

Attendance:

Mr. Bernhard Laschinsky	Agere
Mr. Henry Wong	Agilent
Mr. Paul von Stamwitz	AMCC
Mr. Bill Bissonette	Intel Corporation
Mr. Dan Colegrove	HGST
Mr. George Penokie	IBM
Mr. Bill Lye	PMC-Sierra
Mr. Alvin Cox	Seagate Technology
Mr. Bruce Johnson	Seagate Technology
Mr. Dan Smith	Seagate Technology
Mr. Kalev Sepp	Tektronix
Mr. Don Schulte	Vitesse

12 People Present

Agenda:

- 1) 05-019r1 SAS 1.1 OOB For SAS/SATA Support  
<http://www.t10.org/ftp/t10/document.05/05-019r1.pdf>

This proposal deals with the OOB amplitudes used in SAS systems that support SATA with the intent to avoid SATA drive RX exposure to excessive amplitudes during the OOB sequences possible with the present 'togglng' algorithm. This proposal was withdrawn by the author prior to last week's meeting but is still under consideration pending further investigation.

Bill Bissonette to draft a white paper and present to SATA I/O PHY group for review of the situation to determine if damage is an issue. We plan to review this paper next week on this call. He will include an explanation of when the SAS signal levels would be delivered to the SATA device and give voltage level and circuit examples to aid the analysis. He also mentioned that Intel has studied the situation and found a circuit design that would be affected by the situation, but it is not a design that would be reasonable to expect in any implementations. Dan mentioned a concern over long term migration. The white paper should be a significant help in determining if this is an issue.

- 2) 04-378r0 SAS-1.1 Clarification of SATA Signaling Level Specification [Olawsky]  
<http://www.t10.org/ftp/t10/document.04/04-378r1.pdf>

3Gbps SATA numbers in tables:

SATA and SAS specification specify amplitude differently, resulting in significantly different minimum values.

Pre-emphasis has not been included in simulations.

How real is a worst case SATA device (rise time, amplitude, jitter)? Experience is that SATA devices are much better than worst case.

Eye closure concerns due to influence of reflections from ESD diodes, connectors, etc. These factors may reduce the affects of pre-emphasis and amplitude.

- 3) Addition of FC PL-2 appendix

FC-PI-2 Annex B has received some offline editorial review. Expect to see input regarding FC-PI-2 Annex B by Bill Ham. Need a proposal for review and discussion. George Penokie has offered to do editing of the base document if made available to him.

#### 4) New items

New 4X connector proposal needs to be drafted if it will be included in SAS 1.1.

Next call: February 3, 2005

Thursday, 10 am CST.

Same webex and call number for all calls:

Webex:

seagate.webex.com (no www)

Topic: SAS PHY WG

Date: Every 1 week on Thursday, from Thursday, January 27, 2005 to Monday, March 21, 2005

Time: 10:00 am, Central Standard Time (GMT -06:00, Chicago)

Meeting number: 825 549 498

Meeting password: section5

Toll Free Dial in Number: (866) 279-4742

International Access/Caller Paid Dial In Number: (309) 229-0118

PARTICIPANT CODE: 3243413