Minutes of SAS PHY Working Group conference call February 8, 2007 T10/07-068r0

Attendance:

Ms. Fei Xie	Agilent Technologies, Inc.
Mr. Paul von Stamwitz	AMCC
Mr. Jesse Jaramillo	Amphenol
Mr. Kevin Witt	Dallas Semiconductor
Mr. Kevin Marks	Dell, Inc.
Mr. Mickey Felton	EMC
Mr. Ramez Rizk	Emulex
Mr. Douglas Wagner	FCI
Mr. Mike Fitzpatrick	Fujitsu
Mr. Barry Olawsky	Hewlett Packard Co.
Mr. Rob Elliott	Hewlett Packard Co.
Ms. Carrie Cox	IBM Corp.
Mr. George O. Penokie	IBM Corp.
Mr. Harvey Newman	Infineon Technologies
Dr. Mark Seidel	Intel Corp.
Mr. Pankaj Kumar	Intel Corp.
Mr. Michael Jenkins	LSI Logic Corp.
Mr. Gabriel Romero	LSI Logic Corp.
Mr. Brian Day	LSI Logic Corp.
Mr. Praveen Viraraghavan	LSI Logic Corp.
Mr. Galen Fromm	Molex Inc.
Mr. Hock Seow	NEC Electronics America, Inc.
Mr. Rick Hernandez	PMC-Sierra
Mr. Alvin Cox	Seagate Technology
Mr. Benoit Mercier	STMicroelectonics
Mr. Stephen Finch	STMicroelectronics
Mr. Doug Loree	Toshiba
Mr. Adrian Robinson	Vitesse Semiconductor
Mr. Mahbubul Bari	Vitesse Semiconductor
Mr. Larry McMillan	WDC

30 in attendance

Agenda:
1.) 10/07-058r1 SAS-2 OOB and SSC [Finch]
http://www.t10.org/ftp/t10/document.07/07-058r2.pdf

We had a long discussion on whether two lines or one was needed in the OOBI table. The result was that a single line would be used with values having SSC applied (wider tolerance than previous specification) with a note that the range is increased from previous versions of the spec. From a practical hardware standpoint, the tolerance increase has no effect on the detection circuitry of a SAS 1.1 compliant device. Rob and Steve worked on the wording of the note and the updated proposal can be accessed at the link above. This latest version will be briefly reviewed on the 2/15 call.

2.) New items.
Expect new information regarding the 10-meter cable specification next call.

3.) Continue discussion of PHY specification proposal.
http://www.t10.org/ftp/t10/document.07/07-063r0.pdf

Discussion items:

“Transmitter device” and “receiver device” will remain for now. Any suggestion for better terminology is welcome.

Discussed the method of measuring transmitter equalization. Agreed that the diagnostic 2 DWORD test pattern of D30.3 (Table 215 in SAS 2 rev 8) or an equivalent vendor-specific way to produce this pattern (without scrambling) shall be used for this measurement.

Kevin Witt will supply Alvin with updated illustrations of this pattern and 3dB emphasis.

The reference common mode impedance in the receiver table should be 25 instead of 50.

We discussed the receiver jitter requirements. One proposal is to provide an informative physical test implementation to achieve to a statistical performance level. LSI will work with Vitesse on providing a source document regarding confidence levels. Vitesse will draft a proposal regarding this test.

General:
Values need some amount of description for measurement methodology similar to what was done in SATA.

Mahbubul Bari has agreed to provide a draft for return loss measurement.

Adrian Robinson has agreed to provide a draft for an informative physical receiver test using the characteristics of a 10-meter cable.

Next teleconference 2/15, 2007

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