Approved Meeting Minutes: Joint meeting of IEEE P802.3bq 25G/40GBASE-T Task Force and IEEE P802.3bz 2.5G/5GBASE-T Task Force March 14-15, 2016 Macau, SAR People's Republic of China Prepared by Jon Lewis

The joint meeting of IEEE P802.3bq 25G/40GBASE-T Task Force and IEEE P802.3bz 2.5G/5GBASE-T Task Force meeting convened at 1:24 PM, Monday, March 14, 2016 by David Chalupsky, P802.3bq and P802.3bz Task Force Chair.

Attendance is listed in Appendix A

ADMINISTRATIVE MATTERS Presentation: <u>agenda_3bq-n-bz_01_0316.pdf</u> Presenter: Dave Chalupsky, Chair.

The Chair reviewed the agenda. Mr. Chalupsky turned to presentation <u>agenda_3bq-n-bz_01_0316.pdf</u> and reviewed the schedule of presentations for the meeting.

Motion #1: Approve the agenda from <u>agenda 3bq-n-bz 01_0316.pdf</u>

M: Pete Cibula S: George Zimmerman Approved by voice vote without objection (Procedural > 50%)

Motion #2: Approve the minutes from the January, 2016 IEEE P802.3bq and P802.3bz meeting.

M: Paul Vanderlaan S: Theo Brillhart Approved by voice vote without objection (Procedural > 50%)

The Chair called for introductions and affiliations, the participants introduced themselves.

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 Mr. Chalupsky, Intel indicated that occasionally he communicates publically available information.
- 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 for both P802.3bq and P802.3bz, and ground rules.

Mr. Chalupsky then continued review of the presentation, including the objectives for the projects and Big Ticket items for this meeting including recirculations for P802.3bq and

802.3bz, requesting that P802.3bq be conditionally forwarded to RevCom, and potentially requesting conditional sponsor ballot for P802.3bz.

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 **2:08 PM**, Mr. Chalupsky read slides 1 through 3 on the patent policy from <u>agenda 3bq-n-bz 01_0316.pdf</u>. Mr. Chalupsky made the call for potentially essential patents at **2:11 PM**, and none responded. Mr. Chalupsky then completed the reading of slide #4.

Mr. Chalupsky then continued review of the presentation, discussing that P802.3bz is in working group ballot and P802.3bq is in Sponsor ballot phase and that both task force groups would be primarily comment driven.

LIAISONS

The Chair moved to liaisons, and noted the Task Force had received a liaison for P802.3bz from TIA TR42 for this meeting and that two liaisons from ISO/IEC were received just hours before the meeting.

 Incoming liaison from TIA TR42, providing draft 0.6b of TSB-5021 to P802.3bz – Letter: <u>http://www.ieee802.org/3/bz/private/TR42-2016-06-</u>
 <u>060_Outgoing_Liaison_to_IEEE_802.3bz_re_TSB-5021_Draft_0.6b.pdf</u> posted in P802.3bz private area.

Incoming liaison of ISO/IEC TR 11801- 9905, Cabling to Support 25GBASE-T

- The Chair asked Masood Shariff to draft a response letter to this liaison.
- Incoming liaison of ISO/IEC TR 11801-9904, Cabling to Support 2.5/5GBASE-T

The Chair completed review of the presentation.

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 the authors.)

Title:802.3bq Editor's Report (zimmerman 3bq 01 0316.pdf)Abstract:The editor reported on the status and comments received of the draft 3.1,
along with a proposed agenda for comment resolution.Presenter:George Zimmerman, CME Consulting / Aquantia & Commscope, Chief
Editor IEEE P802.3bq

Discussion:

The Chief Editor presented his report, including the present status of the draft, a summary of comments received against D3.1.

The Editor outlined the comments by topic, and reminded participants that the comments had been posted by topic on the website.

At this time, the editor's report was concluded and comment resolution began.

BQ COMMENT RESOLUTION

Decisions during comment resolution were made by consensus, except where noted that motions were taken. For details on comment resolution see the posted comment database.

Break at 3:10 PM.

Meeting resumed at 4:00 PM.

The meeting resumed noting that comment resolution for P802.3bq would resume Tuesday so that the group can review a draft liaison to ISO/IEC from P802.3bq, and resolve one outstanding comment related to it.

Presentations concerning P802.3bz were then heard.

Title: ENUCA Ad-Hoc report (feyh <u>3bz 01_0316.pdf</u>)

Presenter: German Feyh, Broadcom Corp.

Abstract: The presenter described the status of the Enterprise Noise and Use Case Analysis Ad Hoc (ENUCA).

• Activity since Atlanta, GA.

Discussion:

• No Comments.

Title: Architecture ad hoc report (jones_3bz_01_0316.pdf) **Presenter:** David Chalupsky, Intel for Peter Jones, Cisco Systems **Abstract:** Review status of 802.3bz Architecture Ad Hoc including

- Charter, scope/deliverables, location
- Activity since Atlanta, GA.
- Further Work

Discussion:

• No comments.

Title:802.3bz Editor's Report (zimmerman_3bz_02a_0316.pdf)

Abstract: The editor reported on the status and comments received of the D2.0, along with a proposed agenda for comment resolution.

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

Discussion:

The Chief Editor presented his report, including the present status of the draft, a summary of comments received against D2.0.

Mr. Zimmerman presented the Proposed Comment Resolution Agenda and asked the group if there were objections or modifications to the agenda. None heard.

The Editor reviewed the late comment and asked the group if there was any objection to considering the late comment. None heard.

One late comment was allowed to be included in the comment resolution.

The Editor outlined the comments by topic, and reminded participants that the comments had been posted by topic on the website, with the Editor reminding the group via reflector to review the EZ bucket, as this group was intended to be approved by a single motion.

The editor then asked the group if anyone wished to view the EZ 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 bucket, then do so now. No comments were requested to be removed from the EZ bucket.

Motion #3: Approve the proposed resolution of all EZ comments, marked with the EZ Topic in <u>http://www.ieee802.org/3/bz/comments/802d3bz_D2p0_EZ_Page.pdf</u> excepting none. M: George Zimmerman S: Jon Lewis Y: 33 N: 0 A: 0 MOTION PASSES (Technical >= 75%)

The Editor outlined the comments by topic, and reminded participants that the comments had been posted by topic on the website, with the Editor reminding the group via reflector to review the BQALIGN bucket, as this group was intended to be approved by a single motion.

The editor then asked the group if anyone wished to view the BQALIGN 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 BQALIGN bucket, then do so now. No comments were requested to be removed from the BQALIGN bucket.

Motion #4: Approve the proposed resolution of all BQALIGN comments, marked with the BQALIGN Topic in

http://www.ieee802.org/3/bz/comments/802d3bz_D2p0_BQALIGN_Page.pdf excepting none. M: George Zimmerman S: Jon Lewis MOTION PASSES by voice without opposition

The room wanted to express appreciation for the effort the Chief Editor has taken to align P802.3bq and P802.3bz.

The Editor reviewed a summary of the remaining topics and the comment resolution agenda.

At this time, the editor's report was concluded and comment resolution began.

BZ COMMENT RESOLUTION

Decisions during comment resolution were made by consensus, except where noted that motions were taken. For details on comment resolution see the posted comment database.

Title: 2.5G/5G Impedance Balance Specification (<u>bains_3bz_01a_0316.pdf</u>) **Presenter:** Amrik Bains, Cisco **Abstract:** Addition of impedance balance parameters. (Comment #268) **Discussion:** See comment database

Title: 2.5G/5G Timing considerations for Pause operation (<u>bains 3bz 02a 0316.pdf</u>) Presenter: Amrik Bains, Cisco Abstract: Presentation adding necessary text to 31B.3.7. (Comment #342) Discussion: See comment database

The meeting was recessed for the day at 7:20 PM to resume at 8:00 AM Tuesday, March 18, 2016.

The meeting was called to order at 8:22AM Tuesday, March 18, 2016.

The Chair reviewed the agenda and remaining items for the group.

IEEE Patent Policy, at **8:28 AM**, Mr. Chalupsky asked the group if there was anyone not familiar with the IEEE patent policy. None responded and Mr. Chalupsky made the call for potentially essential patents at **8:29 AM**, and none responded. Mr. Chalupsky then completed the reading of slide #4.

The Chair then proceeded to presentations regarding comment resolution for P802.3bz.

Title: Cable Qualification for 5G and 2.5G: Fine Adjustments (Sedarat 3bz 01 0316.pdf)

Presenter: Hossein Sedarat, Aquantia

Abstract: A new cable qualification criterion with relaxed SNR requirement when insertion loss is lower than 100m limit line.

Discussion: no comments

Title: 802.3bz Use Cases (<u>diminico_3bz_01_0316.pdf</u>) Presenter: Chris Diminico, MCE Communications Abstract: The contribution provides use cases defined to develop deployment configurations and characterize noise environment to develop link segment characteristics (ALSNR)

Discussion: Clarifications on the presentation were asked and answered.

 Title:
 Representative 2.5Gb/s and 5Gb/s PHY Performance in Bundled Cat5e and Cat6

 Configurations With and Without Mitigation (cibula 3bz 01a 0316.pdf)

Presenter: Pete Cibula, Intel

Abstract: This contribution summarizes testing performed to investigate representative P802.3bz use cases, specifically variants of "Use Cases Supported" as described in diminico_3bz_01_0316.pdf.

Discussion: no comments.

Title: Proposed ALSNR Replacement Text for D2.1 (<u>zimmerman_3bz_01_0316.pdf</u>)
 Presenter: George Zimmerman, CME Consulting; Aquantia, Commscope
 Abstract: This contribution provides a clarified and explicit procedure for measurement of ALSNR according to IEEE 802.3bz Draft 2.0.
 Detailed analysis of this proposal against the exact steps provided by IEEE 802.3bz Draft 2.0 is also provided.

Discussion: See Comment database.

Comment resolution for P802.3bz continued.

Short break at 10:17 AM.

Meeting resumed at 10:49 AM.

Comment resolution for P802.3bz continued.

Break for lunch at 12:38 PM

Resumed from lunch at 1:35 PM

After the break the group discussed the P802.3bg response letter to the ISO/IEC liaison.

Comment resolution for P802.3bg was resumed and completed.

Motion #5: Direct the Task Force Chair to create IEEE 802d3 to ISOIEC SC25 WG3 9905 0316 draft.pdf from shariff 3bg 01 0316.doc with editorial license.

Direct the task force chair to make the following motion to 802.3:

Move that the IEEE 802.3 Working Group approve _ IEEE_802d3_to_ISOIEC_SC25_WG3_9905_0316_draft.pdf with editorial license granted to the Chair (or his appointed agent) as liaison communication from the IEEE 802.3 Working Group to ISO/IEC JTC1/SC25 WG3.

Move to send comment file from P802.3bg Task Force participants as an informal liaison from P802.3bg to ISO/IEC JTC1/SC25 WG3, giving editorial license to the TF Chair.

M: George Zimmerman S: Peter Jones Y: 28 N: 0 A: 1 MOTION PASSES (Technical >= 75%)

Comment resolution for P802.3bz was resumed.

Comment resolution for P802.3bz was concluded prior to the break.

Break at 3:35 PM.

Meeting resumed at 4:11 PM.

The Chair reviewed the remaining business related to P802.3bq.

Motions related to P802.3bq.

Motion #6: Move that: The IEEE P802.3bq Task Force accept the comment resolutions (with editorial license to conform to RevCom guidelines) to D3.1 as detailed in <u>http://www.ieee802.org/3/bq/comments/8023bq_D31_approved.pdf_</u> and charter the editor to produce D3.2 for sponsor ballot 2nd recirculation. M: Alan Flatman S: Theo Brillhart Y: 23 N: 0 A: 0 MOTION PASSES (Technical >= 75%)

Motion #7: Direct the Task Force Chair to make the following motion to 802.3: Move that the IEEE 802.3 Working Group re-affirm the CSD responses in <u>https://mentor.ieee.org/802-ec/dcn/15/ec-15-0069-00-ACSD-802-3bq.pdf</u> and request conditional approval to progress the IEEE P802.3bq draft to RevCom once the Sponsor ballot process has been successfully completed. M: Jon Lewis S: Peter Jones Y: 23 N: 0 A: 0 MOTION PASSES (Technical >= 75%)

Motions related to P802.3bz.

Motion #8: Move that: The IEEE P802.3bz Task Force accept the comment resolutions to D2.0 as detailed in <u>http://www.ieee802.org/3/bz/comments/8023bz_D20_approved.pdf_</u> and charter the editor to produce D2.1 for Working Group ballot 1st recirculation. M: Amrik Bains S: Theo Brillhart Y: 23 N: 0 A: 0 MOTION PASSES (Technical >= 75%)

Motion #9: Move to Reaffirm the CSD responses in http://www.ieee802.org/3/bz/802d3_NGEABT_CSD_802.3_WG_approved_12march-15.pdf

Request 802.3 WG to seek conditional EC approval to conduct sponsor ballot. Direct the Task Force Chair to make the following motion to 802.3

Move that the IEEE 802.3 Working Group re-affirm the CSD responses in http://www.ieee802.org/3/bz/802d3_NGEABT_CSD_802.3_WG_approved_12-march-15.pdf and request conditional approval to progress the IEEE P802.3bz draft to IEEE 802 LMSC sponsor ballot once the Working Group ballot process has been successfully completed.

M: Peter Jones S: Pete Cibula Y: 23 N: 0 A: 0 MOTION PASSES (Technical >= 75%)

Straw Poll: Future Meetings Straw Poll

April 14, 2016 Interim I plan to attend in person in Santa Clara, CA Yes – 11 No - 7 Maybe - 3 Having completed the presentations and comment resolution business for the meeting, the Chair reviewed future meetings including a contingent interim for both P802.3bq and P802.3bz on April 14, 2016, in Santa Clara, CA. The Chair noted that as contingent interims, the meetings would be cancelled if not needed to complete the recirculations, and that teleconference attendance was supported. However, this contingent status was subject to the approval by 802.3 and 802 of the motions for conditional approval.

No further motions of business were offered.

Adjournment

Motion #10: To adjourn the meeting. M: Jon Lewis S: Pete Cibula MOTION PASSES by voice without opposition

The Meeting was adjourned at 4:56 PM, Tuesday, March 15, 2016.

Appendix A: Attendees at IEEE P802.3bq and P802.3bz Joint Task Force Meeting, March 17-18, 2016

P802.3bq & P802.3bz March'16					3/15/16
Last Name	First Name	Employer	Affiliation	Monday	Tuesday
Bains	Amrik	Cisco	Cisco	Х	Х
Brillhart	Theo	Fluke Electronics	Fluke Electronics	Х	Х
Carlson	Steve	High Speed Design		Х	Х
Carty	Clark	Cisco	Cisco	Х	Х
Chadha	Mandeep	Microsemi	Microsemi	Х	Х
Chalupsky	David	Intel	Intel	Х	Х
Chuang	Keng Hua	HPE	HPE	Х	Х
Cibula	Pete	Intel	Intel	Х	Х
DiMinico	Christopher	MC Communications	Panduit	Х	Х
Donahue	Curtis	UNH - IOL	UNH - IOL	Х	Х
Farjad	Ramin	Aquantia	Aquantia	Х	Х
Feyh	German	Broadcom	Broadcom	Х	Х
Flatman	Alan	LAN Technologies	LAN Technologies	Х	Х
Hamidy	Farid	Pulse	Pulse	Х	Х
Jimenez	Andrew	Anixter Inc.	Anixter Inc.	Х	Х
Jones	Peter	Cisco	Cisco	Х	Х
Klempa	Mike	UNH-IOL	UNH-IOL	Х	Х
Lewis	Jon	Dell	Dell	Х	Х
Lo	William	Marvell	Marvell	Х	
Maguire	Valerie	Siemon	Siemon	Х	Х
Marris	Arthur	Cadence	Cadence	Х	
McClellan	Brett	Marvell	Marvell	Х	Х
Moffitt	Bryan	Commscope	Commscope	Х	Х
Ng	Chun Wing Alan	Belfuse	Belfuse	Х	Х
Renteria	Victor	Belfuse Inc	Belfuse Inc	Х	Х
Saboori	Mohammad	Pulse Electronics	Pulse Electronics	Х	Х
Sedarat	Hossein	Aquantia	Aquantia	Х	Х
Shariff	Masood	Commscope	Commscope	Х	Х
Shirani	Ramin	Aquantia	Aguantia	Х	Х
Vaden	Sterling	Surtec, Ind.	Vaden Enterprises	Х	Х
Vanderlaan	Paul	Berk-Tek LLC	Berk-Tek LLC	Х	Х
Wagner	Bob	Panduit Corp.	Panduit Corp.	Х	Х
Wang	Hai Fei	Huawei	Huawei	X	X
Wu	Peter	Marvell	Marvell	X	X
Zimmerman	George	CME	Commscope, Aquantia	X	X
Lin	Alex	Mediatek	Mediatek	X	X
Tsang	Dennis	Perfect Brave LTD	Perfect Brave LTD	X	X
Vince	Zheng	Perfect Brave LTD	Perfect Brave LTD	X	X
Luo	Joesy	Pulse	Pulse	X	

P802.3bq & P802.3bz March'16					3/15/16
Last Name	First Name	Employer	Affiliation	Monday	Tuesday
Chen	Joe	Pulse	Pulse	Х	
Oiwen	Zheng	Huawei	Huawei	Х	Х
Ber-Ni	Amir	Aquantia	Aquantia		Х
McCarthy	Mick	Analog Devices	Analog Devices		Х