Minutes of SAS PHY Working Group conference call December 7, 2006

Attendance:

Mr. Bryan Kantack  Agilent Technologies, Inc.
Mr. Paul von Stamwitz  AMCC
Mr. Jesse Jaramillo  Amphenol
Mr. Kevin Marks  Dell, Inc.
Mr. Ramez Rizk  Emulex
Mr. Barry Olawsky  Hewlett Packard Co.
Ms. Carrie Cox  IBM Corp.
Mr. James Rockrohr  IBM Corp.
Mr. George O. Penokie  IBM Corp.
Mr. Schelto van Doorn  Intel Corp.
Dr. Mark Seidel  Intel Corp.
Mr. Gabriel Romero  LSI Logic Corp.
Mr. Keith Maloney  LSI Logic Corp.
Mr. Paul Wassenberg  Marvell Semiconductor, Inc.
Mr. Galen Fromm  Molex Inc.
Mr. Michael Rost  Molex Inc.
Mr. Robert Watson  PMC-Sierra
Mr. Rick Hernandez  PMC-Sierra
Mr. Alvin Cox  Seagate Technology
Mr. Benoit Mercier  STMicroelectronics
Mr. Stephen Finch  STMicroelectronics
Mr. Doug Loree  Toshiba
Mr. Kevin Witt  Vitesse Semiconductor
Mr. Larry McMillan  WDC

24 in attendance

Review of items using 06-496 as the basis and considering the 07-001 discussion.

Kevin has included an additional pk-to-pk value of 1300 mV to cover noise that is added to the transmitted signal. Is this something that should be added?

Pk-to-pk and mode voltages to measure de-emphasis?
   The mode-based voltage measurement method is not widely understood. Alvin will provide a definition of mode voltage measurement.

Use of return loss plots and impact to the DC requirements in the tables.
   Do we lose the mismatch and does it even matter?
   Can it be dropped?
   Is it covered by common mode?
   Do return loss numbers cover what these try to address?
   Schelto and Alvin to investigate background of the DC values.
   Barry will make some measurements to determine if the low frequency issues are being captured.

Barry to propose a set of loss values for a zero length test load.

Should the reference transmitter be allowed to optimize de-emphasis to determine if the channel is compliant?
   Alvin brought up this issue since the receiver is the only end that is optimized during standard SAS operation. The OIF standard optimizes both the transmitter and receiver in
the StatEye simulation, but since SAS has no provision to tune the transmitter, Alvin did not consider transmitter de-emphasis tuning as a fair expectation to determine channel compliance. Most implementations will probably tune de-emphasis based on the known channel characteristics. Disk drives typically have not provided the “handles” to allow this tuning, so a “fixed” transmitter de-emphasis may be supported, but it should be allowed to be adjusted.

Alvin to get a STA opinion on 10e-15 channel simulation requirement.

Next call: 12/14/2006

Agenda: Review of above action items and continue specification discussion.

Weekly teleconferences scheduled for Thursdays at 10 am CST:

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

No call on 12/28.