Minutes of SAS PHY Working Group conference call November 16, 2006 T10/06-514r0

Attendance:

Mr. Ken Paist	Agere Systems
Mr. Ziad Matni	Agere Systems
Mr. Paul von Stamwitz	AMCC
Mr. Jesse Jaramillo	Amphenol
Mr. Kiran Venanabhatla	Finisar
Mr. Barry Olawsky	Hewlett Packard Co.
Mr. James Rockrohr	IBM Corp.
Mr. George O. Penokie	IBM Corp.
Mr. Schelto van Doorn	Intel Corp
Dr. Mark Seidel	Intel Corp.
Mr. Pankaj Kumar	Intel Corp.
Mr. Michael Jenkins	LSI Logic Corp.
Mr. Gabriel Romero	LSI Logic Corp.
Mr. Praveen Viraraghavan	LSI Logic Corp
Mr. John Lohmeyer	LSI Logic Corp.
Mr. Galen Fromm	Molex Inc.
Mr. Hock Seow	NEC Electronics America, Inc
Mr. Amr Wassal	PMC-Sierra
Mr. Tim Symons	PMC-Sierra
Mr. Tom Watson	PMC-Sierra
Mr. Alvin Cox	Seagate Technology
Mr. Stephen Finch	STMicroelectronics
Mr. Kevin Witt	Vitesse Semiconductor
Mr. Larry McMillan	WDC

24 in attendance

Agenda:

1. SAS-2 Modifications to the SAS Speed Negotiation 06-324r9 [Finch, Wassal]
http://www.t10.org/ftp/t10/document.06/06-324r9.pdf

State list and naming consistencies will be checked. Not planned for future calls unless something new comes up. Please review.

2. SAS-2 Electrical Specification Proposal 06-496 [Witt]
http://www.t10.org/ftp/t10/document.06/06-496r2.pdf

Page 13 has some interesting questions:

a) Question: Do we want to Support a Low-Swing Mode for Short / Clean channels? Just refer to use SATA 2 level for power saving if desired.
• 400-600mV
• No De-Emphasis

After discussion, the author decided that this item would be taken off the proposal due to how complicated the item is. The specification allows these sorts of levels to be used as long as compliance points are not claimed.

b) Are we going to support fixed range Tx De-Emphasis?
• If fixed, how do we test? Kevin has included a measurement technique in his proposal.
• The table on page 6 has a -5dB to -7dB range for de-emphasis, but has a differential voltage range of 800 min / 1200 max.

These seem to be in conflict but Kevin explained based on the proposed measurement technique.

• Mike Jenkins has presented simulations that indicate a fixed de-emphasis may not be in the best interest.
http://www.t10.org/ftp/t10/document.06/06-491r1.pdf

• Is the external cable application different than the internal requirements with regards to de-emphasis requirements?

Lots of discussion on this topic. Also included discussion on transmitter specifications.

- We need to decide if a range (value with tolerance) of de-emphasis is to be included in the specification.
- Mike Jenkins will post a counterproposal to be discussed on the next call.
- We should also review other transmitter specification values to agree on some of the easier items.

3. 10-meter cable specification issues
http://www.t10.org/ftp/t10/document.06/06-499r0.pdf

Working on simulations. No new data to present.

4. EMI considerations for SAS-2
http://www.t10.org/ftp/t10/document.06/06-483r0.pdf

Keep in mind when developing spec.

5. Define a loss for the zero-length test load?
No updates yet, but input is expected.

Weekly teleconferences scheduled for Thursdays at 10 am CST:
Next call 11/30/06 (No call on 11/23 or 12/28.)

PARTICIPANT INFORMATION:

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Webex information:
https://seagate.webex.com/seagate

Topic: SAS-2 PHY WG
Date: Thursday
Time: 10:00 am, Central Standard Time
Meeting number: 826 515 680
Meeting password: 6gbpsSAS