

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

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Reply to: John Lohmeyer

To: T10 Membership
From: Ralph Weber & John Lohmeyer
Subject: Parallel SCSI Working Group Meeting -- September 11, 2001
Huntington Beach, CA

Agenda

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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., Tuesday, September 11, 2001. He thanked Skip Jones of QLogic for hosting the meeting.

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

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2. Approval of Agenda

The draft agenda was approved with the following changes:

- 4.2.4 Training Gap [Brown]
- 4.2.5 Disable PreComp During Training [Evans]
- 4.2.6 Message After Streaming [Penokie]
- 4.3.2 Adding Relationship to Developing Standards [Aloisi]

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

- 4.3.3 SPI-4 Revision 06 Review [Penokie]

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. Vince Bastiani	A	Bass Technology Consulting	bass.tech@gte.net
Mr. Bill Galloway	P	BREA Technologies, Inc.	billg@breatech.com
Mr. Mike Kosco	V	Chip Craft Corp.	mike@chipcraft.com
Mr. Robert C. Elliott	P	Compaq Computer Corp.	Robert.Elliott@compaq.com
Dr. William Ham	A	Compaq Computer Corp.	bill_ham@ix.netcom.com
Mr. Wayne Bellamy	V	Compaq Computer Corp.	wayne.bellamy@compaq.com
Mr. Robert Griswold	P	Crossroads Systems, Inc.	rgriswold@crossroads.com
Mr. Titkwan Hui	A	Dallas Semiconductor	tk.hui@dalsemi.com
Mr. Kevin Marks	P	Dell Computer Corp.	kevin_marks@dell.com
Mr. Ralph O. Weber	P	ENDL Texas	roweber@acm.org
Mr. Eugene Lew	P	Fujitsu	elew@fcpa.fujitsu.com
Mr. George O. Penokie	P	IBM / Tivoli Systems	gop@us.ibm.com
Mr. John Lohmeyer	P	LSI Logic Corp.	lohmeier@t10.org
Mr. William Petty	A	LSI Logic Corp.	william.petty@lsil.com
Mr. Brian Day	V	LSI Logic Corp.	brian.day@lsil.com
Mr. Mark Evans	P	Maxtor Corp.	mark_evans@maxtor.com
Mr. Russ Brown	V	Maxtor Corp.	russ_brown@maxtor.com
Mr. Jay Neer	P	Molex Inc.	jneer@molex.com
Mr. Skip Jones	P	QLogic Corp.	skip.jones@qlogic.com
Mr. Richard Moore	A#	QLogic Corp.	richard.moore@qlogic.com
Mr. Tim Hsia	V	QLogic Corp.	tim.hsia@qlogic.com
Mr. Henry Kuo	V	QLogic Corp.	henry.kuo@qlogic.com
Mr. Gerald Houlder	P	Seagate Technology	gerry_houlder@seagate.com
Mr. Jim Coomes	V	Seagate Technology	jim_coomes@seagate.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. Ron Mathews	AV	UNISYS Corporation	ronald.mathews@unisys.com

29 People Present

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

4. SPI-4 Topics

4.1 SPI-4 Physical Topics

4.1.1 Periodic structures on SCSI buses (00-352) [Barnes]

In the absence of Larry Barnes, discussion of this topic was deferred to the November meeting.

John agreed to move this topic to SPI-5 on the November agenda.

4.2 SPI-4 Protocol Topics

4.2.1 SPI-4 negotiation message rewrite (01-131) [Elliott]

Rob Elliott presented 01-131r3, the SPI-4 negotiation message rewrite revision resulting from comments received at the July working group meeting. Bill Galloway raised several concerns, including a problem with "invalid" transfer parameters. It was agreed that "invalid" transfer parameters really is intended to mean that a "negotiation is required".

Rob Elliott moved that 01-131r4 (r3 as revised) be recommended for inclusion in SPI-4. Bill Galloway seconded the motion. In the absence of any objections, the motion passed unanimously.

4.2.2 Bad IU Error Recovery (01-226) [Galloway/Elliott]

After a brief presentation, Bill Galloway moved that 01-226r1 be recommended for inclusion in SPI-4. Rob Elliott seconded the motion. In the absence of any objections, the motion was approved unanimously.

4.2.3 Clarification of SPI-4 DT Data Group Pad and pCRC Transfers (01-251) [Lohmeyer]

John Lohmeyer presented proposals intended to resolve a deadlock situation. He noted that the problem can be corrected by requiring changes in the initiator or in the target. Bill Galloway asked if the problem could be corrected by requiring both sides to change. John noted that such a solution was what the committee decided to do in SPI, but it went beyond what was necessary to solve the problem.

John presented two specific proposals, one for initiator requirements and one for target requirements. The changes in target requirements were deemed more desirable as all the target hardware manufacturers in the room felt they already met the modified requirements.

John Lohmeyer moved that the target requirements version of the document be recommended as 01-251r1 (r0 as revised) for inclusion in SPI-4. Skip Jones seconded the motion. The motion passed on a vote of 11:0:5.

4.2.4 Training Gap [Brown]

Mark Evans reported a problem with the words describing DT DATA OUT Phase Training. George Penokie agreed that the words need editorial correction and details of the correction would be worked out in the document review part of the meeting (see item 4.3.3).

4.2.5 Disable PreComp During Training [Evans]

Mark Evans presented a concern about the clarity of the description of signal strength when precompensation is required to be disabled during training. One of the difficulties encountered in developing corrective wording was the fact that, when precompensation is negotiated to be disabled, the standard has no concept of strong and weak driver levels, meaning that those terms cannot be used in comprehensive replacement wording.

The group agreed that the disable precompensation wording will be changed to, "if precompensation is enabled use the strong driver level." No reference to precompensation disabled was deemed necessary because there is only one level in that circumstance.

4.2.6 Message After Streaming [Penokie]

George Penokie described a corner case in stopping data streaming. The group agreed that nothing was really broken because the target has to deal with whatever the initiator does. George agreed that no changes would be made in SPI-4.

4.3 SPI-4 working draft review [Penokie]

4.3.1 Minor Issues in SPI-4 Draft (01-271) [Moore]

Richard Moore presented three problems with wording in SPI-4 (01-271r0). Richard Moore moved that 01-271r0 be recommended for inclusion in SPI-4. Rob Elliott seconded the motion. In the absence of any objections, the motion passed unanimously.

4.3.2 Adding Relationship to Developing Standards (01-294) [Aloisi]

Paul Aloisi requested the addition of references to PIP, SSM, and SDV to SPI-4 in the 'references to documents in development' section (01-294). George Penokie raised concerns about adding normative references to technical reports. The reference to SSM was switched to SSM-2, which is a standard, but no similar resolution was possible for the SDV reference.

Paul Aloisi moved that 01-294r0 be recommended for inclusion in SPI-4. Bill Ham seconded the motion. The motion passed on a vote of 5:1:6.

4.3.3 SPI-4 Revision 06 Review [Penokie]

George Penokie led a review of outstanding issues in SPI-4.

George Penokie moved that the group recommend that SPI-4 be modified in subclause 10.5.2.3 to change the wording that says "...any task management message is allowed..." to "...the target reset message is allowed...". Bill Galloway seconded the motion. In the absence of any objections, the motion passed unanimously.

George stated a plan to hold a letter ballot on forwarding SPI-4 revision 7 to public review and the group concurred.

5. SPI-5 Topics

5.1 Removal of SE and MSE from SPI-5 (01-236) [Aloisi]

Paul Aloisi presented a proposal that single ended and multimode single ended be removed from SPI-5 (01-236r1). The group discussed the effects of the removal on the industry and especially on disk drive manufacturers. While trauma was predicted for some customers, the difficulty of maintaining 5 volt support in SPI-5 components was presented as a critical problem to be solved in SPI-5.

Paul Aloisi moved 01-236r1 (r0 as revised) be recommended for inclusion in SPI-5. Vince Bastiani seconded the motion. In the absence of any objections, the motion passed unanimously.

5.2 SPI-5 Programmable Termination (01-270) [Aloisi]

Paul Aloisi presented 01-270r0, a proposal to change the definition of terminators in SPI-5 to allow terminators to be programmable as SES devices with an I²C interface between the SES device and the terminator. Although there was agreement that terminator characteristics might need to be more adjustable in SPI-5, solutions other than programmable terminators were preferred by several in the group. Paul agreed to review the proposal again at the November meeting.

6. Old Business

6.1 SDV Recommendations to Change Wording in SPI-4 (01-149) [Ham/Elliott]

Rob Elliott presented SDV recommendations for changes in SPI-4 (01-149r2). He noted that r2 is r1 as revised by the SDV working group. The group requested a minor change in one of the tables.

Rob Elliott moved that 01-149r3 (r2 as revised) be recommended for inclusion in SPI-4. Paul Aloisi seconded the motion. In the absence of any objections, the motion passed unanimously.

6.2 Project Proposal for SPI-6 (01-145) [Lohmeyer]

John Lohmeyer asked that this item be deferred to the November meeting.

7. New Business

No new business was brought before this meeting.

8. Review of Recommendations to the Plenary

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

That 01-131r4 (r3 as revised) "SPI-4 negotiation message rewrite" be included in SPI-4

That 01-149r3 (r2 as revised) "SDV Recommended wording changes" be included in SPI-4

That 01-226r1 "Bad IU Error Recovery" be included in SPI-4

That 01-251r1 (r0 as revised) "Clarification of SPI-4 DT Data Group Pad and pCRC Transfers" be included in SPI-4

That 01-271r0 "Minor Issues in SPI-4" be included in SPI-4

That 01-294r0 "Adding Relationship to Developing Standards" be included in SPI-4

That the SPI-4 subclause 10.5.2.3 be changed where the wording that says "...any task management message is allowed..." to replace the wording with "...the target reset message is allowed...".
That 01-236r1 "Removal of SE and MSE from SPI-5" be included in SPI-5
That the chair conduct a letter ballot on forwarding SPI-4 revision 7 for public review

9. Meeting Schedule

The next meeting of the Parallel SCSI Working Group will be Tuesday November 6, 2001 commencing at 9:00 a.m. in Seaside, CA at the Embassy Suites Hotel (831-393-1115).

10. Adjournment

The meeting was adjourned at 5:15 p.m. on Tuesday, September 11, 2001.