Attendance:

Mr. Bernhard Laschinsky	Agere Systems
Mr. Paul von Stamwitz	AMCC
Mr. Jesse Jaramillo	Amphenol
Mr. Mickey Felton	EMC
Mr. Barry Olawsky	Hewlett Packard Co.
Ms. Carrie Cox	IBM Corp.
Mr. James Rockrohr	IBM Corp.
Mr. George O. Penokie	IBM Corp.
Mr. Harvey Newman	Infineon Technologies
Mr. Pankaj Kumar	Intel Corp.
Mr. Michael Jenkins	LSI Logic Corp.
Mr. Gabriel Romero	LSI Logic Corp.
Mr. Keith Maloney	LSI Logic Corp.
Mr. John Lohmeyer	LSI Logic Corp.
Mr. Paul Wassenberg	Marvell Semiconductor, Inc.
Mr. Helen Lui	Maxim
Mr. Galen Fromm	Molex Inc.
Mr. Hock Seow	NEC Electronics America, Inc.
Mr. Tim Symons	PMC-Sierra
Mr. Robert Watson	PMC-Sierra
Mr. Rick Hernandez	PMC-Sierra
Mr. Alvin Cox	Seagate Technology
Mr. Allen Kramer	Seagate Technology
Mr. Daniel Smith	Seagate Technology
Mr. Benoit Mercier	STMicroelectonics
Mr. Stephen Finch	STMicroelectronics
Mr. Doug Loree	Toshiba
Mr. Larry McMillan	WDC

28 in attendance
Agenda:

1. Call schedule:
No call on 12/21
No call on 12/28
Next call on 1/4/07

2. Review action items from 12/7 call
http://www.t10.org/ftp/t10/document.07/07-004r0.pdf

a. The mode-based voltage measurement method is not widely understood. Alvin will provide a definition of mode voltage measurement.

To make a mode measurement, create a histogram over the portion of the waveform in question, then use the peak value from the histogram, which represents the most commonly occurring value.

If a vertical histogram is created on a scope (assuming you want to determine the amplitude mode), a graphical representation of the distribution of values that occur within the histogram will be displayed. The peak value is the mode.

A timing mode measurement may be creating with a horizontal histogram.

The next key element of mode measurements is the placement of the histogram on the waveform. The choice is often specified in the associated specification. The results obtained vary depending on if looking at a histogram that covers the entire 100000 UI of a waveform, or only a portion of that waveform.

With regards to the de-emphasis measurement, the mode amplitude value would be the average value of the flat area since the portion without de-emphasis would be a separate node on the histogram of all measured values of the waveform.

b. Schelto and Alvin to investigate background of the DC values.

There is no reference to DC in the existing specification of impedance values. The original SAS work included the following with regards to impedance measurement:

All impedance measurements shall be TDR measurements except where the receiver termination being tested includes inductive components such as transformers. When inductive components exist in the receiver termination, a swept frequency Return Loss or VSWR measurement may be more appropriate. The frequency sweep shall cover the range Bit rate/10 to Bit rate/2.

From the SAS perspective, the term DC is first used in Kevin's proposal. It may have resulted from the issue that we have not specifically stated how the measurements are to be made (an item that Kevin Witt has indicated that we need in the SAS-2 specification) or it may be a carry-over from another specification (non-SAS).

c. Barry will make some measurements to determine if the low frequency issues are being captured.
d. Barry to propose a set of loss values for a zero length test load.

C and D responses are planned to be posted to the reflector (or as a proposal) by 12/21.

3. Proposed 6G SAS Phy Specs for EMI Reduction
http://www.t10.org/ftp/t10/document.07/07-007r0.pdf
http://www.t10.org/ftp/t10/document.07/07-007r0.ppt

Mike to review "Differential to Common Mode Conversion" aspects.
Barry to find out whether the office environment is under Class A or Class B requirements.
Barry to supply Mike with the Class A requirement if possible.
Page 6: The .94pF capacitance is the limit imposed by proposed SDD11 values. ESD structured have not been included in the model. A PowerPoint version has been posted so that people can download it and play with the numbers.

4. New items

Discussed the proposal for 1300 mV pk-to-pk instead of 1200 mV to allow for noise. General opinions voiced indicated a bias to leave at 1200 mV, as this has been done on other specifications, but that Kevin's reasoning would like to be heard again.

Next call 1/4/07.

Weekly teleconferences scheduled for Thursdays at 10 am CST:

PARTICIPANT INFORMATION:

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PARTICIPANT CODE: 3243413

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