

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 -- January 17, 2001
Lake Buena Vista, FL

Agenda

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 - 4.2 Long SCSI Device IDs (00-279) [Gardner]
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 - 5.9 SPC-3 Access Controls LUN conflicts due to transport IDs (01-026) [Elliott]
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 - 5.11 iSCSI protocol additions to SPC-2 (01-044) [Peterson]
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 - 6.1 Margin Control (99-264) [Lamers]
 - 6.2 Scatter-Gather Lists for SRP (00-410) [Gardner]
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 - 8.2 SBC-2 Review []
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Results of Meeting

1. Opening Remarks

John Lohmeyer, the T10 Chair, called the meeting to order at 9:00 p.m., Wednesday January 17, 2001. He thanked Ron Roberts and Sondra Heiser of Adaptec 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:

- 5.11 iSCSI protocol additions to SPC-2 (01-044) [Peterson]
- 6.3 SRP Initiator Inactivity Timeout (01-038) [Simpson]
- 7.1 SAN Management & Mode Pages (01-046) [Cummings]

No agenda 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	Electronic Mail Address
Mr. Ron Roberts	P	Adaptec, Inc.	Ron_Roberts@adaptec.com
Mr. Robert Snively	P	Brocade Comm. Systems, Inc.	rsnively@brocade.com
Mr. David Peterson	P	Cisco Systems, Inc.	dap@cisco.com
Mr. Claudio Desanti	V	Cisco Systems, Inc.	cds@cisco.com
Mr. Edward Haske	P	CMD Technology	haske@cmd.com
Mr. Robert C. Elliott	P	Compaq Computer Corp.	Rob_Elliott@compuserve.com
Mr. Wayne Bellamy	V	Compaq Computer Corp.	wayne.bellamy@compaq.com
Mr. Greg Pellegrino	V	Compaq Computer Corp.	greg.pellegrino@compaq.com
Mr. Neil Wanamaker	P	Crossroads Systems, Inc.	ntw@crossroads.com
Mr. Rick DeMars	V	CTS	rdemars@ctscorp.com
Mr. D. A. Christian	V	CTS Inc.	david.christian@rb.ctscorp.com
Mr. Ronald Stockford	P	Dell Computer Corp.	ron_stockford@dell.com
Mr. Kevin Marks	A	Dell Computer Corp.	kevin_marks@dell.com
Mr. Keith W. Parker	V	Diogenes SCSI	diogenes@europa.com
Mr. Ralph O. Weber	P	ENDL Texas	roweber@acm.org
Mr. Mike Taylor	P	Exabyte Corp.	miketa@exabyte.com
Mr. Randy Haagens	P	Hewlett Packard Co.	randy_haagens@hp.com
Mr. George O. Penokie	P	IBM / Tivoli Systems	gpenokie@tivoli.com
Mr. Bill Troop	AV	IBM Corp.	troop@us.ibm.com
Dr. Jim Hafner	V	IBM Corp.	hafner@almaden.ibm.com
Mr. John L. Hufferd	V	IBM Corp.	hufferd@us.ibm.com

Mr. Julian Satran	V	IBM Corp.	julian_satran@ir.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. Pete McLean	P	Maxtor Corp.	pete_mclean@maxtor.com
Mr. Rob Haydt	A#	Microsoft Corp.	robhay@microsoft.com
Ms. Emily Hill	A	Microsoft Corp.	emhill@microsoft.com
Mr. Edward A. Gardner	P	Ophidian Designs	eag@ophidian.com
Mr. Mark Evans	P	Quantum Corp.	mark.evans@quantum.com
Mr. Erich Oetting	P	Storage Technology Corp.	erich_oetting@stortek.com
Mr. Vit Novak	A	Sun Microsystems, Inc.	vit.novak@sun.com
Mr. Ron Mathews	AV	UNISYS Corporation	ronald.mathews@unisys.com
Mr. Roger Cummings	AV	Veritas Software	roger.cummings@veritas.com

34 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 the proposal defining a new multi-port device model for SAM-2 (00-268r3). The group discussed several aspects of the new model figures and text. Changes were requested and George agreed that a new revision would be needed to reflect the changes. George state that a revised proposal would be brought for discussion during the next CAP meeting.

It was noted that this proposal is one of several proposals that need to be coordinated by the study group meeting discussed in 5.2.

4.2 Long SCSI Device IDs (00-279) [Gardner]

Ed Gardner asked that this item be dropped from this and future agendas.

4.3 Making Target Reset optional in SAM-2 (01-015) [Elliott]

Rob Elliott presented a proposal to change SAM-2 to make implementation of target reset optional. The group discussed the uses of target reset, protocol resets, and other reset mechanisms. The group discussed whether logical unit reset should be changed from optional to mandatory. Rob agreed to bring a revised proposal to the next meeting.

4.4 Queue Locking for Busy, Task-Queue-Full, & Reservation Active [Satran]

Julian Satran presented a discussion regarding the lack of ACA-like interlocks on the BUSY, TASK SET FULL, and RESERVATION CONFLICT status codes (01-048r0). The group tentative agreed to resolve the issue by providing an initiator selectable way to make BUSY, TASK SET FULL, and RESERVATION CONFLICT status codes translate to CHECK CONDITION status with informative sense data. Ed Gardner agreed incorporate the tentative resolution in the next revision of his proposal (see agenda item 5.5).

5. Command Set Topics

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

Ken Moe reviewed the changes in the latest revision of the proposal (00-232r4). He described issues raised in a review meeting held earlier this week and stated that a new revision will be prepared as requested. Ken requested approval of a conference call on 12 February to discuss the next revision. Ken stated that a new revision will be available for consideration at the next meeting.

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

Rob Elliott presented a proposal for defining logical unit groups (an extension of concepts originated in the asymmetric behavior proposal, see 5.1) as an extension to the Device Identification vital product data page. Concerns were raised about how the group information is reported and how the proposed logical unit groups interact with access controls.

George Penokie observed that several different efforts are moving in the same general direction and suggested that some kind of study group effort is necessary to develop a coordinated solution.

5.3 CDB Structure Rewrite (00-269) [Weber]

The group reviewed the CDB subclause structure rewrite (00-269r3). Minor changes were agreed and Ralph will prepare a new revision of the proposal. In the absence of any objections, the group unanimously recommended inclusion by reference of 00-269r4 (r3 as revised) in the SPC-2 letter ballot resolution.

5.4 Identifying Devices (00-357) [Gardner]

Ed Gardner asked that this item be dropped from this and future agendas.

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

Ed Gardner described a problem where in autosense clears a unit attention condition (00-359r1). Basically, the combination of commands in flight and autosense results in a condition where the initiator may not be able to stop commands that should be stopped based on unit attention conditions. Ed asked for recommendations on how the initiator should indicate that the new feature was being requested (recognizing that there must be a way to maintain the current behavior). Options discussed were Control byte (plus INQUIRY bit), Control mode page, and protocol specific. The group recommended using the Control mode page and Ed agreed to bring a specific proposal based on that recommendation to the next meeting.

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

Jim Hafner presented a proposal for initiator/target identifiers longer than 64-bits. Changes were requested and the group discussed the need for this to be considered in the context of the study group meeting discussed in 5.2. Jim agreed to bring a revised proposal to the next CAP meeting.

5.7 SCSI Device Memory Export Protocol (00-312) [Wayda]

Since Jim Wayda was not present at the meeting, discussion of this topic was deferred to the next meeting.

5.8 SPC-2 FIRST BURST SIZE definition (01-025) [Elliott]

Rob Elliott presented a proposal (01-025r0) to make the SPC-2 definition of the FIRST BURST SIZE field in the Disconnect-Reconnect mode page more consistent with the definitions in SPI-4 and FCP-2. In the absence of any objections, the group unanimously recommended that 01-025r0 be included in the SPC-2 letter ballot response.

5.9 SPC-3 Access Controls LUN conflicts due to transport IDs (01-026) [Elliott]

Rob Elliott presented a proposal (01-026r0) to use the Fibre Channel node ID only in the previously approved access controls proposal (99-148r7). In the absence of any objections, the group unanimously recommended that option 1 in 01-026r0 be recommended for inclusion in SPC-3.

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

Emily Hill presented a proposal to add a mode page to return a serial number associated with media as opposed to the current VPD page that contains the serial number for the device. The group discussed the format of the page and whether the proposal should be for a mode page or a vital product data page. Emily agreed to prepare a revised proposal for consideration at the next meeting.

5.11 iSCSI protocol additions to SPC-2 (01-044) [Peterson]

Dave Peterson presented a proposal to add iSCSI protocol identifiers to SPC-2. It was noted that identifiers for SRP will be added if the iSCSI proposal is accepted. In the absence of any objections, the group unanimously approved including 01-044r0 in the SPC-2 letter ballot resolution.

6. SCSI Protocol Topics

6.1 Margin Control (99-264) [Lamers]

Ron Roberts asked that this item be dropped from this and future agendas.

Ralph Weber asked if the operation code assigned in SPC-2 for the MARGIN CONTROL command could be returned to the pool of unused operation codes. The group agreed that the assignment could be undone.

6.2 Scatter-Gather Lists for SRP (00-410) [Gardner]

Ed Gardner asked that this item be dropped from this and future agendas.

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

Cris Simpson presented a proposal to introduce an initiator inactivity timeout that allows the target to recover resources if an initiator has not done anything in a specified period of time (01-038). The group asked that a timeout value of "forever" be specifically identified in the proposal. Requests were made to change to a priority scheme allowing the target to have guidance about which initiators to prefer when cleanup resources. Cris agreed to bring a revised proposal to the next meeting.

7. New Business

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

In view of the late hour, Roger Cummings asked that discussion of this topic be deferred to the next meeting.

8. Review of Documents

8.1 SPC-2 Letter Ballot Comments Resolution (00-267) [Weber]

Ralph Weber led a review of the SPC-2 Letter Ballot Comments Resolution (00-267r5). Several changes were agreed and Ralph promised to have the next revision ready for the mailing. As a result of the review, Ralph declared the resolution process complete and stated that a motion to approve the resolution and forward SPC-2 to public review will be entertained in March.

8.2 SBC-2 Review []

Action on this topic was deferred to the next meeting.

8.3 SRP Review [Gardner]

Action on this topic was deferred to the next meeting. Ed noted that the SRP working group is holding separate meetings; one was held in December in Redmond, WA (minutes in 01-009), another was held earlier this month in Houston, TX (minutes in 00-024) and another will be held after the T10 Plenary later this week.

9. Meeting Schedule

The next meeting of the SCSI Commands, Architecture, and Protocols Working Group will be Wednesday, March 7, 2001 from 9 a.m. to 7 p.m. (or until all agenda items are completed). The meeting will be at the Crowne Plaza Suites (972-233-7600) in Dallas, TX, hosted by Texas Instruments.

10. Adjournment

The meeting was adjourned at 5:55 p.m. on Wednesday January 17, 2001.