

Accredited Standards Committee\*

## InterNational Committee for Information Technology Standards (INCITS)

Doc. No.: T10/02-270r0
------------------------

Date: July 15, 2002

Reply to: John Lohmeyer

To: T10 Membership  
From: Ralph Weber & John Lohmeyer  
Subject: Parallel SCSI Working Group Meeting -- July 15, 2002  
Colorado Springs, CO

### Agenda

1. Opening Remarks
2. Approval of Agenda
3. Attendance and Membership
4. SPI-5 Topics
  - 4.1 SPI-5 Testing [Manildi]
  - 4.2 SPI-5 Working Draft Review [Penokie]
  - 4.3 Ultra640 SCSI, Reduction of Crosstalk Errors During Timing Deskew (02-163) [Brown & Aliahmad]
  - 4.4 Proposal for SPI-5 for decreasing deskew error during training for Ultra640 SCSI (02-209) [Russ Brown]
  - 4.5 Termination table note addition for SPI-5 (02-226) [Aloisi]
5. Old Business
  - 5.1 Project Proposal for SPI-6 (01-145) [Lohmeyer]
6. New Business
  - 6.1 Proposal for SPI-5 for Ultra640 receiver masks (02-264) [Brown]
  - 6.2 Ultra 640 input offset compensation and training pattern (02-266) [Penokie]
  - 6.3 Clock-to-Data and Duty Cycle Timings (02-268) [Penokie]
  - 6.4 PPR PCOMP\_EN description for fast-320 in SPI-5 (02-181) [Penokie]
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., Monday, July 15, 2002. He thanked LSI Logic 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 no changes.

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

- 6.4 PPR PCOMP\_EN description for fast-320 in SPI-5 (02-181) [Penokie]

\*Operating under the procedures of The American National Standards Institute.  
**INCITS Secretariat, Information Technology Industry Council (ITI)**  
1250 Eye Street NW, Suite 200, Washington, DC 20005-3922  
Email: incits@itic.org Telephone: 202-737-8888 FAX: 202-638-4922

### 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	Adaptec Consultant	bass.tech@gte.net
Mr. Bill Galloway	P	BREA Technologies, Inc.	billg@breatech.com
Mr. John Tyndall	A	Crossroads Systems, Inc.	jtyndall@crossroads.com
Mr. James A. Lott, Jr.	A	Dallas Semiconductor	jim.lott@dalsemi.com
Mr. Kevin Marks	P	Dell Computer Corp.	kevin_marks@dell.com
Mr. Ralph O. Weber	P	ENDL Texas	roweber@acm.org
Mr. Rob Elliott	P	Hewlett Packard Co.	Elliott@hp.com
Mr. George O. Penokie	P	IBM / Tivoli Systems	gop@us.ibm.com
Mr. Dan Colegrove	V	IBM Corp.	dcolegro@us.ibm.com
Mr. Chris Fournier	V	IBM Corp.	chrisfou@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. Dave Gissel	V	LSI Logic Corp.	david.gissel@lsil.com
Ms. Jie Fan	P	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. James R. (Bob) Davis	P	Network Appliance Inc.	bob@netapp.com
Mr. Henry Kuo	V	QLogic Corp.	henry.kuo@qlogic.com
Mr. John A. Fobel	AV	Rancho Technology, Inc.	johnf@rancho.com
Mr. Vincent Duong	V	Rancho Technology, Inc.	
Mr. Gerald Houlder	P	Seagate Technology	gerry_houlder@seagate.com
Mr. Vit Novak	P	Sun Microsystems, Inc.	vit.novak@sun.com
Mr. Paul D. Aloisi	P	Texas Instruments	Paul_Aloisi@ti.com
Mr. Phil Shelton	A	UNISYS Corporation	phil.shelton@unisys.com

24 People Present

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

### 4. SPI-5 Topics

#### 4.1 SPI-5 Testing [Manildi]

Paul Aloisi noted that most of the discussion on this topic is occurring the PIP working group. Discussion of this topic by this group was deferred to the next meeting.

## **4.2 SPI-5 Working Draft Review [Penokie]**

George Penokie led the group in a review of SPI-5. He announced that the Letter Ballot on SPI-5 will follow the September meeting.

## **4.3 Ultra640 SCSI, Reduction of Crosstalk Errors During Timing Deskew (02-163) [Brown & Aliahmad]**

This item was covered under 4.4.

## **4.4 Proposal for SPI-5 for decreasing deskew error during training for Ultra640 SCSI (02-209) [Russ Brown]**

Russ Brown presented a detailed proposal (02-209r1) to produce the results proposed in the May presentation (see item 4.4). There were no more than four proposed changes of less than one sentence each.

Mark Evans moved that 02-209r1 be recommended for inclusion in SPI-5. Bill Galloway seconded the motion. In the absence of any objections, the motion passed unanimously.

## **4.5 Termination table note addition for SPI-5 (02-226) [Aloisi]**

Paul Aloisi presented a proposal to clarify the table of I-V requirements for differential impedance (02-226r0). George Penokie requested that the table number be corrected in the proposal.

Paul Aloisi moved that 02-226r1 (r0 as revised) be recommended for inclusion in SPI-5. Bill Petty seconded the motion. Russ Brown raised concerns about wording of the requirements and why tolerance values appear to be described in fuzzy logic. After discussion of Russ' issues could not reach a resolution, Paul withdrew the motion. He returned with revised wording later in the meeting.

In the revised proposal, the need to define 'closed system' and 'open system' was raised as an issue.

Paul Aloisi moved that 02-226r1 (r0 as revised and revised) be recommended for inclusion in SPI-5. Bill Petty seconded the motion. In the absence of any objections, the motion passed unanimously.

## **5. Old Business**

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

John Lohmeyer asked that this item be deleted from future agendas.

## **6. New Business**

### **6.1 Proposal for SPI-5 for Ultra640 receiver masks (02-264) [Brown]**

Russ Brown reviewed the fast-320 receiver signal requirements proposal (02-264r0).

Mark Evans moved that 02-264r0 be recommended for inclusion in SPI-5. Paul Aloisi seconded the motion. In the absence of any objections, the motion passed unanimously.

### **6.2 Ultra 640 input offset compensation and training pattern (02-266) [Penokie]**

George Penokie presented a request to increase the duration of the low frequency portion of the training pattern. It appeared that the request was to increase the duration from 400 ns to 1600 ns. Concerns were raised about the

size of the increase. The proposal also requested the addition of a second low frequency pulse, but the group rejected that outright. George agreed to bring a revised proposal to the next meeting.

### **6.3 Clock-to-Data and Duty Cycle Timings (02-268) [Penokie]**

George Penokie proposed that some diagrams might be missing from SPI-5 and suggested new diagrams (02-268r0). The group advised George on what was acceptable and not acceptable in the proposal.

The group agreed that the first figure can be incorporated as editorial. George agreed to bring a revision of the second figure to the next meeting, and to drop the last figure entirely.

### **6.4 PPR PCOMP\_EN description for fast-320 in SPI-5 (02-181) [Penokie]**

George Penokie reviewed the changes needed in SPI-5 to support the agreement from last time that precompensation is not to be used in fast-320. The discussion of whether the use of precompensation is allowed in ultra-320 (started in item 4.4) resurfaced. The group requested changes in the proposal.

Mark Evans moved that 02-181r1 (r0 as revised) be recommended for inclusion in SPI-5. George Penokie seconded the motion. The motion passed on a vote of 10:1:1.

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

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

- 02-209r1 Proposal for SPI-5 for decreasing deskew error during training for Ultra640 SCSI
- 02-264r0 Proposal for SPI-5 for Ultra640 receiver masks
- 02-181r1 (r0 revised) PPR PCOMP\_EN description for fast-320 in SPI-5
- 02-226r1 (r0 revised) Termination table note addition for SPI-5

## **8. Meeting Schedule**

The next meeting of the Parallel SCSI Working Group will be Monday September 9, 2002 commencing at 9:00 a.m. in Minneapolis, MN at the Hilton Airport Hotel (952-854-2100), hosted by Cisco Systems.

## **9. Adjournment**

The meeting was adjourned at 12:05 p.m. on Monday, July 15, 2002.