Minutes of SAS PHY Working Group conference call May 1, 2008

T10/08-207r0

Attendance: Mr. Paul von Stamwitz Mr. Douglas Wagner Mr. Barry Olawsky Mr. Rob Elliott Mr. Dan Colegrove Mr. James Rockrohr Mr. Harvey Newman Mr. Michael Jenkins Mr. Kevin Witt Mr. Mahbubul Bari Mr. Galen Fromm Mr. Hock Seow Mr. Guillaume Fortin Mr. Yuming Tao Mr. Edward Chang Mr. Alvin Cox Mr. Allen Kramer Mr. Benoit Mercier Mr. Bent Hessen-Schmidt Mr. Michael Fogg Mr. Larry McMillan Mr. Andy Chen

AMCC FCI Hewlett Packard Co. Hewlett Packard Co. Hitachi Global Storage Tech. IBM Corp. Infineon Technologies LSI Corp. Maxim Semiconductor Maxim Semiconductor Molex Inc. **NEC Electronics America, Inc** PMC-Sierra PMC-Sierra Samsung Seagate Technology Seagate Technology **STMicroelectonics** Synthesys Research, Inc. TycoElectronics WDC

22 in attendance

Agenda:

1. Electrical questions on SAS 2.0 to SAS 1.1 support?[Felton] http://www.t10.org/ftp/t10/document.08/08-188r0.pdf

The proposal brought up some good questions with regards to how to testPHY's at 1.5 and 3 Gbps if SNW3 is enabled. The assumption is made that these speed may use DFE, but no requirement is in the specification. It is likely that 1.5 Gbps will not enable DFE, but that 3 Gbps might. Since these lower speeds could be added to the stressed receiver testing, the specification needs to be reviewed to determine what need to be added to do so. Since many parameters are specified in UI, the pS conversion could be dropped, however, the pS values do add a convenience (and a sanity check), so it would be nice to have the pS value included for at least one identified speed.

## 2. Sinusoidal jitter added to stressed receiver testing

A long discussion was had on this topic. It also carried over to the issue of including SSC testing on the stressed receiver test. The current table does not include SSC. Should the residual SSC jitter be included as part of the total BUJ specified? If SJ is specified, does that include the effect of SSC? What mix of SJ, RJ, BUJ, and SSC is required for a complete test?

## 3. SSC receiver capabilities

Table 78 is unclear that SSC capability is optional for the receiver. From a practical standpoint, I doubt that any receiver outside of a captive market would not include SSC capability. Let's revisit this optional status and determine if it should really be optional for the transmitter device and expecially the receiver device. The thought is that if a system does not want to use SSC, it can disable it with SNW3, but that basically all transceiver devices will be SSC capable.