

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

Doc. No.: T10/01-006r0

Date: January 18, 2001

Reply to: John Lohmeyer

To: T10 Membership
From: Ralph Weber & John Lohmeyer
Subject: Parallel SCSI Working Group Meeting -- January 16, 2001
Lake Buena Vista, FL

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 Proposal for Ultra320 AAF receiver input signal specification for SPI-4 (00-400 & 00-408) [Brown]
 - 4.1.2 Proposal for Ultra320 SCSI timing skew specification for SPI-4 (00-399) [Brown]
 - 4.1.3 Calculated Signal Losses (00-382, 00-246) [Aloisi]
 - 4.1.4 Receiver Response Requirements (00-332) [Ham]
 - 4.1.5 Periodic structures on SCSI buses (00-352) [Barnes]
 - 4.1.6 Actual Precompensation Eye Diagrams (01-045) [Petty]
 - 4.1.7 SDV Margining Concept [Ham]
 - 4.1.8 Minimum drive levels (01-042r0) [Bridgewater]
 - 4.2 SPI-4 Protocol Topics
 - 4.2.1 Task Status after PPR (00-403) [Galloway]
 - 4.2.2 Aborting commands when changing in/out of packetized mode (00-403) [Galloway]
 - 4.2.3 QAS Handshake Correction (01-031) [Galloway]
 - 4.2.4 Additional Flow Control Timings (01-032) [Galloway]
 - 4.2.5 Proposed changes to SPI IU exception handling (00-384) [Srinivasan]
 - 4.3 SPI-4 working draft review [Penokie]
5. New Business
 - 5.1 SPI-4 Dedication [Lohmeyer]
6. Meeting Schedule
7. Adjournment

Results of Meeting

1. Opening Remarks

John Lohmeyer, the T10 Chair, called the meeting to order at 9:00 a.m., Tuesday, January 16, 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.

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

2. Approval of Agenda

The draft agenda was approved with the following changes:

- 4.1.6 Actual Precompensation Eye Diagrams (01-045) [Petty]
- 4.1.7 SDV Margining Concept [Ham]

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

- 4.1.8 Minimum drive levels (01-042r0) [Bridgewater]
- 5.1 SPI-4 Dedication [Lohmeyer]

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. Wally Bridgewater	V	Adaptec, Inc.	wally@eng.adaptec.com
Mr. Bill Mable	P	Amphenol Interconnect	mableaipc@aol.com
Mr. Vince Bastiani	V	Bass Technology Consulting	bass.tech@gte.net
Mr. Bill Galloway	P	BREA Technologies, Inc.	billg@breatech.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
Dr. William Ham	A	Compaq Computer Corp.	bill_ham@ix.netcom.com
Mr. Wayne Bellamy	V	Compaq Computer Corp.	wayne.bellamy@compaq.com
Mr. Rick DeMars	V	CTS	rdemars@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. Ralph O. Weber	P	ENDL Texas	roweber@acm.org
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. Bill Troop	AV	IBM Corp.	troop@us.ibm.com
Mr. Dennis Moore	P	KnowledgeTek, Inc.	dmoore@ix.netcom.com
Mr. John Lohmeyer	P	LSI Logic Corp.	lohmeier@t10.org
Mr. Larry Barnes	V	LSI Logic Corp.	larry.barnes@lsil.com
Mr. Brian Day	V	LSI Logic Corp.	brian.day@lsil.com
Mr. Jeffrey J. Gauvin	V	LSI Logic Corp.	jeff.gauvin@lsil.com
Ms. Jie Fan	A	Madison Cable Corp.	jie.fan@madisoncable.com
Mr. Jay Neer	P	Molex Inc.	jneer@molex.com
Mr. Gregg Neely	AV	NSTOR	greggn@nstor.com
Mr. Richard Moore	A#	QLogic Corp.	r_moore@qlc.com
Mr. Ting Li Chan	V	QLogic Corp.	t_chan@qlc.com
Mr. Tim Hsia	V	QLogic Corp.	t_hsia@qlc.com
Mr. Henry Kuo	V	QLogic Corp.	h_kuo@qlc.com

Mr. Mark Evans	P	Quantum Corp.	mark.evans@quantum.com
Mr. John Masiewicz	A	Seagate Technology	john_masiewicz@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. Mike Kosco	V	Texas Instruments	mike@chipcraft.com
Mr. Ron Mathews	AV	UNISYS Corporation	ronald.mathews@unisys.com

36 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 Proposal for Ultra320 AAF receiver input signal specification for SPI-4 (00-400 & 00-408) [Brown]

Mark Evans asked that discussion of this topic be deferred to the next meeting.

4.1.2 Proposal for Ultra320 SCSI timing skew specification for SPI-4 (00-399) [Brown]

Mark Evans presented a proposal to describe skew timing for Ultra320 (00-399r1) revised based on the inputs from the last meeting. Minor corrections were requested and Mark agreed to revise the proposal. On a vote of 14:0:1, the group recommended 00-399r2 (r1 as revised) for inclusion in SPI-4.

4.1.3 Calculated Signal Losses (00-382, 00-246) [Aloisi]

Paul Aloisi asked this item be dropped from this and future agendas.

4.1.4 Receiver Response Requirements (00-332) [Ham]

Bill Ham presented the proposed receiver response requirements (00-332r2). Concerns were raised about the proposal requiring physical tests instead of the modeling previously agreed and Bill revised the proposal to eliminate the word "test". Several other details in the specifications were discussed and Bill made additional revisions based on inputs from the group.

Bill agreed to provide 00-332r3 for the next mailing and consideration at the next meeting.

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

Larry Barnes asked that discussion of this topic be deferred to the next meeting.

4.1.6 Actual Precompensation Eye Diagrams (01-045) [Petty]

Bill Petty presented laboratory data based on SPI-4 precompensation drivers (00-045r0). Bill Ham led a discussion of how signal detection is (or should be) specified with the result being that the current SPI-4 language was held to be correct by the majority of those involved in the discussion.

4.1.7 SDV Margining Concept [Ham]

Bill Ham reported that the SDV (SCSI Domain Validation) working group discovered that most concepts of margining are "half baked". He noted that the problem gets dramatically more difficult as the number of devices on a bus increases past two. He indicated that the minutes of the SDV meeting contain information on this topic (see 01-005).

Bill suggested specific wording for SPI-4 and George Penokie asked that Bill review the content of SPI-4 and write specific proposals for changes if needed.

In the absence of any objections, the group supported the view that the integration of margining beyond the driver-receiver connection will be documented in SDV.

4.1.8 Minimum drive levels (01-042r0) [Bridgewater]

Wally Bridgewater presented simulation data and suggested a different way of computing losses, previously agreed from Paul Aloisi's spreadsheet. Concerns were raised about additional sources of losses not reflected in the presented simulation. The group agreed to consider the different way of computing losses only if Wally demonstrates where relaxation of some criteria is offset by tighter restrictions on other loss criteria.

4.2 SPI-4 Protocol Topics

4.2.1 Task Status after PPR (00-403) [Galloway]

Bill Galloway asked that this item be dropped from this and future agendas as it is covered in 4.2.2.

4.2.2 Aborting commands when changing in/out of packetized mode (00-403) [Galloway]

Bill Galloway presented a proposal requiring that commands be aborted when an I_T nexus changes in or out of packetized mode. In the absence of any objections, 00-403r1 was recommended for inclusion in SPI-4.

4.2.3 QAS Handshake Correction (01-031) [Galloway]

Bill Galloway presented a new round of corrections for the QAS handshake (01-031r0). In the absence of any objections, 01-031r0 was recommended for inclusion in SPI-4.

4.2.4 Additional Flow Control Timings (01-032) [Galloway]

Bill Galloway presented a proposal to add flow control timings for the slower speeds. In the absence of any objections, 01-032r0 was recommended for inclusion in SPI-4.

4.2.5 Proposed changes to SPI IU exception handling (00-384) [Srinivasan]

John Lohmeyer agreed to contact Mr. Srinivasan regarding this topic.

4.3 SPI-4 working draft review [Penokie]

George Penokie led a review of SPI-4 revision 2 with emphasis on editor's notes and text that has changed since the last revision.

5. New Business

5.1 SPI-4 Dedication [Lohmeyer]

John Lohmeyer presented the proposed SPI-4 dedication to Gene Milligan. In the absence of any objections, inclusion of the dedication was unanimously recommended.

6. Meeting Schedule

The next meeting of the Parallel SCSI Working Group will be Tuesday March 6, 2001 commencing at 9:00 a.m. in Dallas, TX at the Crowne Plaza Suites (972-233-7600).

7. Adjournment

The meeting was adjourned at 6:45 p.m. on Tuesday, January 16, 2000.