal. In response to a question from Jim Hafner, George noted that the document being presented is not necessarily a proposal for changes in a draft standard, it is more a review of the current state of things that may result in proposals for changes.

Several recommendations were made for additions and corrections to the document and George noted changes for the next revision. In view of the late hour, George asked the group to review the document outside the meeting and send additional comments that he can incorporate in the next revision.

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

Ralph Weber asked that discussion of this topic be deferred to the July meeting.

4.5 Long Identifiers in SPC-3, SAM-2, SBC-2 and other XOR issues (00-425) [Hafner]

Jim Hafner presented the latest revision of the ALIASES proposal (00-425r2). Corrections and enhancements were requested and Jim agreed to prepare a new revision for consideration at the next meeting.

4.6 SRP Protocol Identifiers (01-104r0) [Gardner]

In the absence of Ed Gardner, discussion of this topic was deferred to the July meeting.

4.7 SAM-2, SBC-2, SPI-4 Wakeup and Reset cleanup (01-134) [Elliott]

Rob Elliott reviewed the history of and presented issues related to the SPI Wakeup and Reset Service Delivery Subsystem task management function (01-134r0). Questions were raised about whether Wakeup can be made to apply to protocols other than parallel SCSI and the prospects looked dim especially for serial protocols.

Rob offered two alternatives for cleaning up loose ends. To the extent that the group approved of the proposal, the preferred alternative was the one that makes Wakeup a task management function (as opposed to some other kind of function). Rob agreed to bring a revised proposal to the next meeting.

4.8 SCSI MIB (01-163) [Krueger]

Marjorie Krueger presented a request that work be initiated to develop a SCSI MIB (01-163r0). George Penokie noted that T10 members have worked on other MIBs with the DMTF (Desktop Management Task Force). The group discussed the relationship between using UML to create a SCSI MIB and using UML to create the container-ship (a.k.a. hierarchy) diagrams in SAM-2.

George Penokie noted that the agreements reached were: 1) proceeding with work to incorporate UML definitions of the SCSI model in SAM-2 and 2) working to review the iSCSI UML model/MIB for general correctness with George Penokie and Ralph Weber particularly directed to do the review and others invited to review as they see fit.

5. Command Set Topics

5.1 Asymmetrical SCSI Behavior (00-232) [Moe]

Ken Moe reviewed the history since the last CAP meeting of the Asymmetrical SCSI Behavior proposal (01-232r9) and then reviewed substantial changes in the proposal. Ken Moe moved that 00-232r9 be recommended for inclusion in SPC-3. Rob Elliott seconded the motion. In the absence of any objections, the motion passed unanimously.

5.2 Logical unit groups (01-004) [Elliott]

Rob Elliott presented a proposal to add logical unit group identifier information to the Device Identification VPD page (01-004r1). The need for the capability and usefulness of the proposed information was discussed. Modifications were agreed and Rob promised to produce a new revision. Rob moved that 01-004r2 (r1 as revised) be recommended for inclusion in SPC-3. Charles Monia seconded the motion. The motion passed 6:0:12.

5.3 Unit attention issue (00-359) [Gardner]

Ralph Weber announced that the unit attention issue has become a problem with respect to iSCSI and that completing the proposal originated by Ed Gardner is important to resolving layering problems defined in iSCSI. He further noted that in the absence of any progress on 00-359 he may author a proposal based on Ed's work for the next meeting.

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

Andrew Barry reviewed the SCSI Device Memory Export Protocol proposal (00-312r0). The group could not agree on how best to incorporate the proposal in the SCSI standards. Strong concerns were expressed about expecting disk drives to implement the command. Andrew received recommendations on how to work with specific members of the group to prepare a more acceptable proposal.

5.5 Media Serial Number Mode Page Proposal (01-027) [Hill]

Emily Hill presented a proposal to add a proposal a VPD page containing a media serial number (01-027r1). It was suggested that the MAM commands would be a better place to provide the required capability and Emily agreed to look at that option and return with a proposal at the next meeting.

5.6 SAN Management & Mode Pages (01-046) [Cummings]

Roger Cummings presented a discussion of SAN management as related to mode pages (01-046r1). Based on the group's discussion Roger stated a plan to bring a project proposal for a technical report to the next meeting.

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

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

5.8 SPC-3 letting persistent reservations ignore target ports (01-099) [Elliott]

Rob Elliott presented the latest revision of the proposal to let persistent reservations ignore the incoming target port (01-099r1). The group expressed concerns about the ability of the proposed feature to corrupt configurations where multiple SCSI domains are in use. Rob agreed to consider enhancements to the proposal to address the concerns.

5.9 SPC-3 letting persistent reservations ignore initiator ports (01-100) [Elliott]

Rob Elliott presented the latest revision of the proposal to let a PERSISTENT RESERVE OUT command delivered from one initiator to be treated as if it applies to several initiators (01-100r1). Rob took notes on the need to justify the request better and promised a response at the next meeting.

5.10 Project Proposal for Management Server Commands (01-095) [Penokie/Elliott]

Rob Elliott presented a review the history of the Bridge Controller Command Set proposal and his work since the last meeting (01-151r0). He offered many possible discussion topics and the group considered several of them. Rob and George agreed that bringing a project proposal to the next meeting is the appropriate next step.

5.11 CMD DT for Variable Length CDBs () [Elliott]

Rob Elliott asked what the INQUIRY command with the CmdDt set to one should return if the operation code is 7Fh (the variable length CDB). He noted a similar problem exists with the MAINTENANCE IN and MAINTENANCE OUT commands and the SERVICE ACTION field (effectively used as an operation code extension). Rob took notes on how to draft a specific proposal for consideration at the next meeting.

6. SCSI Protocol Topics

6.1 SRP Initiator Inactivity Timeout (01-038) [Simpson]

Cris Simpson asked that discussion of this topic be deferred to the July meeting.

7. New Business

No new business was brought before the working group.

8. Review of Documents

8.1 SBC-2 Review []

In the absence of a technical editor, no action was taken on SBC-2.

9. Review of Recommendations to the Plenary

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

- Multi-Port Model Discussion (00-268r8) [Penokie] — unanimous
- Asymmetrical SCSI Behavior (00-232r9) [Moe] — unanimous
- Logical unit groups (01-004r2) [Elliott] — 6:0:12

10. Meeting Schedule

The next meeting of the SCSI Commands, Architecture, and Protocols Working Group will be Wednesday, July 18, 2001 from 9 a.m. to 7 p.m. (or until all agenda items are completed). The meeting will be at the Wyndham Hotel (719-260-1800) in Colorado Springs, CO, hosted by LSI Logic.

11. Adjournment

The meeting was adjourned at 9:05 p.m. on Wednesday May 2, 2001.