

Accredited Standards Committee\*

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

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Date: May 11, 2001

Reply to: John Lohmeyer

To: T10 Membership  
From: Ralph Weber & John Lohmeyer  
Subject: Parallel SCSI Working Group Meeting -- May 1, 2001  
Nashua, NH

## 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 Minimum drive levels (01-094) [Bridgewater]
    - 4.1.3 Precomp Cutback Level (01-136) [Manildi]
    - 4.1.4 SPI-4 Timing Budget Question [Petty]
    - 4.1.5 QAS Timing Question [Ham]
  - 4.2 SPI-4 Protocol Topics
    - 4.2.1 Streaming Clarifications (e-mail by Sriram Srinivasan and 01-125) [Day]
    - 4.2.2 SPI-4 reset cleanup (01-128) [Elliott]
    - 4.2.3 SPI-4 negotiation message rewrite (01-131) [Elliott]
    - 4.2.4 SPI L\_Q error handling (reflector message) [Penokie]
    - 4.2.5 Bus Free After Negotiation (reflector message) [Day]
  - 4.3 SPI-4 working draft review [Penokie]
5. New Business
  - 5.1 SDV Recommendations to Change Wording in SPI-4 (01-149) [Ham]
  - 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 (01-126) [Ham]
  - 5.5 SPI-4 Length and Signal Specifications [Ham]
  - 5.6 Does ABORT TASK Clear CA? (reflector message) [Penokie]
6. Review of Recommendations to the Plenary
7. Meeting Schedule
8. Adjournment

## Results of Meeting

### 1. Opening Remarks

John Lohmeyer, the T10 Chair, called the meeting to order at 9:00 a.m., Tuesday, May 1, 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.

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## 2. Approval of Agenda

The draft agenda was approved with the following changes:

- 4.1.3 Precomp Cutback Level (01-136) [Manildi]
- 4.1.4 SPI-4 Timing Budget Question [Petty]
- 4.1.5 QAS Timing Question [Ham]
- 4.2.5 Bus Free After Negotiation (reflector message) [Day]
- 5.1 SDV Recommendations to Change Wording in SPI-4 () [Ham]
- 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 [Ham]
- 5.5 SPI-4 Length and Signal Specifications [Ham]

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

- 5.6 Does ABORT TASK Clear CA? (reflector message) [Penokie]
- 6 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. Vince Bastiani    | V | Bass Technology Consulting    | bass.tech@gte.net         |
| Mr. Bill Galloway     | P | BREA Technologies, Inc.       | billg@breatech.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. David Rotman      | V | Compaq Computer Corp.         | david.rotman@compaq.com   |
| Mr. Kevin Marks       | A | Dell Computer Corp.           | kevin_marks@dell.com      |
| Mr. Ralph O. Weber    | P | ENDL Texas                    | roweber@acm.org           |
| Mr. Douglas Wagner    | P | FCI                           | dwagner@fciconnect.com    |
| Mr. Kim R. Davies     | V | FCI                           | kdavies@fciconnect.com    |
| Mr. Eugene Lew        | P | Fujitsu                       | elew@fcpa.fujitsu.com     |
| Mr. Zane Daggett      | P | Hitachi Cable Manchester, Inc | 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. Brian Day         | V | LSI Logic Corp.               | brian.day@lsil.com        |
| Mr. Mark Evans        | P | Maxtor Corp.                  | mark.evans@quantum.com    |
| Mr. Bruce Leshay      | V | Maxtor Corp.                  | bleshay@tdh.qntm.com      |
| Mr. Richard Uber      | V | Maxtor Corp.                  | duber@tdh.qntm.com        |
| Mr. Paul Entzel       | P | Quantum Corp.                 | paul.entzel@quantum.com   |
| Mr. A. Bruce Manildi  | V | Seagate Technology            | bruce_manildi@seagate.com |
| Mr. Paul D. Aloisi    | P | Texas Instruments             | Paul_Aloisi@ti.com        |
| Mr. Phil Shelton      | V | UNISYS Corporation            | phil.shelton@unisys.com   |

23 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 July meeting.

#### 4.1.2 Minimum drive levels (01-094) [Bridgewater]

Vince Bastiani requested that this item be dropped from this and future agendas.

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

Bruce Manildi presented laboratory data showing the effects of precomp cutback (01-136r0). After reviewing the data, Bruce propose that the range of weak driver levels be changed from 50%-66% to 60%-75%. Concerns were raised about how the proposed changes affect the cable configurations. The group agreed to only half of the proposed changes and Bruce agreed to prepare a new revision of the proposal for the next meeting.

#### 4.1.4 SPI-4 Timing Budget Question [Petty]

Bill Petty raised questions about how the Transmit assertion period and Transmit negation period values are computed to the values shown in Table 35 in SPI-4 revision 4. The group explained how the numbers were picked (not exactly computed). Some of those present wanted to consider making a proposal for changes to these values but consideration was deferred pending a formal proposal from Bill.

#### 4.1.5 QAS Timing Question [Ham]

Bill Ham asked if the QAS timing budget included enough time for expanders and received an answer of yes.

### 4.2 SPI-4 Protocol Topics

#### 4.2.1 Streaming Clarifications (01-124 and 01-125) [Day]

Brian Day presented a request that a target may use either streaming or non-streaming to complete a read transfer requested with streaming enabled (01-124r0). The group discussed how best to represent the options in SPI-4 with George Penokie taking advisory notes to be applied to the next SPI-4 revision.

Brian presented a request for two clarifications regarding error handling on streaming transfers. Brian Day moved that 01-125r1 (r0 as revised to remove all but the changes to item g) be approved for inclusion in SPI-4. Bill Galloway seconded the motion. The motion passed 9:0:2.

#### 4.2.2 SPI-4 reset cleanup (01-128) [Elliott]

Rob Elliott presented a proposal to clarify a SPI target's response to logical unit reset as well as to cleanup several other problems with reset terminology and descriptions in SPI-4 (01-128r1). Minor corrections were agreed and Rob promised a new revision. Rob Elliott moved that 01-128r2 (r1 as revised) be accepted for inclusion in SPI-4. Bill Galloway seconded the motion. The motion passed on a vote of 6:0:5.

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

Rob Elliott presented a proposal (01-131r1) to rewrite the discussion of SDTR, WDTR, and PPR including reorganization of the text to form a model subclause and definitions subclauses. He noted that only r0 has been posted and corrections are already in the r1 being presented. The group requested several more corrections and enhancements. Rob agreed to prepare a new revision for the next meeting.

#### 4.2.4 SPI L\_Q error handling (reflector message) [Penokie]

George Penokie reviewed two error handling problems relating to SPI L\_Q information units. The group discussed the proposal and George agreed to prepare a proposal. George moved that 01-147r0 be approved for inclusion in SPI-4. Bill Galloway seconded the motion. In the absence of any objections the motion was passed unanimously.

#### 4.2.5 Bus Free After Negotiation (reflector message) [Day]

George Penokie presented a question about going bus free after an exception condition during a WDTR/SDTR negotiation while in packetized mode. The group agreed that going to bus free was the correct response and it is not an unexpected bus free because the situation is in the list of expected bus free scenarios.

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

George Penokie led a review of SPI-4 revision. Bill Ham asked that interoperability points (the device connector) be more carefully specified and George asked Bill to identify specific changes. Bill pointed out places where he has problems.

Bill Ham agreed to prepare a proposal that cleans up the receiver signal specifications for SPI-4. He stated a plan to discuss the draft proposal at the upcoming SSM working group meeting.

## 5. New Business

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

Bill Ham reported that the SDV working group is requesting changes in the margin controls parts of SPI-4 and noted that the request is documented in 01-149r0. The group agreed to discuss the topic in more detail at the next meeting.

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

Due to the late hour, John Lohmeyer asked everybody to review the SPI-5 project proposal and come to the next meeting prepared to discuss it.

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

Due to the late hour, John Lohmeyer asked everybody to review the SPI-6 project proposal and come to the next meeting prepared to discuss it.

#### **5.4 Segment Simulation Results (01-126) [Ham]**

Bill Ham described how the minutes of the recent SSM working group (01-126) include complete simulation results for a segment of parallel bus cable. He asked that additional discussion of this topic be deferred to the next meeting.

#### **5.5 SPI-4 Length and Signal Specifications [Ham]**

Bill Ham asked that discussion of this topic be deferred to the next meeting.

#### **5.6 Does ABORT TASK Clear CA? (reflector message) [Penokie]**

George Penokie reviewed a very old question about whether an ABORT TASK message clears a Contingent Allegiance. Due to the late hour, George agreed to review the issue and return with a proposal to the next meeting.

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

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

- Streaming Clarifications (01-125r1) [Day] — r0 as revised — 9:0:2
- SPI L\_Q error handling (01-147r0) [Penokie] — unanimous
- SPI-4 reset cleanup (01-128r3) [Elliott] — r1 as revised — 6:0:5

### **7. Meeting Schedule**

The next meeting of the Parallel SCSI Working Group will be Tuesday July 17, 2001 commencing at 9:00 a.m. in Colorado Springs, CO at the Wyndham Hotel (719-260-1800).

### **8. Adjournment**

The meeting was adjourned at 7:10 p.m. on Tuesday, May 1, 2001.