

Unconfirmed Meeting Minutes: IEEE P802.3bq 40GBASE-T Task Force, Next Generation Enterprise Access BASE-T PHY Study Group, and 25GBASE-T Study Group

March 11-12, 2015

Berlin, Germany

Prepared by George Zimmerman and Pete Cibula

Joint meeting of the IEEE P802.3bq 40GBASE-T Task Force, IEEE 802.3 25GBASE-T Study Group, and IEEE 802.3 Next Generation Enterprise Access BASE-T Study Group meeting convened at 08:30 AM, Wednesday, March 11, 2015 by David Chalupsky, 802.3bq Task Force/25GBASE-T Study Group/NGEABT Study Group Chair

Attendance is listed in Appendix A

ADMINISTRATIVE MATTERS

Presentation: [agenda_3base-t-all_01_0315.pdf](#)

Presenter: Dave Chalupsky, Chair.

The Chair called for introductions and affiliations, the participants introduced themselves, and the Chair then proceeded with the agenda.

The Chair reviewed the agenda. Mr. Chalupsky turned to presentation [agenda_3base-t-all_01_0315.pdf](#) and reviewed the schedule of presentations for the meeting.

Motion #1: Approve the agenda from [agenda_3base-t-all_01_0315.pdf](#)

M: Pete Cibula **S:** Alan Flatman

Approved by voice vote without objection (Procedural > 50%)

Motion #2: Approve the minutes from the January 2015 P802.3bq, NGEABT SG, and 25GBASE-T SG meetings

M: Paul Vanderlaan **S:** Ron Nordin

Approved by voice vote without objection (Procedural > 50%)

The Chair then resumed the review of the agenda presentation:

- Mr. Chalupsky asked if anyone was attending from the press including those who would run a public blog on this meeting – there were no indications from the group.
- 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.

Mr. Chalupsky then continued review of the presentation, including the objectives for the projects and Big Ticket items for this meeting.

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 **9:07 AM**, Mr. Chalupsky showed slides 0 through 4 patent policy from agenda_3base-t-all_01_0315.pdf. Mr. Chalupsky showed slide 0 and read aloud slides 1 through 4. Mr. Chalupsky made the call for potentially essential patents at **9:07 AM**, and one participant noted that the RJ45 patent is noted in IEC standards and provided the name of the patent holder to the Chair. Mr. Chalupsky then completed the reading of slide #4.

Mr. Chalupsky then continued review of the presentation, discussing that the group had entered the “Task Force Review” phase where we would be primarily comment driven.

LIAISONS

The Chair moved to liaisons, and noted liaisons to 802.3 which Mr. Law, Chair of the 802.3 Working Group had assigned to the Task Force:

1. [TR42-2015-06-059 Outgoing Category 8 Liaison to IEEE 802.3 Mar 2015.pdf](#) (received prior to this meeting) conveying [PN-568-C.2-1, Draft 3.1 To be published as ANSI/TIA-568-C.2-1](#) conveying the latest draft(s) of the category 8 cabling specification.
2. [TR42-2015-06-060. Outgoing TSB-5019 Liaison to IEEE 802.3 Mar 2015.pdf](#), conveying the latest draft of TSB-5019 covering high performance structured cabling use cases for data centers and other premises.
3. [TR42-2015-02-045b Outgoing Liaison to 802.3 re 2.5G & 5G PAR.PDF](#), announcing the formation of a TIA TR-42.7 project entitled “Guidelines for the use of installed cabling to support 2.5GBASE-T and 5GBASE-T” in support of the applications under consideration by IEEE 802.3 in the NGEABT Study Group.
4. [ISO/IEC JTC 1/SC 25 25N2401 LiaisonRep toIEEE802.3onCopperQualification.pdf](#), announcing that in March 2015, ISO/IEC JTC 1/SC 25/WG 3 agreed to create a NWIP titled “Guidelines for the use of installed cabling to support 2,5GBASE-T and 5GBASE-T” in support of these two applications under consideration by IEEE 802.3.

A commenter from the floor reported that the groups initiating new projects may appreciate a response indicating the IEEE 802.3 group’s appreciation for the work, and Mr. Diminico (the outgoing TIA liaison) volunteered to work with Mr. Flatman (the ISO liaison) to draft a response for the group’s approval.

The Chair completed review of the presentation noting the project objectives for each group 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. Abstracts are given as a guide to the presentation material, where possible, these are as provided by authors.)

Title: Brief Overview of the 802.3by Draft Standard ([marris_25gbit_01_0315.pdf](#))
Abstract: The presenter described the status and organization of the draft 25Gbps Ethernet standard under development by the IEEE P802.3by Task Force.
Presenter: Arthur Marris, Cadence
Discussion: Questions were asked and answered.

Ad Hoc Reports

Title: NGEABT Architecture Ad Hoc Report ([jones_ngeabt_01_0315.pdf](#))
Abstract: The presenter described the status and next steps for the NGEABT Architecture ad hoc. The ad hoc had held three telephonic meetings since the January interim Study Group meeting. Meetings focused on ways to move the standard forward quickly. Ad hoc meetings will be scheduled as needed, meeting Tuesday mornings at 9AM.
Presenter: Peter Jones, Cisco, Chair 802.3 NGEABT Architecture ad hoc
Discussion: The ad hoc chair noted that he will be out of pocket until the beginning of April, so, if someone wanted an earlier meeting, arrangements would be made for an alternate chair and meeting host.

Title: NGEABT Use Case Ad Hoc Report ([diminico_ngeabt_01_0315.pdf](#))
Abstract: The presenter described the status and next steps for the NGEABT use case ad hoc, organized to define use cases and deployment configurations for 2.5 Gb/s and 5 Gb/s PHY operation in the enterprise environment. The ad hoc had held three telephonic meetings since the January interim Study Group meeting. Meetings focused on possible cabling configurations used in wireless access point deployments. Ad hoc meetings will be scheduled as needed, meeting on Fridays at dates and times to be announced.
Presenter: Chris Diminico, MC Communications/Panduit, Chair 802.3 NGEABT Use Case ad hoc
Discussion: Questions were asked and answered.

Title: NGEABT ENUCA Ad Hoc Report ([feyh_ngeabt_01_0315.pdf](#))
Abstract: The presenter described the status and next steps for the NGEABT Enterprise Noise and Use Case Analysis ad hoc. The ad hoc had held two telephonic meetings since the January interim Study Group meeting. Meetings focused on measurement setups for noise, initial measurements, and some analysis of power back off. Ad hoc meetings will be scheduled as needed, meeting on alternate Wednesdays at dates and times to be announced.
Presenter: German Feyh, Broadcom, Chair 802.3 NGEABT ENUCA ad hoc
Discussion: Questions were asked and answered.

Title: P802.3bq Receiver Common Mode Noise Rejection Ad Hoc Report ([cibula_3bq_01_0315.pdf](#))

Abstract: The presenter described the status and next steps for the ad hoc organized to investigate the receiver common mode noise rejection (aka “cable clamp”) test, and develop corresponding text for 802.3bq to adopt for clause 113.5.4.3. The ad hoc had held three telephonic meetings since the January interim. Presenter reviewed the text in P802.3bq, Draft 1.1 as a follow-up to discussion of the specification held during P802.3bq D1.1 comment resolution, reviewed the basic electrical performance of an updated cable clamp fixture that features a larger center conductor to accommodate larger-diameter cables, and considered several proposals for Clause 113.5.4.3 and developed recommended text to be reviewed during P802.3bq D1.2 comment resolution. Ad hoc meetings are scheduled for every other Wednesday with the goal of providing text to refine details of implementation as suggested in the Editor’s note.

Presenter: Pete Cibula, Intel, Chair 802.3bq RxCMNR ad hoc

Discussion: Questions were asked whether any new technical requirements were planned, and the ad hoc chair answered there were none.

Title: 802.3bq PHY Baseline Ad Hoc Report ([zimmerman 3bq 01 0315.pdf](#))

Abstract: The presenter described the status and next steps for the 802.3bq PHY Baseline Ad Hoc. The ad hoc had held one telephonic meeting since the January interim Study Group meeting, focused on building consensus to resolve remaining technical issues in the draft. Ad hoc meetings will be scheduled as needed.

Presenter: George Zimmerman, CME Consulting/Aquantia & Broadcom, Chair 802.3bq PHY Baseline Ad Hoc ad hoc

Discussion: There were no questions

THE GROUP PAUSED FOR A BREAK AT 10:01AM AND RESUMED AT 10:19AM

At 10:05 am, Mr. Cibula assumed the duties of secretary so Mr. Zimmerman could present and resolve comments as Chief Editor. Decisions during comment resolution were made by consensus, except where noted that motions were taken.

Title: 802.3bq Editor’s Report ([zimmerman 3bq 02b 0315.pdf](#))

Abstract: The editor reported on the status and comments received of the draft 1.1.1, along with a proposed agenda for comment resolution

Presenter: George Zimmerman, CME Consulting / Aquantia & Commscope, Chief Editor IEEE 802.3bq

Discussion: The Chief Editor presented his report, including the present status of the draft, a summary of comments received against D1.2 and progress since Draft 1.0 and Draft 1.1.1. During his introductory comments, the Editor encouraged participants to continue careful review of future drafts during upcoming working group comment cycles in order to expedite progress on the standard. The Editor suggested that commenters consolidate multiple comments (driven by multiple instances of the same item) by flagging the 1st instance in a comment and including additional references within that comment.

The Editor outlined the comments by topic, and reminded participants that the comments had been posted by topic on the website since 2/28/2015, with the Editor reminding the group via reflector to review the EZ and EZ-check buckets, as well as the ED-COORD bucket as these were two groups intended to be approved each by a single motion.

The editor then asked the group if anyone wished to view the EZ and EZ-check bucket comments on the screen; no request was made and the comments were not displayed. The Editor then asked the group that if anyone wished to remove a comment from the EZ or EZ-check bucket, they do so now; again, no request was made and no comments were removed from this bucket.

The Editor then presented the following motion:

Motion #3: Approve the proposed resolution of all EZ and EZ-Check comments, marked with the EZ or EZ-check Topic in http://www.ieee802.org/3/bq/comments/p802.3bq_d1.2_proposed_response_by_topic.pdf , without exception.

The Task Force chair asked if there was any discussion of the motion; none was offered by participants.

M: George Zimmerman S: Val Maguire
MOTION PASSES by voice vote without objection (Technical >= 75%)

The Editor then turned to the ED-COORD bucket, which were changes requested during a coordinating meeting across Task Forces by the IEEE 802.3 Chief Editor. The editor then asked the group if anyone wished to view the ED-COORD bucket comments on the screen with affirmative responses. The Editor then displayed and reviewed some representative comments from the ED-COORD (#199, #200) as examples of the types of comments in this bucket. The Editor then asked the group that if anyone wished to remove a comment from the ED-COORD bucket, they do so now; no request was made and no comments were removed from this bucket.

The Editor then presented the following motion:

Motion #4: Approve the proposed resolution of all ED-COORD comments, marked with the ED-COORD Topic in http://www.ieee802.org/3/bq/comments/p802.3bq_d1.2_proposed_response_by_topic.pdf , without exception.

The Task Force chair asked if there was any discussion of the motion; none was offered by participants.

M: George Zimmerman S: Pete Cibula
MOTION PASSES by voice vote without objection (Technical > 75%)

The Editor reviewed a summary of the remaining topics and the comment resolution agenda, and then informed the group that at the conclusion of review & resolution of submitted comments, a single comment taken from the floor (associated with comments received from the 802.3 WG preview of the draft) would be reviewed and resolved.

While reviewing the summary of the remaining topics, there was some discussion associated with the appropriate designation to use for the alternative MDI identified in several comments, which was clarified to be IEC 61076-3-110. A commenter from the floor asked for clarification on the order and number of topics to be reviewed, noting that the “Notes” comment was missing from the comment resolution agenda.

The Editor then previewed the comment from the floor during the plenary opening session, which is related to formatting that, if left as-is in the draft, could suggest the draft is not technically complete.

At this time, the editor’s report was paused for comment resolution.

COMMENT RESOLUTION

Comment resolution on P802.3bq D1.2 began at 10:57AM. Resolution of comments by consensus or motion is listed in the comment database.

http://www.ieee802.org/3/bq/comments/p802.3bq_d1.2_resolved_response_by_topic.pdf

Comment resolution was paused at 12:03PM. The joint meeting was recessed for lunch at 12:04PM and resumed at 1:23PM.

At 3:10PM, the Editor requested that the Task Force chair lead the meeting (so as to avoid any conflicts related to the Editor’s affiliation). The following two presentations were heard in support of comment #246:

Title: Experimental Evaluation of 25 and 40GBASE-T Channel Performance
([Belopolsky 3bq 01 0315.pdf](#))

Abstract: This contribution in support of IEEE 802.3bq 40GbE standard development summarizes the transmission test results for channels utilizing IEC 61076-3-110 Augmented RJ45 connectivity. The data covers a range of channels from 4m to 60m tested up to 2000 MHz. The cabling (Category 8.2) was provided by multiple vendors. The significant improvement of the major channels characteristics: NEXT, Return Loss, Transverse Conversion Loss was experimentally demonstrated. In particular, it was shown that with the use of IEC61076-3-110 connectivity a 57 to 60 dB NEXT @2000 MHz in a 30m channel can be achieved.

Presenter: Yakov Belopolsky, Stewart Connector

Discussion: Discussion was deferred until after the second presentation also related to the comment.

Title: IEC61076-3-110 Augmented RJ45 Alternative MDI interface for 25 and 40GBASE-T ([Belopolsky 3bq 02 0315.pdf](#))

Abstract: The availability of robust copper connectivity is vital for implementation of 25 and 40GbE technology. The test data demonstrated that use of IEC/ISO 61076-3-110 Augmented RJ45 connectivity resulted in channels with improved transmission characteristics such as RL, NEXT, ACR and TCL. This technical contribution, put forward by leading manufactures of the integrated magnetics, proposes IEC61076-3-110 (Augmented RJ45) as an alternative interface connector for IEEE 802.3bq 25/40GbE MDI in addition to IEC 60603-7-81 (RJ45). The contribution reviews the comparative features of IEC 61076-3-110 (ARJ45) and IEC 60603-7 (RJ45) with and without integrated magnetics

Presenter: Yakov Belopolsky, Stewart Connector

Discussion: Some comments from discussion of the presentations are summarized in the following notes.

- Questions regarding compatibility with existing RJ45 connectors clarified that the augmented RJ45 is not plug-compatible (and is in fact keyed to prevent mismatches) and that a hybrid cord is required for use with existing interfaces.
- Other discussion included a variety of topics, ranging from the type of mechanical testing performed (the same requirements as the RJ45), manufacturability and availability of the augmented RJ45, some additional review of the electrical characteristics and general discussion of compensation techniques adopted in existing interconnects.

The meeting was recessed for a brief break at 4:00PM. Comment resolution by the Chief Editor resumed at 4:15PM, when the Editor asked if there was any objection to revisiting the ClassI/ClassII comments at this time. None was noted.

At 5:12 PM, comment resolution was paused to address responses received against the P802.3bq objectives, PAR and CSD.

Response to PARs:

The TF Chair presented modifications to the P802.3bz PAR. Items noted in included changes to 5.5 Need for the Project:, including minor clarifications on standards references and some amplifications on the types of enterprise wireless access point speeds associated with 802.11ac-2013 Wave 1 and Wave 2. Participants also discussed the scope of changes to the PAR that can be entertained at this time. A series of motions related to the modifications (highlighted in the working document as blue text) followed, summarized as follows:

Motion #8: Motion to accept the blue text. (Technical > 75%)

M: George Zimmerman S: Valerie Maguire

Y: 34

N: 0

A: 4

MOTION PASSES

Motion #9: Motion to amend Motion #8 with “...and replace in item 5.5 “interconnect solutions” with “structured cabling”. (Technical > 75%)

M: Valerie Maguire S: Yakov Belovsky

Y: 20

N: 7

A: 4

MOTION FAILS

Motion #10: Motion to amend Motion #8 to “...and replace the word “over” with “by a portion of the installed”. (Technical > 75%)

M: Valerie Maguire **S:** Yakov Belovsky

All in the room: Y:14 N:12 A:18

MOTION FAILS

(802.3 voters only: Y:8 N:7 A:12)

Motion #11: Adopt the modified PAR text in P802.3_3bz_PAR_Detail_110315.pdf (Technical > 75%)

M: Peter Jones **S:** Theo Brillhart

Y: 39

N: 0

A: 3

MOTION PASSES

Comment resolution resumed at 5:57PM.

Having completed the comments submitted during the Task Force Review cycle, the Editor then resumed review of [zimmerman_3bq_02b_0315.pdf](#) and turned to comments from the floor.

With comment resolution completed, the Chair resumed leading the meeting.

Motion #15: Move to:

- Generate Draft 2.0 from Draft 1.2 and closed comments
- Request 802.3 WG Chair to conduct 802.3 Working Group ballot on P802.3bq Draft 2.0 (Technical > 75%)

M: George Zimmerman

S: Alan Flatman

Y: 33 N: 4 A: 4

MOTION PASSES

The joint meeting was recessed for the day at 6:48PM, Wednesday, March 11th, 2015.

The meeting was called to order and resumed at 8:11AM Thursday March 12, 2015.

The Study Group Chair called for introductions and affiliations, the participants introduced themselves, and the Chair then proceeded with the agenda.

The Chair reviewed the agenda. Mr. Chalupsky turned to presentation agenda_3base-t-all_01_0315.pdf and reviewed the schedule of presentations for the meeting.

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.

The Chair then resumed the review of presentation agenda_3bq_01_0115.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 indications from the group.
- Mr. Chalupsky noted that there should be no recording or photography without permission.
- Mr. Chalupsky read the Guidelines for IEEE WG Meetings from the agenda presentation.

The Chair then resumed the review of presentations not related to comments, summarized in the order presented.

Title: NGEABT Study Group January 15 Market Update
([jones_ngeabt_02c_0315.pdf](#))

Abstract: This contribution presents some updated analyst forecast with a brief review of the data presented during the CFI and new data from January 2015.

Presenter: Peter Jones, Cisco

Discussion:

One question from the floor referenced the anticipated transition to 2.5G/5G Ethernet at the enterprise edge, asking if this data has any effect on the anticipated project timeline. The question was deferred until the Study Group transitions to a Task Force and defines a project timeline.

Title: NGEAB-T Use Cases ([diminico_ngeabt_02_0315.pdf](#))

Abstract: This contribution provides information related to defining use cases and deployment configurations for 2.5 and 5 Gb/s, including use cases defined to develop deployment configurations and characterize the noise environment, deployment configurations needed to develop link segment characteristics, and use cases and link segment characteristics for purpose of PHY modeling.

Presenter: Chris Diminico, MC Communications

Discussion:

Comments from the floor covered a wide range of topics related to NGEAB-T Use Cases, with more significant discussions summarized as follows:

- While the wireless access point use case is of primary importance, there is work underway to evaluate other enterprise deployments. There may be some overlap with 10GBASE-T in the 55m Cat6 range, and a commenter suggested that use case analysis take this into consideration.

- Cabling configurations and co-existence with other twisted-pair technologies led to the observation that a 6-around-1 configuration with NGEAB-T aggressors may not be a worst-case scenario, since different aggressors with different PSDs and no PBO will be involved. Participants discussed further work to define the mix of existing services (100Mbps/1Gbps/10Gbps, etc.) and consider not only interference from (NGEAB-T as the victim), but also interference to (NGEAB-T as the aggressor) in order to better define transfer functions for PHY developers.

Title: NGEABT Potential Timeline and Challenges ([kim_ngeabt_01a_0315.pdf](#))

Abstract: This contribution provides a discussion of possible timelines and challenges in producing a proposed NGEABT standard.

Presenter: Yong Kim, Broadcom

Discussion:

Discussion from the floor encouraged participants to accelerate the process in order to develop the standard in a timely manner.

Title: Response to the Technical Feasibility CSD ([Souvignier_ngeabt_01a_0315.pdf](#))

Abstract: This contribution provides a description and laboratory examination of scaling 10GBASE-T technology in support of technical feasibility of the NGEABT draft standard.

Presenter: Tom Souvignier, Broadcom

Discussion:

Participants asked how Tx power would scale and PBO would be incorporated in a scaled 10GBASE-T solution. The presenter noted that the peak Tx voltage in the time-domain would be the same.

Title: Relations between the use cases, operational environment and PHY choices in 10GBASE-T and NGEABT ([zimmerman_ngeabt_01_0315.pdf](#))

Abstract: This contribution discusses considerations used in the early stages of the 10GBASE-T project, some lessons learned in 10GBASE-T and differences relative the environment in which the Next Generation Enterprise Access BASE-T PHY may operate.

Presenter: George Zimmerman, CME Consulting

Discussion:

Discussion from the floor centered on the effectiveness of the existing 10GBASE-T coding scheme and the role played by the defined Euclidian distance in mitigating multiple impulse noise events. Noting the significant technical discussion from the floor on this issue, interested participants were encouraged to continue the dialogue and associated technical work in the ENUCA ad hoc.

Title: Cat 6 Alien Crosstalk Testing in WAP Deployment Configurations ([nordin_ngeabt_01a_0315.pdf](#))

Abstract: This contribution provides discussion and some measurement results of alien crosstalk in use cases representing the TIA TSB-162 guidelines for cabling for WAP deployment.

Presenter: Ron Nordin, Panduit

Discussion:

Comments from the floor included questions about some details of the measured configurations, margin computation, and plans for further work. The presenters noted that the configurations are consistent with common installation practice and were designed to implement configurations that are representative of a “reasonable worst-case” (as opposed to common worst-case lab configurations). It was noted that wide variation exists among installations purported to follow installation guidelines, so it may be beneficial to consider both typical and worst-case configurations. One participant noted that older, early-revision Cat5e and Cat6 connectors, that may be common in the installed base, exhibit somewhat different characteristics and have limited AFEXT/ANEXT performance. Discussion concluded with a call for continued discussion of these and other use cases in the Use Case ad hoc.

The Study Group paused for a short break at 10:22AM, and resumed discussion at 10:36AM.

Title: Remarks on 2.5G / 5G noise ([Feyh_ngeabt_02_0315.pdf](#))

Abstract: This contribution provides a discussion of various noise sources, including alien crosstalk and impulse noise, as well as a discussion of coding for signal transmission based on 10GBASE-T.

Presenter: German Feyh, Broadcom

Discussion:

The presented remarks solicited lively discussion from the floor regarding many aspects of noise impairments and noise mitigation techniques that could be used within a NGEAB-T PHY. The discussion encompassed many noise sources - impulse (including ESD), alien, and EMI sources, as well as conditions whereby some of the presented noise sources are generated. The floor discussion concluded with the note that further discussion on noise characteristics the relative weight/importance of different sources should continue in the ad hoc, with the Study Group Chair reminding participants that as NGEAB-T is a study group, any recommendation or discussion related to baseline text is not actionable at this time.

At this time, the SG chair asked to defer continued review of contributions to address liaison letters.

Suggestions were offered from the floor to eliminate confusion on the state of the progress of the SG and use terminology that is friendly and familiar to the recipients. After editing, three motions were advanced to accept the liaison letters to forward to the 802.3 WG chair.

Motion #16: Move to adopt <ngeabt_to_iso_0315.pdf>, giving license to the study group chair to format, and that the NGEABT Study Group Chair submit the following motion to the IEEE 802.3 Working Group:

Move that IEEE 802.3 approve the text in IEEE_802d3_to_ISO_0315.pdf with editorial license granted to the Chair (or the Chair's appointed agent) as a liaison communication from the IEEE 802.3 Working Group to ISO/IEC JTC1/SC25/WG3.

(Technical > 75%)

M: Chris DiMinico S: George Zimmerman

Y: 39

N: 0

A: 2

MOTION PASSES

Motion #17: Move to adopt <ngeabt_to_tia_0315.pdf>, giving license to the study group chair to format, and that the NGEABT Study Group Chair submit the following motion to the IEEE 802.3 Working Group:

Move that IEEE 802.3 approve the text in IEEE_802d3_to_TIA_0315.pdf with editorial license granted to the Chair (or the Chair's appointed agent) as a liaison communication from the IEEE 802.3 Working Group to TIA TR42.

(Technical > 75%)

M: Chris DiMinico S: George Zimmerman

Y: 36

N: 0

A: 2

MOTION PASSES

Motion #18: Move to adopt <ngeabt_to_iecSC48B_0315.pdf>, giving license to the study group chair to format, and that the NGEABT Study Group Chair submit the following motion to the IEEE 802.3 Working Group:

Move that IEEE 802.3 approve the text in IEEE_802d3_to_iecsc48b_0315.pdf with editorial license granted to the Chair (or the Chair's appointed agent) as a liaison communication from the IEEE 802.3 Working Group to IEC SC48B.

(Technical > 75%)

M: Chris DiMinico S: George Zimmerman

Y: 40

N: 0

A: 0

MOTION PASSES

DISCUSSION, MOTIONS & STRAW POLLS RELATED TO TASK FORCE AND STUDY GROUP ADVANCEMENT

Having concluded the presentations for the day and addressed outgoing liaison letters, the Chair then moved to discussion, motions and (additional) straw polls related to Task Force & Study Group Advancement.

Motion #19: Request 802.3 to provide an extension of the 25GBASE-T Study Group

**M: Paul Vanderlaan
Procedural >= 50%**

S: Theo Brillhart

Y: 40

N: 0

A: 1

MOTION PASSES

Motion #20: Request 802.3 to provide an extension of the Next-Generation Enterprise Access BASE-T Study Group

M: Peter Jones S: Yong Kim
Procedural >= 50%

Y: 46

N: 0

A: 1

MOTION PASSES

The chair reviewed future meeting plans, noting that near-term ad hoc meetings will continue, with Kamal Dalmia substituting for Peter Jones as the Architecture ad hoc chair and Tom Souvignier substituting for German Feyh as the ENUCA ad hoc chair during the respective chairs.

Two straw polls were conducted to assist in future meeting planning.

FUTURE MEETINGS

Straw Poll on future meetings

I will be attending:

May 2015 Interim Week, Week of May 18 - Omni William Penn Hotel, Pittsburg, PA, USA

Y: 36

N: 3

Maybe:3

July 2015 Plenary, week of July xx – Waikoloa, HI

Y: 31

N:6

Maybe:5

No further motions of business were offered.

Adjournment

Motion #21: To adjourn the meeting.

M: Pete Cibula S: Peter Jones

MOTION PASSES by voice without opposition

The Meeting was adjourned at 11:23AM, Thursday, March 12, 2015.

Appendix A: Attendees at the joint IEEE P802.3bq Task Force/25GBASE-T Study Group & Next Generation Enterprise Access BASE-T Study Group Meeting, March 11-12, 2015

Total attended:	57		Daily # attended:	52	52
JOINT MEETING: P802.3bq TF; 25GBASE-T & NGEABT SG March 2015				3/11/2015	3/12/2015
Last Name	First Name	Employer	Affiliation	WEDS	THURS
Assouad	Simon	Broadcom	Broadcom	x	x
Bains	Amrik	Cisco	Cisco	x	x
Belopolsky	Yakov	Bel Stewart	Bel Stewart	x	x
Bourgeois	Stephane	Belden	Belden	x	x
Brillart	Theo	Fluke Electronics	Fluke Electronics	x	
Brown	Tom	Vitesse	Vitesse	x	x
Carty	Clark	Cisco	Cisco	x	x
Cates	Ron	Marvell	Marvell	x	x
Chalupsky	David	Intel	Intel	x	x
Chang	Jacky	HP	HP	x	x
Chuang	Keng Hua	HP	HP	x	x
Cibula	Pete	Intel	Intel	x	x
Dalmia	Kamal	Aquantia	Aquantia	x	x
Diab	Wael	Huawei	Huawei		x
DiMinico	Christopher	MC Communications	Panduit	x	x
Engels	Yvan	Leoni	Leoni	x	
Estes	Dave	Spirent	Spirent	x	x
Farjad	Ramin	Aquantia	Aquantia	x	x
Feyh	German	Broadcom	Broadcom	x	x
Flatman	Alan	LAN Technologies	LAN Technologies	x	x
Freeburn	Paul	Avaya	Avaya	x	x
Fritsche	Matthias	Harting	Harting		x
Hammond	Bernard	TE Connectivity	TE Connectivity	x	x
Hess	Dave	Cord Data	Cord Data	x	x
Huang	Liang-wei	Realtek	Realtek		x
Jimenez	Andrew	Anixter Inc.	Anixter Inc.	x	
Jones	Peter	Cisco	Cisco	x	x
Kim	Yong	Broadcom	Broadcom	x	x
Kupec	Jan	Reichle & De-Massari AG	Reichle & De-Massari AG	x	x
Lackner	Hans	QoSCom Gmbh	QoSCom Gmbh	x	x
Lapak	Jeff	UNH - IOL	UNH - IOL	x	x
Lee	Arthur	Mediatek	Mediatek	x	x
Lo	William	Marvell	Marvell	x	x
Maguire	Valerie	Siemon	Siemon	x	x
Malkemus	James	General Cable	General Cable	x	x
Marris	Arthur	Cadence	Cadence	x	

McClellan	Brett	Marvell	Marvell		x
Mei	Richard	Commscope	Commscope	x	x
Moffitt	Bryan	Commscope	Commscope	x	x
Nakamoto	Edward	Spirent	Spirent	x	x
Nordin	Ron	Panduit Corp.	Panduit Corp.	x	x
Rabinovich	Rick	Alcatel-Lucent	Alcatel-Lucent		x
Renteria	Victor	Belfuse Inc	Belfuse Inc	x	x
Rossbach	Martin	Nexans	Nexans	x	x
Saboori	Mohammad	Pulse Electronics	Pulse Electronics	x	x
Schicketanz	Dieter	Consultant	Leoni-Kerpen	x	x
Sedarat	Hossein	Aquantia	Aquantia	x	x
Shariff	Masood	Commscope	Commscope	x	x
Shen	BZ	Broadcom	Broadcom	x	x
Shirani	Ramin	Aquantia	Aquantia	x	x
Souvignier	Tom	Broadcom	Broadcom	x	x
Thieissen	Hubert	Nexans	Nexans	x	
Vanderlaan	Paul	Berk-Tek LLC	Berk-Tek LLC	x	x
Wang	Roy	Hewlett-Packard	Hewlett-Packard	x	x
Wu	Peter	Marvell	Marvell	x	x
Yu	Jerome	Realtek	Realtek	x	x
Zimmerman	George	CME	Commscope, Aquantia	x	x

Appendix B: List of NGEAB-T Study Group contributions submitted but not presented due to time constraints.

Title: Enterprise Environment Impulse Noise Measurements
([shirani_ngeabt_02_0315.pdf](#))

Abstract: This contribution provides measurements and discussion of environmental impulse noise in enterprise environments

Presenter: Ramin Shirani, Aquantia

Discussion: (Not presented)

Title: Survey of 60,000 Installed and Tested Cabling Links
([brillhart_ngeabt_01a_0315.pdf](#))

Abstract: This contribution provides a summary of measurement results for a large number of cabling links, including lengths, category, and transmission parameters.

Presenter: Theo Brillhart, Fluke Networks

Discussion: (Not presented)

Title: Alien Crosstalk Performance of CAT6 Channels
([cibula_ngeabt_01a_0315.pdf](#))

Abstract: This contribution presents Cat6a alien crosstalk measurements in what are believed to be “worst-case” 6-around-1, 4-connector channel configurations to further characterize Cat6 alien crosstalk.

Presenter: Pete Cibula, Intel

Discussion: (Not presented)

Title: NGEABT Layering and Gaps ([kim_ngeabt_02_0315.pdf](#))

Abstract: This contribution provides an overview of clauses in 802.3 that might be touched in an amendment supporting a possible new NGEABT standard.

Presenter: Yong Kim, Broadcom

Discussion: (Not presented)