

Accredited Standards Committee*
InterNational Committee for Information Technology Standards (INCITS)

Doc. No.: T10/08-130r0

Date: March 11, 2008

Reply to: John Lohmeyer

To: T10 Membership
From: Ralph Weber and John Lohmeyer
Subject: SAS Protocol WG -- March 10, 2008
Raleigh, NC

Agenda

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Results of Meeting

1. Opening Remarks

John Lohmeyer called the meeting to order at 9:05 a.m. Monday, March 10, 2008. He thanked Fred Knight of NetApp for hosting the meeting. As usual, the people present introduced themselves.

2. Approval of Agenda

The draft agenda was approved with no additions and changes.

No additions and changes were made during the course of the meeting.

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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
Mr. Kevin Marks	P	Dell, Inc.
Mr. William Martin	P	Emulex
Mr. Ralph O. Weber	P	ENDL Texas
Mr. Chris Cicchetti	A	Finisar Corp.
Mr. David Freeman	P	Finisar Corp.
Mr. Rob Elliott	P	Hewlett Packard Co.
Mr. Dan Colegrove	P	Hitachi Global Storage Tech.
Mr. Kevin Butt	P	IBM Corp.
Mr. Ted Vojnovich	A	IBM Corp.
Mr. Pak Seto	V	Intel Corp.
Mr. Dennis Moore	P	KnowledgeTek, Inc.
Mr. Brad Besmer	A	LSI Corp.
Mr. Brian Day	A	LSI Corp.
Mr. Dennis Kleppen	A	LSI Corp.
Mr. John Lohmeyer	P	LSI Corp.
Mr. George Penokie	A	LSI Corp.
Mr. Michael Forney	V	Microsoft Corp.
Mr. Frederick Knight	P	NetApp
Mr. Chris Fore	A	Network Appliance
Mr. Gerald Houlder	P	Seagate Technology
Mr. Mark Evans	P	Western Digital
Mr. Duncan Penman	V	Western Digital

22 People Present

Status Key: P - Principal
 A - Alternate
 AV - Advisory Member
 E - Emeritus
 L - Liaison
 V - Visitor

4. Miscellaneous topics

No miscellaneous topics were presented to the group.

5. General Protocol topics

5.1 SAS-2 Redundant primitive sequence error handling (07-089) [Elliott]

Rob Elliott asked that discussion of a proposal to correct a number of error cases for which the recipient's Redundant Primitive detection rules are unclear, especially in light of the 6 Gbs usage of Decision Feedback Equalization (07-089r1), be deferred to the next meeting.

5.2 SAS-2 SPC-4 Differentiate between ACK NAK timeout reasons (08-064) [Elliott]

Rob Elliott asked that discussion a proposal to define new additional sense codes to indicate when different time-outs have been detected (08-064r0) be deferred to the next meeting.

6. Zoning topics

No zoning topics were presented to the group.

7. Non-zoning Expander topics

No non-zoning expander topics were presented to the group.

8. Physical WG overlap topics

8.1 SAS-2 Far-end retimed loopback phy test function (07-119) [Elliott]

Rob Elliott asked that discussion of the proposal to define a far-end loopback testing mechanism for SAS (07-119r4) be deferred to the next meeting.

8.2 White paper on existing SCSI low power modes (08-100) [Houlder]

Gerry Houlder presented a proposal that was an overview of the options SCSI provides for lowering power consumption (08-100r0). The white paper provided useful inputs to the transceiver proposal (see agenda item 8.3), and suggested some ideas that might be carried to CAP.

The group agreed that this item could be removed from future agendas.

8.3 SAS: Add low power transceiver options (08-015) [Houlder]

Gerry Houlder presented a document whose purpose was to begin building consensus regarding the SAS protocol efforts to lower power consumption on inactive SAS links or SAS links with reduced activity (08-015r1). The group discussed: how many low power states to define; how best to initiate the reduced power modes; how to exit the reduced power modes; and whether new states should be defined especially for the low power mode recovery.

Gerry agreed to prepare a new revision for consideration at the next meeting.

9. New Business

9.1 Review of new SAS Project Proposals (08-110, 08-117, 08-118) [Elliott and Butt]

The group discussed the differences between three project proposals:

- 08-110 – SAS-2.1 as a combined Phy and protocol standard
or
- 08-117 – SAS-2.1 as a Phy only standard
- 08-118 – Serial Attached Protocol

There was a straw poll taken on 1 versus 2 standards at SAS-2.1:

- 9 favored 1 standard
- 7 favored 2 standards

Questions were raised about splitting SAS-3, but this discussion deferred until one or more SAS-3 project proposals were on the agenda.

10. Review of Recommendations

The following documents were recommended for consideration by the Plenary:

For inclusion in SAS-2: None

11. Meeting Schedule

A SAS Protocol Working Group meeting is scheduled for:

Monday, May 5, 2008 commencing at 9:00 a.m. in Santa Clara, CA at the Hotel Valencia (Reservations: 866-842-0100) hosted by Nvidia.

Teleconference calls will be announced on the T10 reflector as needed.

12. Adjournment

The meeting was adjourned at 12:10 p.m. on Monday March 10, 2008.