Unapproved Minutes
IEEE P802.3bq Channel Model Ad Hoc
<u>**July 31st, 2013**</u>
Prepared by Pete Cibula and Brad Booth

Meeting Agenda:
1) Roll call - Record attendance, attendees' names and affiliations

2) Reminder of IEEE patent policy: www.ieee802.org/3/patent.html

3) ~~Houskeeping: Placeholder, the house is pretty clean right now.~~

    a) ~~Approve July 3rd meeting minutes (unapproved minutes are located here)~~

4) New business for the July 31st ad hoc meeting as follows:

    a) Channel Modeling ad hoc sub-team updates with discussion
        i) MDI-to-MDI cabling channel (C. DiMinico and W. Larsen) – Update on MDI-to-MDI cabling channel efforts with discussion
        ii) MDI & isolation path (M. Grimwood and G. Zimmerman) – Update on data collection for MDI and isolation path with discussion.
        iii) PCB transmission lines & noise for 10GBASE-T systems (B. Booth and P. Cibula) - Update on data collection on PCB transmission lines and noise for 10GBASE-T systems with discussion.

    b) New contributions with discussion

5) General Discussion and meeting wrap-up
    a) Review action items from the July 31st meeting
    b) Suggestions for future presentations
    c) Next steps/future meetings

The 5rd meeting of the P802.3bq Channel Modeling Ad Hoc was called to order at 8:05 AM Pacific Time.

1) The agenda was reviewed with those in attendance; no modifications were suggested and the agenda was approved without opposition. The agenda stands approved.

2) Participants were asked to email B. Booth or P. Cibula a note confirming their attendance. The attendance record at the bottom of these minutes is a compilation of email confirmations and an online meeting log.

3) P. Cibula reminded everyone of the patent policy. Those not familiar with it were directed to the URL above.

4) Approval of July 3rd meeting minutes: No meeting minutes were posted for the July 3rd meeting; unapproved meeting notes will be add to the ad hoc site after the meeting notes have been recovered from a co- system archive. Thank you for your patience.

5) The meeting was then opened to hear new business for the July 31st ad hoc meeting as follows:

a) Channel Modeling ad hoc sub-team updates

   i) MDI-to-MDI cabling channel (C. DiMinico and W. Larsen) – Meeting participants reviewed an overview/readme of a 30 meter category 8 channel (3m-24m-3m) submitted by Chris DiMinico with contributions from Paul Wachtel, Ron Nordin and Bob Wagner from Panduit. **The channel s16p file can be found in the channel data area of the P802.3bq task force.** Please refer to the readme file for a description of the channel model and associated IL, RL, NEXT, PSNEXT, ACRF and PSACRF characteristics. It was noted that this starting point is a worst-case IL model and does not include MDI characteristics, and that the subteam's expected next contribution is a short channel (without MDI).
   ii) MDI & isolation path (M. Grimwood and G. Zimmerman) – The subteam continues to collect data for MDI & isolation path parameters.
   iii) PCB transmission lines & noise for 10GBASE-T systems (B. Booth and P. Cibula) - Several ad hoc participants are working on PCB channel characteristics. **Measurements on one representative 10GBASE-T channel have been completed and preliminary s16p parameters are being summarized for review by and distribution to the channel ad hoc.**

b) General discussion regarding the channel model and next steps – Meeting participants discussed some logical next steps toward developing the 40GBASE-T end-to-end channel model.

   i) A natural progression is to characterize additional channels without MDI, then add MDI characteristics, isolation/magnetics parameters, and PCB board losses.
   ii) With respect to magnetics, we can probably anticipate starting with transfer functions for the magnetics before we include a full integrated connector module (ICM).
   iii) Considering the end-to-end channel model, a question was raised regarding using measurements/models for various channel elements – can we incorporate various channel elements in "mix and match" scenarios, or will we be working only with complete end-to-end configurations? As long as the sections use consistent port definitions and model parameters they should plug-and-play.
   iv) The general channel model discussion closed with some concerns about assumptions underlying the channel model.
      (1) Experience with other standards activities suggests that we work to assure that we have common understandings about these assumptions and the basis for analysis of the channel model.
      (2) The goal of expanding the ad hoc's scope to consider this concern is to help assure that the channel ad hoc isn't providing a "black box" that provides different answers based on a different set of underlying assumptions about the model.
      (3) As an example, some 1000BASE-T contributions provided examples of analyses with sufficient detail to assure common assumption about the models, and some participants would like to see that type of analysis as part of this process.
      (4) **There was general agreement that this is seen as an appropriate item to add to the model ad hoc "to-do list" and that we should expand the scope of the work to include that topic with the caveat that we don't want to expand our efforts too much outside of the ad hoc charter**.

c) Closing discussion – timing of the next channel modeling ad hoc meeting. Given the relatively short time between the recent IEEE 802 Plenary and the upcoming interim in the 1st week of September, it was noted that requests for presentation time would be due by August 23rd and presentations August 27th. **Participants agreed that next ad hoc meeting would be re-scheduled from August 14th to August 21st.**

6) The next meeting was scheduled for Wednesday, August 21st 2013 at 8:00AM PDT.

The P802.3bq Channel Modeling Ad Hoc meeting was adjourned without opposition at 9:50 AM Pacific Daylight Time.

Meeting Attendance

Name	Employer	Affiliation (if different)
Bernie Hammond	TE Connectivity	
Beth Kochuparambil	Cisco	
Bill Woodruff	Broadcom	
Brad Booth	Independent	
Chris DiMinico	MC Communications	Panduit
Dave Chalupsky	Intel	
Dave Jeskey	Sentinel Connector Systems	
Fred Fons	Foxconn	
George Zimmerman	CME	
Jerry Chiang	Foxconn	
Mike Good	Berk-Tek	
Mike Grimwood	Broadcom	
Mohammad Saboori	Pulse	
Rich Mellitz	Intel	
Peter Cibula	Intel	
Peter Wu	Marvell	
Sam Sambasivan	AT&T	