

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

Doc. No.: T10/01-214r0
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Date: July 18, 2001

Reply to: John Lohmeyer

To: T10 Membership  
From: Ralph Weber & John Lohmeyer  
Subject: Parallel SCSI Working Group Meeting -- July 17, 2001  
Colorado Springs, CO

## Agenda

1. Opening Remarks
2. Approval of Agenda
3. Attendance and Membership
4. SPI-4 Topics
  - 4.1 SPI-4 Physical Topics
    - 4.1.1 Periodic structures on SCSI buses (00-352) [Barnes]
    - 4.1.2 Precomp Cutback Level (01-136) [Manildi]
  - 4.2 SPI-4 Protocol Topics
    - 4.2.1 SPI-4 negotiation message rewrite (01-131) [Elliott]
    - 4.2.2 P\_CRCA Streaming Clarifications (01-170) [Day]
    - 4.2.3 Exception Handling and Streaming Transfers (01-125) [Srinivasan and Day]
    - 4.2.4 ATN Condition Streaming Change (01-207) [Day]
    - 4.2.5 SPI-4 Add DISCONNECT OUT during IU mode to bus free list (01-201) [Elliott]
    - 4.2.6 SPI-4 Obsolete AIP annex (01-202) [Elliott]
    - 4.2.7 Bad IU Error Recovery () [Galloway/Elliott]
  - 4.3 SPI-4 working draft review [Penokie]
5. Old Business
  - 5.1 SDV Recommendations to Change Wording in SPI-4 (01-149) [Ham/Elliott]
  - 5.2 Project Proposal for SPI-5 (01-144) [Lohmeyer]
  - 5.3 Project Proposal for SPI-6 (01-145) [Lohmeyer]
  - 5.4 Segment Simulation Results (01-190) [Ham/Aloisi]
  - 5.5 SPI-4 Length and Signal Specifications (01-225) [Ham/Aloisi]
  - 5.6 Does ABORT TASK Clear CA? (01-212) [Penokie]
6. New Business
  - 6.1 Fast-320 Preliminary Timing Budget (01-162) [Petty]
  - 6.2 SPI-5 Data (01-224) [Evans]
7. Review of Recommendations to the Plenary
8. Meeting Schedule
9. Adjournment

## Results of Meeting

### 1. Opening Remarks

John Lohmeyer, the T10 Chair, called the meeting to order at 9:00 a.m., Tuesday, July 17, 2001. He thanked LSI Logic hosting the meeting.

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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:

- 4.2.7 Bad IU Error Recovery (01-226) [Galloway/Elliott]
- 6.2 SPI-5 Data (01-224) [Evans]

No 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. Vince Bastiani	A	Bass Technology Consulting	bass.tech@gte.net
Mr. Robert C. Elliott	P	Compaq Computer Corp.	Robert.Elliott@compaq.com
Mr. Ronald Stockford	A	Dell Computer Corp.	ron_stockford@dell.com
Mr. Ralph O. Weber	P	ENDL Texas	roweber@acm.org
Mr. Douglas Wagner	P	FCI	dwagner@fciconnect.com
Mr. Steve Wong	A#	FCI	sywong@fciconnect.com
Mr. Eugene Lew	P	Fujitsu	elew@fcpa.fujitsu.com
Mr. Tim Mackley	A	General Dynamics	timothy.a.mackley@gd-is.com
Mr. Zane Daggett	P	Hitachi Cable Manchester	zdaggett@hcm.hitachi.com
Mr. George O. Penokie	P	IBM / Tivoli Systems	gpenokie@tivoli.com
Mr. John Lohmeyer	P	LSI Logic Corp.	lohmeier@t10.org
Mr. William Petty	A	LSI Logic Corp.	william.petty@lsil.com
Mr. Larry Barnes	V	LSI Logic Corp.	larry.barnes@lsil.com
Mr. Brian Day	V	LSI Logic Corp.	brian.day@lsil.com
Mr. Frank Gasparik	V	LSI Logic Corp.	frank.gasparik@lsil.com
Mr. Paul V. Smith	V	LSI Logic Corp.	paul.v.smith@lsil.com
Ms. Jie Fan	A	Madison Cable Corp.	jie.fan@madisoncable.com
Mr. Mark Evans	P	Maxtor Corp.	mark_evans@maxtor.com
Mr. Russ Brown	V	Maxtor Corp.	russ_brown@maxtor.com
Mr. Richard Uber	V	Maxtor Corp.	duber@tdh.qntm.com
Mr. Richard Moore	A#	QLogic Corp.	richard.moore@qlogic.com
Mr. Ting Li Chan	V	QLogic Corp.	ting.chan@qlogic.com
Mr. Gerald Houlder	P	Seagate Technology	gerry_houlder@seagate.com
Mr. Van T. Ton	AV	Seagate Technology, LLC	Van.T.Ton@seagate.com
Mr. Vit Novak	A	Sun Microsystems, Inc.	vit.novak@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. Doug Piper	P	Woven Electronics	doug.piper@wovenelectronics.com
Mr. Tom Browning	A	Woven Electronics	tom.browning@wovenelectronics.com

wovenelectronics.com

30 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]

Larry Barnes asked that discussion of this topic be deferred to the September meeting. He noted that the topic may be discussed at the next PIP meeting.

#### 4.1.2 Precomp Cutback Level (01-136) [Manildi]

John Lohmeyer presented 01-136r1 on behalf of Bruce Manildi, who could not attend.

George Penokie moved that the working group recommend that the maximum weak driver amplitude be changed from 66% to 75% of the strong driver amplitude in SPI-4. Gerry Houlder seconded the motion. The motion passed on a vote of 14:0:0.

### 4.2 SPI-4 Protocol Topics

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

Rob Elliott led a review of the latest revision of the rewrite of the SDTR/WDTR/PPR description, 01-131r2. The first area reviewed was the figures at the end of the proposal. A page-by-page review of the descriptive text followed. The group proposed corrections and Rob agreed to prepare another revision for consideration at the next meeting.

#### 4.2.2 P\_CRCA Streaming Clarifications (01-170) [Day]

Brian Day presented 01-170r0, a request to clarify the target's use of P\_CRCA as described in 14.3.4 in SPI-4. Concerns were raised about the method of presenting the clarification and wording changes for table 29 and table 30 were discussed.

The group revised 01-170r0 and Brian agreed to prepare r1. Brian moved that 01-170r1 (r0 as modified) be recommended for inclusion in SPI-4. George Penokie seconded the motion. In the absence of any objections, the motion passed unanimously.

As a result of the discussion an additional proposal will be prepared to cover the issue of when P\_CRCA is required to be used on read streaming. Brian volunteered to write the proposal and George agreed to review the proposal as necessary prior to the next meeting.

#### 4.2.3 Exception Handling and Streaming Transfers (01-125) [Srinivasan and Day]

Brian Day stated that this issue was resolved at the last meeting.

#### 4.2.4 ATN Condition Streaming Change (01-207) [Day]

Brian Day presented 01-207r0, a request that a nonsense paragraph be deleted from 14.3.4 in SPI-4. Concerns were expressed about increasing the number of CRCs that are "outstanding" concurrently.

Brian Day moved that 01-207r0 be recommended for inclusion in SPI-4. Gerry Houlder seconded the motion. In the absence of any objections the motion passed unanimously.

#### 4.2.5 SPI-4 Add DISCONNECT OUT during IU mode to bus free list (01-201) [Elliott]

Rob Elliott presented a proposal 01-201r0 that identified an instance where an unexpected bus free case was not listed in the standard.

Rob Elliott moved that 01-201r0 be recommended for inclusion in SPI-4. Gerry Houlder seconded the motion. In the absence of any objections, the motion passed unanimously.

#### 4.2.6 SPI-4 Obsolete AIP annex (01-202) [Elliott]

After a brief presentation, Rob Elliott moved that 01-202r0 be recommended for inclusion in SPI-4. George Penokie seconded motion. In the absence of any objections, the motion passed unanimously.

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

Rob Elliott presented an e-mail proposal from Bill Galloway.

George Penokie noted that the proposed change reverses a current requirement in that the ATN gets raised after the last ACK currently and the proposal is to move that to on or before the last ACK. Therefore, George insisted that a proposal document be prepared and announced on the reflector for review by all interested parties.

### 4.3 SPI-4 working draft review [Penokie]

George Penokie reviewed the editor's notes in SPI-4 revision 05.

George Penokie moved that the following sentence be recommended for inclusion in SPI-4: "If the STATUS field contains a CHECK CONDITION status the SNSVALID bit shall be set to one." Gerry Houlder seconded the motion. In the absence of any objections, the motion passed unanimously.

George stated that his intention is to request a forwarding letter ballot on SPI-4 following the September plenary meeting.

## 5. Old Business

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

Rob Elliott presented a collection of changes proposed for SPI-4 by the domain validation working group (01-149r0). He noted that the primary objective of the proposal was to define the contents of the margin control mode page.

Several corrections were requested and Rob agreed that Compaq will prepare a revision for the next meeting.

## **5.2 Project Proposal for SPI-5 (01-144) [Lohmeyer]**

John Lohmeyer presented a project proposal for SPI-5 (01-144r0). The group requested corrections and John agreed to prepare an r1. John Lohmeyer moved that 01-144r1 (r0 as revised) be recommended for forwarding to NCITS as a new project proposal. Paul Aloisi seconded the motion. In the absence of any objections, the motion passed unanimously.

George Penokie volunteered to edit SPI-5.

## **5.3 Project Proposal for SPI-6 (01-145) [Lohmeyer]**

John Lohmeyer led a brief discussion of SPI-6 noting that it might be too complex to handle sequentially with SPI-5, so the group should be prepared to begin the SPI-6 project before SPI-5 is completed. John requested that the group not consider forwarding the SPI-6 project proposal at this time. Paul Aloisi tentatively indicated a willingness to edit SPI-6.

## **5.4 Segment Simulation Results (01-190) [Ham/Aloisi]**

Paul Aloisi presented the basic segment simulation model, taken from the minutes of the most recent SSM working group meeting (01-190r0).

## **5.5 SPI-4 Length and Signal Specifications (01-225) [Ham/Aloisi]**

Paul Aloisi presented SSM/PIP concerns regarding the specifications in SPI-4 (01-225r0).

## **5.6 Does ABORT TASK Clear CA? (01-212) [Penokie]**

George Penokie asked that this topic be moved to the CAP agenda.

# **6. New Business**

## **6.1 Fast-320 Preliminary Timing Budget (01-162) [Petty]**

Bill Petty presented a different format for tallying up the parallel SCSI bus timing budget (01-162r0). He pointed out areas where the timing budget has problems for SPI-5. Concerns were raised about possible changes in the cable plant requirements and whether such changes were represented in the SPI-5 project proposal and John Lohmeyer demonstrated that the project proposal covers the issue.

## **6.2 SPI-5 Data (01-224) [Evans]**

Russ Brown presented laboratory data showing the effects of going to Fast-320 timing on current SCSI cables and backplanes (01-224r0). The group discussed changes that might be made in Fast-320.

# **7. Review of Recommendations to the Plenary**

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

- That the maximum weak driver amplitude be changed from 66% to 75% of the strong driver amplitude in SPI-4.
- That 01-207r0 be included in SPI-4.
- That 01-170r1 (r0 as modified) be included in SPI-4.
- That 01-201r0 be included in SPI-4.
- That 01-202r0 be included in SPI-4.

That 01-144r1 (r0 as revised) be forwarded to NCITS as a new project proposal for SPI-5.  
That the following sentence be included in SPI-4: "If the STATUS field contains a CHECK CONDITION status the SNSVALID bit shall be set to one."

## **8. Meeting Schedule**

The next meeting of the Parallel SCSI Working Group will be Tuesday September 11, 2001 commencing at 9:00 a.m. in Huntington Beach, CA at the Hilton Waterfront Hotel (714-960-7873).

## **9. Adjournment**

The meeting was adjourned at 7:20 p.m. on Tuesday, July 17, 2001.