Minutes SAS-1.1 PHY WG teleconference February 10, 2005 T10/05-065r0

Attendance:

Mr. Tim Symons	Adaptec
Mr. Paul von Stamwitz	AMCC
Mr. Barry Olawsky	HP
Mr. Bill Bissonette	Intel Corporation
Mr. Mike Jenkins	LSI Logic
Mr. Dick Uber	Maxtor
Mr. Jay Neer	Molex
Mr. Galen Fromm	Molex
Mr. Bill Lye	PMC-Sierra
Mr. Alvin Cox	Seagate Technology
Mr. Dan Smith	Seagate Technology
Mr. Bill Gintz	Sues
Mr. Kalev Sepp	Tektronix
Mr. Dan Gorenc	Tyco
Mr. Dave Springberg	Vitesse

15 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

Reviewed the draft white paper by Bill Bissonette concerning OOB signal levels applied to SATA devices in a SAS environment. The paper will be posted as an information proposal with editing per the discussion on the teleconference and will be shared with the SATA-I/O PHY WG for feedback regarding potential issues with the SAS OOB toggling algorithm.

2) 04-378r2 SAS-1.1 Clarification of SATA Signaling Level Specification [Olawsky and Bissonette]
http://www.t10.org/ftp/t10/document.04/04-378r2.pdf

Revision 2 posted and found acceptable. This proposal applies to 1.5Gbps only and is considered complete.

Bill Bissonette and Barry Olawsky are working on 3Gbps SATA simulation numbers. Barry expects to have enough data to draft a proposal by 2/24, the cut-off date to make the March plenary and inclusion in the SAS-1.1 ballot draft.

3) Use of words: "Maximum near-end crosstalk" [Olawsky]

Maximum near-end crosstalk has two different uses in the rev 8 SAS 1.1 specification. In Tables 28 and 29 (pages 151 and 152) it has its common usage referring to crosstalk measured within a cable. In Tables 33 and 35 (pages 171 and 174) is has a different meaning that is defined in note f as:
Near-end crosstalk is the unwanted signal amplitude at IR and CR coupled from signals and noise sources other than the desired signal. See SFF-8410.

This definition of near-end crosstalk is different than the standard usage and now that near-end crosstalk is specified for cable performance, it is more critical that the intent be made clear. I suggest we consider changing the name of the parameter in Tables 33 and 35 to something more appropriate.

The value is actually a noise budget number for system design with near-end crosstalk being a major contributor. Barry will review IEEE and other specifications to determine a better name for the parameter. Alvin will propose text that indicates this is a system noise budget and that the sum of worst-case specifications for each piece is likely to exceed the specified value.

4) 05-062r0 SAS 1.1 Signal Performance Measurements Annex [Penokie]
http://www.t10.org/ftp/t10/document.05/05-062r0.pdf

Carry-over.

5) New 4X connector proposals need to be drafted if they will be included in SAS 1.1
04-320r0 SAS-1.1 Reduced width internal connector [Neer]
04-321r0 SAS-1.1 Reduced width external connector [Neer]

SFF-8086 Interface
SFF-8087 Internal
SFF-8088 External

Two sections (one for internal and one for external) for each of the following:
connector configuration
pinout
electrical requirements

04-320r0 and 04-321r0 are to be posted prior to the 2/17 call. These proposals will have electrical performance data. Proposals with different numbers will be created for inclusion in the SAS-1.1 specification.

6) Review draft proposal concerning transients during OOB [Cox]
http://www.t10.org/ftp/t10/document.05/05-069r0.pdf

Proposal 05-069r0 posted after discussion of initial draft. Text located in section 5 and referenced in section 6. Contect in section 5 resulted in significant editing of the main paragraph. Please review.

7) New items

7.1 SAS-1.1 rev 8 posted. Please review.

7.2 Dal Allan has posted 05-059r0 concerning the figure swap and figure names in 05-023r0. The figure swap was corrected in 05-023r1 to resolve the technical issue. The renaming issue suggests adding fixed and free designations to all referenced connectors, however the suggestion retains the plug and receptacle designations. To achieve the intended political correctness (the supposed explicit sexual references), any references using “plug” or “receptacle” also need to be removed from the connector descriptions. Fixed and free designations only reference physical aspects of the application of the connector (ideally, mounted in a fixed location or free to be mated in another location) rather than the connector type, thus being less descriptive of the physical aspects of the connector itself. Depending on the application, a receptacle or plug may be either fixed or free.
http://www.t10.org/ftp/t10/document.05/05-069r0.pdf

Review on next call.

Next call: February 17, 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 week on Thursday
Time: 10:00 am, Central Standard Time (GMT -06:00, Chicago)
Meeting number: 825 549 498
Meeting password: section5

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