Confirmed Meeting Minutes: IEEE P802.3bq 40GBASE-T Task Force

September 5, 2013
York, UK

Prepared by George Zimmerman

IEEE P802.3bq 40GBASE-T Task Force meeting convened at 09:04AM, Thursday, September 5, 2013 by David Chalupsky, 802.3bq Task Force Chair.

Attendance is listed in Appendix A

ADMINISTRATIVE MATTERS

Presentation: agenda_3bq_01b_0913.pdf
Presenter: Dave Chalupsky, Chair.

The Chair called for introductions and affiliations, and a short joke, song or limerick.

The Chair reviewed the agenda. Mr. Chalupsky turned to presentation agenda_3bq_01b_0913.pdf and reviewed the schedule of presentations for the meeting.

Motion #1: Approve the agenda as shown in agenda_3bq_01b_0913.pdf

M: Chris DiMinico S: Paul Vanderlaan
Approved by voice vote without opposition (Procedural > 50%)

Motion #2: Approve the minutes from the July meeting (http://www.ieee802.org/3/bq/public/jul13/Unconfirmed_minutes_3bq_0713.pdf)

M: Ron Nordin S: Brad Booth
Approved by voice vote without opposition (Procedural > 50%)

The Chair then resumed the review of presentation agenda_3bq_01b_0913.pdf:

- Mr. Chalupsky asked if anyone was attending from the press including those who would run a public blog on this meeting. (There were no responses)
- Mr. Chalupsky noted that there should be no recording or photography without permission.

Mr. Chalupsky reviewed the goals for the meeting, access to the reflector and website, and ground rules.

Attendance, Mr. Chalupsky advised the group of the IEEE meeting attendance tool and procedures, including both the attendance book and the web attendance tracking tool.

IEEE Patent Policy, at 09:23am, Mr. Chalupsky showed slides 0 through 4 patent policy from agenda_3bq_01b_0913.pdf. Mr. Chalupsky read aloud slides 0 through 4. Mr. Chalupsky made the call for potentially essential patents at 09:28 am, and none responded. Mr. Chalupsky then completed the reading of slide #4.

Mr. Chalupsky then continued review of the presentation, Big Ticket items for this meeting, and a possible project timeline.

LIAISONS

The Chair moved to liaisons, and announced that no new incoming liaisons had been received since the last meeting.

The Chair completed review of the presentation noting the project objectives which were unchanged from the prior meeting.

PRESENTATIONS

The Chair then moved to the presentations for the meeting. (Secretary's note – where significant group discussion occurred, particularly involving future actions, a summary of any follow-on points is provided.)

Title: Market Requirement for FCoE Applications (forbes_3bq_01_0913.pdf)
Abstract: This presentation discussed the importance of supporting Fiber Channel applications, and some possible considerations for the Task Force.
Presenter: Harry Forbes, Nexans
Discussion: Group discussion focused on how Fibre Channel over Ethernet (FCoE) related to our objectives, and no specific changes to the objectives were proposed. Individuals suggested while objectives were not being changed, that PHY proposals should consider bit error ratios better than 10^{-12} (possibly 10^{-15}), and that contributions examining latency consider FCoE requirements.

BREAK AT 10:10 AM AND RECONVENED AT 10:26 AM.

Title: Channel Modeling Ad Hoc Report (cibula_3bq_01_0913.pdf)
Abstract: Report of activities of the 802.3bq channel modeling ad hoc since the July plenary meeting, by Brad Booth, co-chair.
Presenter: Brad Booth, Microsoft, Co-chair 802.3bq channel modeling ad hoc
Co-Author: Pete Cibula, Intel, Co-chair 802.3bq channel modeling ad hoc

Title: Rudimentary Host PCB Channel Model for 10GBASE-T LOM (chalupsky_3bq_01_0913.pdf)

Abstract: The presenter provided an overview and summary of PCB channel model data posted to the Task Force website, based on 2012 high-volume server 10GBASE-T LOM designs. Follow on work to include expected variations was also discussed.
Presenter: David Chalupsky, Intel

Title: 802.3bq Cabling channel ad hoc (diminico_3bq_02_0913.pdf)
Abstract: This presentation summarized activities of the sub-ad hoc modeling the cabling channel, identifying topologies and gathering measurements.
Presenter: Chris DiMinico, MC Communications, Panduit
Co-Author: Wayne Larsen, Commscope

Title: 40GBASE-T Link Segment Specifications (diminico_3bq_01_0913.pdf)
Abstract: This presentation discussed measurement of 30 m and 4 m channels posted to the Task Force website, and requested PHY analysis on measurement data in addition to those provided on scaling measurements.
Presenter: Chris DiMinico, MC Communications, Panduit

Title: PHY Channel Model Updates (grimwood_3bq_01a_0913.pdf)
Abstract: This presentation is a follow-up to "grimwood_01_0513_40GBT" presented in Victoria, BC in May 2013, and includes simulation results using the S-parameter models that have been submitted to the IEEE 802.3bq PHY Channel ad hoc subcommittee. A 16-port model for the isolation path is still needed to complete this analysis. Based on the intermediate results showing the 40GBASE-T PHY ADC power Figure of Merit (FoM) as a function of symbol rate, the presenter recommends focusing symbol rate study in the range of 2800 MHz to 4000 MHz.
Presenter: Mike Grimwood, Broadcom
Update: The presenter noted a typo in the graph label on slide 7 of the posted presentation (Grimwood_3bq_01_0913), which was fixed in the presented version, updated on the website after the presentation.
Discussion: The group discussed the results, asking questions for understanding and clarification. Concern was raised that as we move towards baseline presentations, PHY developers sufficiently document their modeling, margin and power estimation methodology to preferably get agreement on methodology among proposers, or allow the group to understand any differences. The group thanked the presenter for this work.

Title: Link Definitions and Testing (brillhart_3bq_01_0713.pdf)

Abstract: Review of link definitions, terminology, and disparities. This presentation includes a proposal for a new link definition that removes disparities and shows advantages for specification, field testing, and certification of installed cabling.
Author: Theo Brillhart, Fluke Networks
Discussion: The group asked questions of clarification and discussed understanding of how the proposed end-to-end test would relate to IEEE's definition of the MDI port, and definitions and tests of plugs from the relevant cabling standards bodies.

BREAK AT 12:28 PM AND RECONVENED AT 1:35 PM.

Based on the prior presentation, the Chair entertained Mr. Brillhart's request to take a straw poll, crafted with discussion from the group:

Straw Poll #1:
Q: Would it be desirable for TIA and ISO cabling standards to pursue the definition of a new test configuration and development of associated channel performance limits in support of link segments terminated with plugs, as concluded in the proposal brillhart_3bq_01_0713.pdf?
Note: this assumes the use of a Cat8 test reference connector defined by the cabling standards.

Results:
Y=13
N=4
(25 in room)

Presentations resumed with the final scheduled technical presentation:

Title: Field Tester Capability for Balance Measurement (brillhart_3bq_02_0713.pdf)
Abstract: This presentation highlights developments with respect to field testing of TIA 568 balance requirements, such as TCL and ELTCTL, and other cable balance measurements also possible in the field.
Author: Theo Brillhart, Fluke Networks

Having concluded the presentations for the meeting, the Chair then moved to discussion, motions and (additional) straw polls.

DISCUSSION, MOTIONS & STRAW POLLS

The Chair asked for discussion of the project timeline, turning to the "Possible Project Timeline" in presentation agenda_3bq_01b_0913.pdf. He pointed out that the likelihood of baseline proposals in November was low. Discussion on the possible schedule ensued, without producing a revised straw man.

Discussion of support of speeds below 40G was the next item, perhaps to ease magnetics. Disagreement of opinion as to whether the magnetics high frequency cutoff was limiting was heard. Members of the group desired to solicit input from magnetics designers, including:
Action Item: MDI champions of channel modeling ad hoc to request models for 40G optimized, 10G/40G and 1G/10G/40G magnetics.

There were no motions made.

OTHER ADMINISTRATIVE BUSINESS

Future Meetings Straw Poll

Straw Poll #2:
Will you attend the November 2013 Plenary meeting in Dallas, TX
YES! – 18
Maybe – 1
NO! – 3

Straw Poll #3:
Will you attend the January 2014 interim meeting in Indian Wells, CA
YES! - 17
Maybe - 2
NO! - 2

Adjournment
Motion #3: To adjourn the meeting.
M: Brad Booth S: Chris DiMinico
MOTION PASSES by voice without opposition
The Meeting was adjourned at 3:18 PM.

Appendix A: Attendees at the IEEE P802.3bq 40G BASE-T Task Force Meeting, September 5, 2013

Total attended:	26		Daily # attended:	26
IEEE P802.3bq 40GBASE-T Task Force September 2013				**9/5/2013**
Last Name	**First Name**	**Employer**	**Affiliation**	**Thursday**
Arceri	Daniele	ST Microelectronics	ST Microelectronics	x
Ballingall	Iain	The Cable Clinic	The Cable Clinic	x
Barrass	Hugh	Cisco	Cisco	x
Booth	Brad	Microsoft	Microsoft	x
Brillart	Theo	Fluke Electronics	Fluke Electronics	x
Chalupsky	David	Intel	Intel	x
DiMinico	Christopher	MC Communications	Panduit	x
Donahue	Curtis	UNH – IOL	UNH - IOL	x
Flatman	Alan	LAN Technologies	LAN Technologies	x
Forbes	Harry	Nexans	Nexans	x
Giunco	Fabio	ST Microelectronics	ST Microelectronics	x
Grimwood	Michael	Broadcom	Broadcom	x
Hammond	Bernard	TE Connectivity	TE Connectivity	x
Maguire	Valerie	Siemon	Siemon, TIA	x
Mei	Richard	Commscope	Commscope	x
Nordin	Ron	Panduit Corp.	Panduit Corp.	x
Pachon	Arturo	TE Connectivity	TE Connectivity	x
Rossbach	Martin	Nexans	Nexans	x
Schweizer	Diminik	Reichle & De-Massari AG	Reichle & De-Massari AG	x
Thompson	Geoff	GraCaSI	GraCaSI	x
Vaden	Sterling	Optical Cable Corp.	Optical Cable Corp.	x
Vanderlaan	Paul	Nexans	Nexans	x
Vincenti	Stefano	ST Microelectronics	ST Microelectronics	x
Withey	James	Fluke Networks	Fluke Networks	x
Wu	Peter	Marvell	Marvell	x
Zimmerman	George	CME	Commscope, Aquantia	x