

Attendance:

Mr. Bernhard Laschinsky	Agere Systems
Mr. Jesse Jaramillo	Amphenol
Mr. Kevin Witt	Dallas Semiconductor
Mr. Kevin Marks	Dell, Inc.
Mr. Mickey Felton	EMC
Mr. Barry Olawsky	Hewlett Packard Co.
Dr. Mark Seidel	Intel Corp.
Mr. Michael Jenkins	LSI Logic Corp.
Mr. Gabriel Romero	LSI Logic Corp.
Mr. Paul Wassenberg	Marvell Semiconductor, Inc.
Mr. Galen Fromm	Molex Inc.
Mr. Hock Seow	NEC Electronics America, Inc.
Mr. Tim Symons	PMC-Sierra
Mr. Rick Hernandez	PMC-Sierra
Mr. Alvin Cox	Seagate Technology
Mr. Kees Propstra	Tektronix, Inc.
Mr. Mahbubul Bari	Vitesse Semiconductor
Ms. Diana Johnson	Vitesse Semiconductor
Mr. Larry McMillan	WDC

19 in attendance

Agenda:

1. Common mode return loss specs (SCC11 & SCC22) [Jenkins]

Original intent was to follow the FCAL values. Mike has updated 07-001 to reflect these values. 07-063 needs to be updated to these new values. An update to 07-063 will be posted 3/26.

<http://www.t10.org/ftp/t10/document.07/07-001r2.pdf>

Link to the latest 8Gbps FCAL spec:

<http://www.t11.org/ftp/t11/pub/fc/pi-4/07-155v1.pdf>

2. Reference receiver definition [Witt]

Kevin supplied the information to Alvin and it was then added to 07-063.

We had a lengthy discussion on whether 2 taps or three taps should be used for the reference receiver. Kevin's draft had 3 taps, however, 07-063 has 2 taps listed. We plan to vote on the number of taps during the next call. The decision should be based on data that is already available. Concerns included the amount of margin that is needed/included, what actually works with the worst-case usage models without overspecifying, and did the simulations included enough crosstalk and other noise.

Mike Jenkins argued that increasing the number of taps does not help compensate for non-compensable jitter. Kevin Witt's counter-argument is that an extra tap will add margin and increase interoperability in the cases where compensable jitter is present. He was also concerned about the amount of jitter included in simulations. Barry Olawsky included NEXT characteristics in 05-084 and that the majority of crosstalk was introduced at the connectors. He indicated that the NEXT characteristics for HP 15-18 are characteristic of that present in HP 24-26 designs and that a simplified model of 1% crosstalk may be acceptable for a realistic approximation. Below are

links to the various presentations to help determine a position on the number of taps. Assume that the transmitter has 3dB of equalization.

05-425R1 SAS-2 Channel Model Simulations [Witt]
<http://www.t10.org/ftp/t10/document.05/05-425r1.pdf>

05-426R0 SAS-2 Cable Reach Objective and Crosstalk [Witt]
<http://www.t10.org/ftp/t10/document.05/05-426r0.pdf>

Good overall transmitter/receiver performance simulations:

06-419R1 SAS-2 Reference Transmitter and Receiver Specification Proposal [Witt]
<http://www.t10.org/ftp/t10/document.06/06-419r1.pdf>

06-491R0 Proposal for 6G SAS TX Specification via Reference Receiver [Jenkins]
<http://www.t10.org/ftp/t10/document.06/06-491r0.pdf>

Giant file (11419945) with lots of simulations:

06-049R1 Comparison of Equalization Schemes for 6Gbps SAS Channels [Caroselli, Malipatil]
<http://www.t10.org/ftp/t10/document.06/06-049r1.pdf>

Crosstalk characterization:

T10/05-390r1 SAS-2 Channel Models (3-Connector, Board/Cable/Backplane/Drive) [Olawsky]
<http://www.t10.org/ftp/t10/document.05/05-390r1.pdf>
<http://www.t10.org/ftp/t10/document.05/05-390r1.zip>

T10/05-384r2 SAS-2 Channel Models (3-Connector, Board-to-Board) [Olawsky]
HP15 to HP18 are NEXT crosstalk models
<http://www.t10.org/ftp/t10/document.05/05-384r2.pdf>
<http://www.t10.org/ftp/t10/document.05/05-384r2.zip>

T10/05-025r1 SFF8470 Crosstalk Study [Olawsky]
<http://www.t10.org/ftp/t10/document.05/05-025r1.pdf>

Schedule:

Weekly teleconferences scheduled for Thursdays at 10 am CDT:
There will not be calls on 4/12 or 4/19.

PARTICIPANT INFORMATION:

Toll Free Dial in Number: (866) 279-4742
International Access/Caller Paid Dial In Number: (309) 229-0118

PARTICIPANT CODE: 3243413

Webex information:

<https://seagate.webex.com/seagate>

Topic: SAS-2 PHY WG

Date: Thursday

Time: 10:00 am, Central Daylight Time

Meeting number: 826 515 680

Meeting password: 6gbpsSAS

T10 INTERIM APRIL 2007 MEETINGS ANNOUNCEMENT
17-19 April 2007
Hosted by Amphenol and HP

Meeting schedule:

Tuesday 17 April 2007	9am-6pm	SCSI Security (CAP WG)
Tuesday 17 April 2007	9am-6pm	SAS Physical WG
Wednesday 18 April 2007	9am-12pm	SAS Physical WG
Wednesday 18 April 2007	1pm-2pm	Joint SAS Physical/Protocol WG
Wednesday 18 April 2007	2pm-6pm	SAS Protocol WG
Thursday 19 April 2007	9am-6pm	SAS Protocol WG

Please RSVP on <http://www.zoomerang.com/survey.zgi?p=WEB226A8XLW9RE>

Location

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Houston Marriott North at Greenspoint
255 N. Sam Houston Parkway East
Houston, TX 77060
phone 281-875-4000 or 888-236-2427 or 800-228-9290

Room Rate

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Group Name: HP T10
Online group code: HTTHHTA (for booking on <http://www.marriott.com>)
Group rate: \$149.00 plus 17% tax (includes \$40 meeting fee)
Please use the group name/group code when making reservations and confirm the group rate
Cut-off date: Friday 30 March 2007

Host contacts

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Rob Elliott, HP
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