

Approved Minutes
IEEE P802.3cd 50 Gb/s, 100 Gb/s, 200 Gb/s Ethernet Task Force
Plenary Meeting
November 9-10, 2016
San Antonio, TX, USA
Prepared by Kent Lusted

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IEEE P802.3cd 50 Gb/s, 100 Gb/s, 200 Gb/s Ethernet Task Force – November 9, 2016:

Prepared by Kent Lusted

IEEE P802.3cd 50 Gb/s, 100 Gb/s, and 200 Gb/s Ethernet Task Force meeting convened at ~8:05 a.m., by Mark Nowell, IEEE P802.3cd Task Force Chair.

Mr. Nowell welcomed attendees.

Chair reviewed agenda in http://www.ieee802.org/3/cd/public/Nov16/agenda_3cd_01a_1116.pdf

Introductions were made.

Motion #1:

Move to approve the agenda:

- Moved by: Adee Ran
- Second by: Mike Dudek
- Passed by voice without opposition

Minutes were posted shortly after the meeting. Chair asked if there were any comments on the posted minutes. Kent noted that he did review a request from Mike Dudek for a change in his affiliation. The updated version was posted after the correction was made. Kent asked if anyone wanted to see the corrected minutes. No one responded.

Motion #2:

Move to approve the September 2016 minutes:

- Moved by: Mike Li
- Second by: Mike Dudek
- Passed by voice without opposition

Chair reminded participants to observe meeting decorum. Called for members of the press. No one responded. Photography and recording are not permitted.

Chair reviewed the reflector and web information. Chair reviewed the ground rules for the meeting.

Chair reviewed the attendance procedures. Chair reminded participants to sign into the IEEE Attendance Tool and to sign the book.

Chair reviewed the IEEE structure.

Chair reviewed the Bylaws and Rules slides in http://www.ieee802.org/3/cd/public/Nov16/agenda_3cd_01a_1116.pdf

IEEE Patent Policy: Chair reviewed the Patent related slides on the 4 slides contained in the agenda. Chair calls for potentially essential patents. No one responded. Chair read the Guidelines for IEEE WG meetings. No one responded.

Chair advised the WG attendees that:

- The IEEE's patent policy is described in Clause 6 of the *IEEE-SA Standards Board Bylaws*;
- Early identification of patent claims which may be essential for the use of standards under development is strongly encouraged;
- There may be Essential Patent Claims of which the IEEE is not aware. Additionally, the IEEE, the WG, nor the WG chair can ensure the accuracy or completeness of any assurance or whether any such assurance is, in fact, of a Patent Claim that is essential for the use of the standard under development.

No one responded.

Chair reviewed the IEEE 802.3 Standards Process.

Chair noted that there was a liaison from the OIF to the IEEE 802.3bs and IEEE 802.3cd regarding the progress on OIF CEI-56G projects. (see [http://www.ieee802.org/3/minutes/nov16/incoming/OIF to IEEE 802d3bs cd Sept 2016.pdf](http://www.ieee802.org/3/minutes/nov16/incoming/OIF%20to%20IEEE%20d3bs%20cd%20Sept%202016.pdf)) The P802.3bs Task Force is preparing the response and will send it to the P802.3cd Task Force for review.

Chair also noted that there was a liaison from COBO to the IEEE 802.3bs and IEEE 802.3cd requesting access to the drafts. (see [http://www.ieee802.org/3/cd/public/Nov16/IEEE 802d3 to COBO status 1116 draft.pdf](http://www.ieee802.org/3/cd/public/Nov16/IEEE%20d3%20to%20COBO%20status%201116%20draft.pdf)) The P802.3bs Task Force is preparing the response and will send it to the P802.3cd Task Force for review.

Chair reviewed the P802.3cd Ethernet Task Force approved project documentation.

Chair reviewed the adopted objectives.

Chair reviewed the timeline in the agenda. Chair noted that there is potential opportunity to reduce the number of Task Force to three drafts. Noted that the magenta items in the draft representing TBD values could be turned to black as accepted values (no longer TBD) after two draft circulations without comment.

Chair recognized the editorial team members in the room and thanked them for their hard work to produce Draft 1.0.

Goals for the meeting:

- Comment Resolution
- Review Technical presentations
- Generate Draft 1.1

Future Meetings:

- January 2017 Interim
 - Week of Jan 9th, 2017 – Huntington Beach, CA, USA
- March 2017 Plenary
 - Week of March 12th, 2017 – Vancouver, BC, Canada
- May 2017 Interim
 - Week of May 22, 2017 – New Orleans, LA

Anyone interested in hosting a meeting should contact the Chair or Steve Carlson.

IEEE P802.3cd Task Force Ad-hoc report:

See http://www.ieee802.org/3/cd/public/Sept16/lusted_3cd_01a_0916.pdf

- Kent Lusted noted that the joint ad hoc meetings will likely resume on November 23, 2016. Details will be announced over the reflector.
- Asked for a show of hands from participants that would not attend an ad hoc call on November 23, the day immediately before the U.S. Thanksgiving holiday. Approximately half the room indicated.

Presentation #1:

“Editorial Consideration”, Matt Brown

See: http://www.ieee802.org/3/cd/public/Nov16/brown_3cd_01_1116.pdf

- Noted that there were not comments against the AUI clauses.
- Matt reviewed the list of comments considered “bucket” worthy. (see: http://www.ieee802.org/3/cd/comments/8023cd_D10_comment_proposed_responses_bucket_list.pdf) The editorial team was liberal in allocating comments to the bucket due to time constraints.
- Asked participants to review the proposed responses for these comments and notify the Chair, the Chief Editor and the Recording Secretary of any comments that should be address on the Task Force floor. The proposed responses to the bucket worthy will be adopted in motion during closing business.

Comment resolution began.

Chief Editor noted that the scope for Draft 1.1 will be the entire document, not restricted to the changes made from Draft 1.0.

Chair noted that the draft liaison letter responses generated by P802.3bs were posted to the Task Force web page for P802.3cd Task Force review. See http://www.ieee802.org/3/cd/public/Nov16/IEEE_802d3_to_OIF_CEI_1116_draft.pdf and http://www.ieee802.org/3/cd/public/Nov16/IEEE_802d3_to_COBO_status_1116_draft.pdf

Break at ~10:10 a.m. Resumed at ~10:35 a.m.

Chief Editor thanked Jeff Slavick, Pete Anslow, and Mike Dudek for their extensive peer review of the draft prior to publication. Matt thanked Adam Healey for his editorial contribution to Clause 136. Matt also thanked the many others who also reviewed the draft prior to publication.

Chair asked participants to review the proposed responses for “bucket” worthy comments and notify the Chair, the Chief Editor and the Recording Secretary of any comments that should be addressed on the Task Force floor. The proposed responses to the bucket worthy will be adopted in motion during closing business.

Break for lunch at ~12:00 p.m. Resume at ~1:05 p.m.

Presentation #3:

“106 Gb/s PAM4 TDECQ Measurement”, Greg LeCheminant

See: http://www.ieee802.org/3/cd/public/Nov16/lecheminant_3cd_01_1116.pdf

- Discussed some of the details of the TDECQ measurement methodology
- Noted that this presentation focuses on 50 Gbaud not 25 Gbaud, which needs to be explored.

Presentation #4:

“100GBASE-DR Link Budget Considerations”, Matt Traverso

See: http://www.ieee802.org/3/cd/public/Nov16/traverso_3cd_01a_1116.pdf

- Updated version ‘01a’ with significant changes. Chair asked if there was objection. No one responded.
- There was much discussion on the recommended changes to Table 140-3 and the link loss to MPI penalty budget.

Comment resolution continued.

On the topic of wideband MMF, Pete Anslow provided a brief summary of a similar discussion that occurred in the P802.3bs Task Force meeting this week. Chair noted that he would like to determine if the Task Force desires to accept the same approach or wait until P802.3bs settles. Chair opened the floor to hear feedback from participants.

There was a straw poll in regards to comments 175-180.

Straw poll #1: 2:42 p.m.

- I support:
 - A) following P802.3bs by the adoption into draft 1.1 of wideband MMF (TIA-492AAAE) as a supported medium
 - B) defer to draft 1.2
- A: 27 , B: 19

Chair summarized the results of Straw Poll #1 and noted that the editorial team has procedural guidance to resolve comments on the wideband MMF topic (comments # 175, 176, 177, 178, 179, 180).

Break at ~3:00 p.m. Resumed at ~3:35 p.m.

Chair noted comment resolution was suspended in order to take a motion from the floor.

Motion #3: 3:35 p.m.

- Move to
 - Include wideband MMF per TIA-492AAAE in IEEE P802.3cd Draft 1.1
- M: Steve Swanson
- S:
- Technical ($\geq 75\%$),
- Y: N: A:
- Results: fails due to a lack of a second

Pete Anslow made a request to have further discussion on wideband MMF take place in the P802.3bs MMF ad hoc rather than the P802.3cd ad hoc. Chair confirmed the guidance to the Task Force and suggested that an update might happen at a P802.3cd ad hoc meeting when there is more progress to report.

Comment resolution resumed.

Presentation #5:

“Addressing Delay, Skew, and Skew Variation”, Adele Ran and Matt Brown

See: http://www.ieee802.org/3/cd/public/Nov16/brown_3cd_03_1116.pdf

Comment resolution continued.

There was a request to pull comment #31 from the bucket to address IEEE 802.3 maintenance item #1283.

Chair outlined the plans for Thursday. Chair reminded participants of the 8:00 a.m. start time.

Chair asked participants to review the proposed responses for “bucket” worthy comments and notify the Chair, the Chief Editor and the Recording Secretary of any comments that should be address on the Task Force floor. The proposed responses to the bucket worthy will be adopted in motion during closing business.

Break for the day at ~6:05 p.m.

IEEE P802.3cd 50 Gb/s, 100 Gb/s, 200 Gb/s Ethernet Task Force – November 10, 2016:

Prepared by Kent Lusted

Meeting convened at ~8:00 a.m. by Mark Nowell, IEEE P802.3cd Task Force Chair.

Chair reviewed the plans for the day. Chair displayed the agenda presentation:

http://www.ieee802.org/3/cd/public/Sept16/agenda_3cd_01a_0916.pdf

Chair reminded participants to sign into the IEEE Meeting Attendance Tool and to sign the attendance book.

Chair displayed the liaison letters to the ITU and COBO:

(http://www.ieee802.org/3/cd/public/Nov16/IEEE_802d3_to_OIF_CEI_1116_draft.pdf and http://www.ieee802.org/3/cd/public/Nov16/IEEE_802d3_to_COBO_status_1116_draft.pdf)

Motion #4:

Move that the Task Force approve the text in IEEE_802d3_to_COBO_status_1116_draft.pdf with editorial license granted to the Chair (or his appointed agent) as an informal communication from the IEEE P802.3cd Task Force to COBO and approve the text in

IEEE_802d3_to_OIF_CEI_1116_draft.pdf with editorial license granted to the Chair (or his appointed agent) as an informal communication from the IEEE P802.3cd Task Force to OIF.

- M: Kent Lusted
- S: Tom McDermott
- Technical ($\geq 75\%$),
- Results: passes by voice without opposition – 8:09 a.m.

Chair asked participants to review the proposed responses for “bucket” worthy comments and notify the Chair, the Chief Editor and the Recording Secretary of any comments that should be address on the Task Force floor. The proposed responses to the bucket worthy will be adopted in motion during closing business.

Matt Brown outlined the comment resolution plans for the day. He asked that participants reviewed the proposed responses to their submitted comments, especially the comments with proposed accepts, in order to make efficient use of time.

Comment resolution resumed.

Matt Brown noted that due to time constraints that priority will be given to comments that were received on time over late comments.

Break at ~10:10 a.m. Resumed at ~10:25 a.m.

Presentation #6:

“Choosing COM Reference Package Impedance Based On Channel Driving Point Impedance”, Rich Mellitz

See: http://www.ieee802.org/3/cd/public/Nov16/mellitz_3cd_01_1116.pdf

- Clarifying questions were asked and answered.
- There was a request for supporting material on the COM computation.

Presentation #7:

“Variation of COM Parameters for Package Trace and Termination Resistance”, Yasuo Hidaka

See: http://www.ieee802.org/3/cd/public/Nov16/hidaka_3cd_01_1116.pdf

- Chair noted that the presentation was given twice in the ad hoc. Chair asked if the topic could be resolved today; there was feedback that it might be possible. Chair asked commenters to be brief. Chair asked if there was interest in continuing the investigation.
- Discussed the options on slide 18.

There was a request from Yasuo Hidaka for a straw poll to assess interest in progressing this work. Chair stated that time constraints prevent the straw poll. However, the Chair summarized that based on the questions/comments there is interest in the topic and appears to be interest to progress forward. It was requested that Yasuo Hidaka and Rich Mellitz work together to see if their work can result in a common proposal.

Chair provided some background and description of a motion from the floor that the Task Force was about to address. Chair explained that the normal Task Force process used by some Task Forces and planned to be used by P802.3cd in our work is to use a technical motion to gain a 75% approval of all the closed and bucket comments and to also gain approval to generate the next revision of the draft. There was a request from the floor for a separate motion specifically on the wideband MMF related comments #175-180 to elicit a technical 75% approval on those comments separately. Chair agreed to take the motion.

Chief Editor asked if the participants wanted to closed comment #140 without seeing the presentation noting that the presentation had been presented at the ad hoc and seems to have general consensus. There were comments but there was agreement to proceed without seeing the presentation.

In preparation of discussion on Motion #5, Chair showed the planned motion that the Task Force will consider if we were following normal practices. (Presented as Motion #7 later). The upcoming motion is based on a desire by an individual to specifically focus on a particular issue to assess Task Force support of including those closed comments into the draft. Chair noted that if the motion passes then we continue with our normal progress. If the motion fails, then the identified closed comments will not be included in Draft 1.1.

Pete Anslow asked that comments which fail should have a note in the database indicating such.

Motion #5: 11:30 a.m.

Move to:

- Approve the closed comments #175-180 for inclusion in D1.1
- M: Steve Swanson

- S: Rick Pimpinella
- Technical ($\geq 75\%$),

Discussion on the motion:

- Comments are referencing the new fiber type for wideband MMF.
- Chairs noted that if the motion passes, the comments are implemented. If the motion fails, then the comments will not be included Draft 1.1.
- There was strong objection from the floor to the use of this process as it sets a bad precedent on future comment resolution.

Motion 6: 11:39 a.m.

Move to table motion #5

- M: Paul Vanderlaan
- S: Rich Mellitz
- Procedural $>50\%$
- Y: 57 N: 0 A: 15
- Results: passes 11:40 a.m.

Attendance Straw Polls:

- I will attend the IEEE P802.3cd meetings at the January interim in Orange County, CA, USA (week of January 9, 2017)
 - P802.3cd: Y: 57 , M: 9
- I will attend the IEEE P802.3cd meetings at the March plenary in Vancouver, BC, Canada (week of March 12th, 2017)
 - P802.3cd: Y: 57 , M: 12

Comment resolution continued.

Motion #7:

Move to:

- Accept the proposed responses to comments listed in 8023cd_D10_comment_proposed_responses_bucket_list.pdf
- Generate Draft 1.1 for Task Force recirculation from Draft 1.0 and the closed comments
- M: Kent Lusted
- S: Matt Brown
- Technical ($\geq 75\%$),
- Y: 69 N: 0 A: 2
- Results: passes

Chair thanked editorial team again for their hard work to generate D1.0 and resolve comments.

Chair anticipates that D1.1 will be made available in December.

Motion #8:

Move to Adjourn:

- Moved by: Adee Ran
- Second by: Mike Dudek
- Passed by voice vote without opposition

Meeting ended at ~12:00 p.m.

Attendees

P802.3cd, November 2016			9-Nov-16	10-Nov-16
Last Name	First Name	Affiliation	Wednesday	Thursday
Abbott	Justin	Lumentum	x	x
Afifi	Emad	Gigpeak	X	X
Anslow	Pete	Ciena Corporation	x	x
Baden	Eric	Broadcom	x	x
Baldwin	Thananya	Ixia	x	x
Bar-Niv	Amir	Aquantia	x	x
Bietti	Ivan	Marvell Semiconductor	x	x
Booth	Brad	Microsoft	x	x
Braun	Ralf-Peter	Deutsche Telekom		x
Brooks	Paul	Viavi Solutions	x	x
Brown	Matt	Applied Micro	x	x
Butter	Adrian	Global Foundries	x	x
Chang	Frank	Inphi	X	X
Chen	David	Applied Optoelectronics	x	x
Cheng	Weiyang	Coriant	x	
Choudhury	G. Mabud	Commscope	x	
Cole	Chris	Finisar	x	
Coppinger	Fred	Samtec		X
Dawe	Piers	Mellanox	x	x
Dhingra	Sachin	Cadence	X	
Didde	Stephen	Keysight Technologies	X	
Dillard	John	MicroSemi	x	x
Donahue	Curtis	UNH-IOL		x
Dudek	Mike	Cavium	x	x
Dupuis	Mark	Web Industries	x	
Estes	Dave	Spirent Communications	x	x
Ewen	John	Global Foundries	x	x

Farjad	Ramin	Aquantia	x	x
Flatman	Alan	LAN Technologies	x	x
Fransen	Robert	Panduit Corp.	X	
Ghiasi	Ali	Ghiasi Quantum, Huawei	x	x
Gong	Zhigang	O-net	x	x
Gorshe	Steve	microsemi	x	x
Grow	Bob	RMG Consulting		x
Guo	Bujin	Applied Optoelectronics	X	X
Gustlin	Mark	Xilinx	x	x
Hashimoto	Tomohiro	Socionext	X	X
Hayakawa	Akinori	Fujitsu Laboratories		X
Healey	Adam	Broadcom Limited	x	x
Hegde	Raj	Broadcom	x	
Hess	Dave	Corddata	X	
Hidaka	Yasuo	Fujitsu Laboratories of America	x	x
Ishibe	Kazuhiko	Anristu	x	x
Isono	Hideki	Fujitsu Optical Components	x	x
Issenhuth	Tom	Microsoft	x	x
Jackson	Ken	Sumitomo	x	x
Johnson	John	Broadcom		x
Kareti	Upen Reddy	Cisco	x	x
Kawatsu	Yasuaki	Hitachi-Metals	x	x
Kimber	Mark	Semtech	x	x
Kirkland	William	Semtech	X	
Klempa	Mike	UNH-IOL		x
Lackner	Hans	QoSCom	x	x
Li	Mike	Intel	x	x
Lim	Jane	Cisco	x	x

Lingle, Jr.	Robert	OFS		x
Liu	Hai-Feng	Intel	x	x
Liu	Karen	?	X	X
Liu	Zhenyu	Credo Semiconductor		x
Lusted	Kent	Intel	x	x
Marris	Arthur	Cadence	x	x
Matoglu	Erdem	Amphenol	x	x
McClellan	Brett	Marvell Semiconductor	X	X
McDermott	Tom	Fujitsu	x	x
McDonough	John	NEC America	x	
Medina	Marcel	Spirent Communications	X	X
Mellitz	Richard	Samtec	x	x
Moritake	Toshiyuki	JAE	x	
Muir	Ron	JAE	x	
Nicholl	Gary	Cisco		x
Norimatsu	Takayasu	Hitachi	X	X
Nowell	Mark	Cisco	x	x
Ofelt	David	Juniper Networks		x
Palkert	Tom	Molex - MACOM	x	x
Pham	Phong	US Conec	x	x
Piehler	David	Dell EMC	X	X
Pimpinella	Rick	Panduit Corp.	x	x
Rabinovich	Rick	IXIA	x	x
Remein	Duane	Huawei		x
Rotolo	Salvatore	ST Microelectronics	x	x
Sakai	Toshiaki	Socionext	x	x
Sayre	Edward	Samtech LTD	x	x
Sedarat	Hossein	Aquantia		x
Shrikhande	Kapil	Innovium		x
Slavick	Jeff	Broadcom Limited	x	x
Sommers	Scott	Molex	x	x

Sone	Yoshiaki	NTT	x	x
Sparrowhawk	Bryan	Leviton	x	x
Stassar	Peter	Huawei	x	x
Stone	Rob	Broadcom	x	x
Swanson	Steve	Corning	x	x
Szczepanek	Andre	Inphi		x
Tailor	Bharat	Semtech Corp	x	
Takahara	Tomoo	Fujitsu Laboratories	x	x
Tamura	Kohichi	Oclaro	x	x
Toyserkani	Pirooz	Cisco	x	x
Traverso	Matt	Cisco	x	x
Trowbridge	Steve	Nokia	x	x
Ulrichs	Ed	Source Photonics	x	x
Umnov	Alexander	Fujitsu	x	
Wang	Roy	HPE	x	
Welch	Brian	Luxtera	x	x
White	Martin	Cavium	x	
Zambell	Andrew	Amphenol	x	
Zhang	Huanlin	Applied Optoelectronics	x	x
Zhang	Yuanbin	ZTE	x	x
Zivny	Pavel	Tektronix	x	x