Minutes of SAS PHY Working Group conference call July 19, 2007

Attendance:

Mr. Jesse Jaramillo  Amphenol
Mr. Greg McSorley  Amphenol
Mr. Kevin Witt  Dallas Semiconductor
Mr. Ramez Rizk  Emulex
Mr. Barry Olawsky  Hewlett Packard Co.
Mr. Rob Elliott  Hewlett Packard Co.
Mr. Dan Colegrove  Hitachi Global Storage Tech.
Mr. Harvey Newman  Infineon Technologies
Dr. Mark Seidel  Intel Corp.
Mr. Mike Jenkins  LSI Logic
Mr. Gabriel Romero  LSI Logic
Mr. Galen Fromm  Molex Inc.
Mr. Hock Seow  NEC Electronics America, Inc
Mr. Rick Hernandez  PMC-Sierra
Mr. Guillaume Fortin  PMC-Sierra
Mr. Yuming Tao  PMC-Sierra
Mr. Joseph Chen  Samsung
Mr. Alvin Cox  Seagate Technology
Mr. Daniel Smith  Seagate Technology
Mr. Allen Kramer  Seagate Technology
Mr. Benoit Mercier  STMicroelectronics
Mr. Augusto Rossi  STMicroelectronics
Mr. Doug Loree  Toshiba
Ms. Dan Gorenc  TycoElectronics
Mr. Mahbubul Bari  Vitesse Semiconductor
Mr. Larry McMillan  WDC
Mr. Ramya Dissanayake  WDC

27 in attendance

Agenda:
1. StatEye version 5.0
The run by Anthony was not available yet due to a bug causing the eye to have two lobes rather than one. The StatEye web site is now updated. Successful run results will be posted there and discussed on the next call in two weeks.

You can go directly to www.stateye.org and click on Stateye development forum or follow this link:
http://www.stateye.org-developmentForum/doku.php

07-355r0 SAS-2 Channel Stateye Analysis [Tao, Hernandez]
PMC’s Yuming Tao and Rick Hernandez shared their StatEye simulations with the group. They are waiting for a proposal number to post the information. They used a “x/2” in the settings to get the voltage plots to look correct, however, this reduced the number printed above by a factor of two. For those using the files only, this ends up giving the wrong number. It only helps the visual aspect of the graph and may be confusing to others who have experience with the program. Kevin Witt indicated that the results from PMC are very similar to the ones he had. There are some concerns about the 6-meter versus 10-meter simulations.

Harvey will see if the voltage issue can be corrected in version 5 prior to release.

2. 07-304 SAS-2 Zero-length test load [Olawsky]
No update. R1 has been posted and r2 will follow (editing done at Colorado Springs. An r3 will follow.

4. 07-339 SAS-2 6 Gbps PHY specification [Cox] (not posted yet)
This is the continuation of 07-063. It now includes text from SAS-2r10 as the basis for the SAS-2 PHY spec. Alvin has taken the approach of making this a SAS-2 specification rather than trying to maintain SAS 1.1 differences in measurement technique. The r0 will be posted prior to the next teleconference and Alvin expects to have the complete PHY section edited and posted prior to the August face-to-face.

Discussed the RJ number and where it came from. It is from the SATA numbers of .37 TJ - .19 DJ. The .18UI is high and we decided to change back to .15UI RJ as well as determine what the value should be based on working backwards from the receiver end. All are encouraged to look at this.

Also brought up the concern that the reference transmitter voltage was increased to 1000 mV at the Colorado Springs meeting but that the transmitter equalization stayed at 2 dB. Should the equalization also be increased since a high-loss channel is being used for the simulation? Comments encouraged. Would this result in different reference transmitter settings depending on channel loss? Does one size really fit all?

5. Schedule

5.1. Interim meeting

An interim meeting needs to be set up in August so the PHY section can be completed by the September T10 meeting. Details: http://www.t10.org/ftp/t10/t10r/2007/r0707166.htm

5.2. Next call August 2.

Toll Free Dial in Number: (877)810-9442
International Access/Caller Paid Dial In Number: (636)651-3190
PARTICIPANT CODE: 3243413

Webex information:
https://seagate.webex.com/seagate
Topic: SAS-2 PHY WG
Date: Thursday
Time: 10:00 am, Central Daylight Time (GMT -05:00, Chicago)
Meeting number: 826 515 680
Meeting password: 6gbpsSAS