Attendance

Mr. Ziad Matni	Agere
Mr. Ken Paist	Agere
Mr. Chuck Hill	Alta Engineering
Mr. Paul von Stamwitz	AMCC
Mr. Pack Chan	Hewlett Packard Co.
Dr. Mark Seidel	Intel Corp.
Mr. James Rockrohr	IBM
Mr. Hugh Curley	Knowledge Tech
Mr. Michael Jenkins	LSI Logic Corp.
Mr. Richard Uber	Maxtor Corp.
Mr. Galen Fromm	Molex Inc.
Mr. Yuriy Greshishchev	PMC-Sierra
Mr. Alvin Cox	Seagate Technology
Mr. Kevin Witt	Vitesse Semiconductor
Mr. Doug Loree	

15 people present

Agenda

1. 06-104r0 SAS-2 External link crosstalk budget suggestion and analyses [Yuriy Greshishchev and Galen Fromm]
http://www.t10.org/ftp/t10/document.06/06-104r0.pdf

Yuriy simulation for 3G.
How do we know if a 10-meter cable won't work in a 3G system? Can this be tested?

Yuriy's simulation results and actual testing done by Kevin Witt shows that the 10-meter cable can work at 3Gbps when de-emphasis is used. The eye is virtually closed without de-emphasis, so this brings up the question of how STA wants to deal with the 10-meter cable. It doesn't fail miserably at 3G as hoped. Since there is no control handle for activating de-emphasis or equalization, or even a requirement for them to be available on a SAS 1.1 device, we have a situation where the cable will work in some applications, work marginally in some, and won't work at all in others.

Alvin will notify STA of the findings.

2. All – Investigate impact on SSC on design.
Alvin will post today a list of items concerning issues already mentioned.

3. New items.

External connections don't have the large crosstalk that is found on backplanes. It is possible that a simple transmit de-emphasis could achieve the 10-meter cable length goal. This would allow a separate requirement for external versus internal applications. The external would not necessarily have to have receiver equalization, however, the silicon vendors indicated that they wanted to include it for the margin gained in signal recovery.

We discussed how equalization might be specified for external applications. It was decided that a .5-meter cable would be the shortest so that a fixed amount of de-emphasis could be specified. Since de-emphasis schemes may have IP involved, a fixed amount may not be appropriate to

include in the specification. Mike Jenkins brought up the point that the TCTF avoids the IP issue. This is a topic that needs further discussion. There is no "reference TCTF available on the market. Mention was made that something similar to the Molex fixture, part number 73931-2544, might be a viable example. The current TCTF description in SAS 1.1 is lacking in several aspects. Also, if the delivered signal degrades to the point of not being an open eye, is the TCTF still a viable specification option?