

Approved Minutes

IEEE P802.3cd 50 Gb/s, 100 Gb/s, 200 Gb/s Ethernet Task Force

Plenary Meeting

March 5-6, 2018

Rosemont, IL, USA

Prepared by Kent Lusted and Mark Nowell

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IEEE P802.3cd 50 Gb/s, 100 Gb/s, 200 Gb/s Ethernet Task Force – March 5, 2018

Prepared by Kent Lusted

IEEE P802.3cd 50 Gb/s, 100 Gb/s, and 200 Gb/s Ethernet Task Force meeting convened at ~8:00 a.m., by Mark Nowell, Task Force Chair.

Chair welcomed attendees.

Introductions were made.

Chair reviewed agenda in http://www.ieee802.org/3/cd/public/Mar18/agenda_3cd_01_0318.pdf

Motion #1:

Move to approve the agenda:

- Moved by: Mike Dudek
- Second by: Rich Mellitz
- Passed by voice without opposition

Minutes were posted shortly after the January meeting. Chair asked if there was any feedback on the posted minutes. No one responded.

Motion #2:

Move to approve the January 2018 minutes:

- Moved by: Mike Dudek
- Second by: Pete Anslow
- 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 Meeting 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/Mar18/agenda_3cd_01_0318.pdf

Chair noted that there was a slide with a statement on the participation in IEEE 802 Meetings. Chair noted that by participating in the IEEE 802 meeting, that participants accept these requirements. Chair asked if there were questions about the participation requirements. No one responded.

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 were no liaison letters received.

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

Chair reviewed the adopted objectives.

Chair reviewed the adopted timeline and the current timeline. The P802.3cd draft may need to be left open in order to implement editorial changes to align with IEEE 802.3cj Revision project. Chair noted that the discussion will continue in future meetings to determine the best course of action.

Chair reviewed the D3.1 recirculation Sponsor Ballot results.

Goals for the meeting:

- Comment Resolution
- Review Technical presentations
- Generate D3.2

Chair reviewed the meeting logistics. There will be a break for the opening plenary at 10 a.m. The Task Force will operate in tracks in order to complete comment resolution. Evening work may be needed to complete the comment agenda.

Chair noted that the hot topics in Draft 3.1 were TDECQ and ERL.

Chair reviewed the meeting agenda.

There were 2 late requests from Adee Ran and Frank Chang. Adee prepared a working document for reference during comment resolution. Frank Chang had a TDECQ update. Chair asked if there was opposition to hearing these presentations. No one responded.

Chair also noted that several presentations were updated and posted to the website. There was a comment to fix a few URL links on the website.

Future Meetings:

- May 2018 interim
 - Week of May 21, 2018 – Pittsburgh, PA, USA
- July 2018 Plenary
 - Week of July 8, 2018 – San Diego, CA, USA

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

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

“802.3cd Task Force Ad-hoc report”, Kent Lusted

See: http://www.ieee802.org/3/cd/public/Mar18/lusted_3cd_01_0318.pdf

- Tentatively expect calls to resume on March 21, 2018. Announcement will be made over the email reflector.

Presentation #1:

“Chief Editor’s Report”, Matt Brown

See: http://www.ieee802.org/3/cd/public/Mar18/brown_3cd_01_0318.pdf

- Chief Editor thanked the editors and advisors for their efforts to review and produce the draft.
- Chief Editor noted that a number of comments were related to aligning the draft to changes made in the P802.3cj Revision project.

Presentation #2:

“Comment Agenda”, Matt Brown

See: http://www.ieee802.org/3/cd/public/Mar18/brown_3cd_02_0318.pdf

- Matt reviewed the list of comments considered “bucket” worthy. (see: http://www.ieee802.org/3/cd/comments/8023cd_D31_comment_proposed_responses_bucket_list.pdf)
- Matt asked participants to review the proposed responses for the “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 unresolved bucket comments will be adopted in a motion during closing business.

Matt Brown reviewed the tentative plan for comment resolution.

Chair thanked the editors and advisors for their efforts to review and produce the draft.

There was a request to remove comment #r01-21 from the bucket. The deadline for pulling comments from the bucket was announced to be no later than noon Tuesday.

Comment resolution began at ~9:00 a.m.

Chair noted that the bucket list pdf was posted to the website. See http://www.ieee802.org/3/cd/comments/8023cd_D31_comment_proposed_responses_bucket_list.pdf

Chair noted that the Task Force will resume at 1 p.m. as a common group before going to tracks.

Break at ~9:45 a.m. Resumed at ~1:00 p.m.

Chair asked participants to review the proposed responses for the “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 unresolved bucket comments will be adopted in a motion during closing business.

Chair reviewed the plans for tracks.

Matt Brown noted that there was a request to pull comment #r01-11, #r01-12, and #r01-18 from the bucket list.

In regards to comment #54, Matt asked for a show of hands in favor of changing the jitter specification. Three people indicated. Matt asked for a show of hands in opposition to changing the jitter specification; most of the room indicated. Matt concluded that there was no

support to change the jitter specification and that a note in the specification was the suggested path forward.

Chair asked participants to review the proposed responses for the “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 unresolved bucket comments will be adopted in a motion during closing business.

After break, the Task Force will resume in tracks. Chair noted that the start time for Tuesday was 8:00 a.m.

Break at ~3:00 p.m.

Electrical Track

By Kent Lusted

Resumed at ~3:30 p.m. in Grand Ballroom GH by Kent Lusted. There were approximately 36 people in the room.

Presentation #ET-1:

“Can ERL replace SNRisi for 50GBASE-CR(updated)?”, Mike Dudek

See: http://www.ieee802.org/3/cd/public/Mar18/dudek_3cd_01_0318.pdf

- Clarifying questions were asked and answered

Presentation #ET-2:

“Transmitter Specifications for CI137”, Alexander Rysin

See: http://www.ieee802.org/3/cd/public/Mar18/rysin_3cd_01_0318.pdf

- Clarifying questions were asked and answered

Presentation #ET-3:

“ERL Results for 50GBASE-KR”, Alexander Rysin

See: http://www.ieee802.org/3/cd/public/Mar18/rysin_3cd_02_0318.pdf

- Clarifying questions were asked and answered

Kent asked participants to review the proposed responses for the “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 unresolved bucket comments will be adopted in a motion during closing business.

Kent reminded participants to sign the attendance book.

Presentation #ET-4:

“ERL Measured Results for 50G-KR Device”, Toshiaki Sakai

See: http://www.ieee802.org/3/cd/public/Mar18/sakai_3cd_01_0318.pdf

- Clarifying questions were asked and answered

Presentation #ET-5:

“Observations and inputs with regard to ERL in 802.3cd ”, Nathan Tracy

See: http://www.ieee802.org/3/cd/public/Mar18/tracy_3cd_01a_0318.pdf

- Clarifying questions were asked and answered

Presentation #ET-6:

“Summary of ERL, SNR_ISI, and RL comment recommendations ”, Rich Mellitz

See: http://www.ieee802.org/3/cd/public/Mar18/mellitz_3cd_01_0318.pdf

- Clarifying questions were asked and answered

Reviewed comment and proposed response summary prepared by Adee Ran. See:

http://www.ieee802.org/3/cd/public/Mar18/ran_3cd_01_0318.pdf

Straw Poll #ET1:

I support the following:

- A. ERL normative, no RL spec
- B. ERL normative, RL informative
- C. ERL normative, RL normative
- D. ERL informative, RL normative (i.e. Draft 3.1)
- E. ERL deleted. RL normative (i.e. Draft 3.0)

(Chicago Rules): A: 15. B: 21 C: 0 D: 8 E: 0

Kent Lusted noted a start of 8:00 a.m. on Tuesday morning.

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

Optical Track

By Mark Nowell
Started at ~3:20 p.m.

The optical track started in the O'Hare BC room. There were approximately 25 people in the room.

Presentation #OT-1:

"Refining TDECQ", Piers Dawe

See: http://www.ieee802.org/3/cd/public/Mar18/dawe_3cd_01a_0318.pdf

- Presentation looks at whether 0, 1 and 2 precursors are all desirable in a reference equalizer used for TDECQ measurements
- Simulations presented arguing that reference receiver could be simplified for SMF

Presentation #OT-2:

"In Response to TDECQ/SECQ Questions for Threshold Adjustments and Proposed Changes (comments r01-98, r01-104, r01-99, r01-103, r01-102, r01-97)", Frank Chang

See: http://www.ieee802.org/3/cd/public/Mar18/chang_3cd_01b_0318.pdf

- Presented supporting evidence for their comments proposing an adjustable threshold adjustments for TDECQ methodology

Chair commented that the Task Force needs to make a decision on whether to include threshold adjustment at this meeting. This will be probably last chance. There has been considerable discussion for many meeting cycles now. The Task Force is creating D3.2 after this meeting and time will likely not be available to continue to try and build consensus to make a change after this meeting.

Presentation #OT-3:

"TDECQ Updates", Jonathan King

See: http://www.ieee802.org/3/cd/public/Mar18/king_3cd_01a_0318.pdf

- Presented concerns with including threshold adjustments for TDECQ

Presentation #OT-4:

"TDECQ Update", Frank Chang

See: http://www.ieee802.org/3/cd/public/Mar18/chang_3cd_02_0318.pdf

- Presented more data in response to previous presentation
- Continued support for adding threshold adjustment for TDECQ

Meeting break @ ~6:00pm

IEEE P802.3cd 50 Gb/s, 100 Gb/s, 200 Gb/s Ethernet Task Force – March 6, 2018

Prepared by Kent Lusted and Mark Nowell

Electrical Track

By Kent Lusted

Resumed at ~8:10 a.m. in Grand Ballroom H by Kent Lusted. There were approximately 30 people in the room.

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

Kent asked participants to review the proposed responses for the “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 unresolved bucket comments will be adopted in a motion during closing business.

Matt Brown reviewed the plans to resolve the remaining comments.

Continued review and discussion of comment and proposed response summary prepared by Adee Ran. See: http://www.ieee802.org/3/cd/public/Mar18/ran_3cd_01_0318.pdf

Straw Poll #ET2:

I would support adding an editor’s note to retain the informative RL specification under review.
Y: 9, N: 10

Straw Poll #ET3:

I would support:

- A. Make ERL normative. Remove RL specification
- B. Make ERL normative, make RL specification informative

A: 21. B: 10

Break at ~10:00 a.m. Resumed at ~10:30 a.m.

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

Kent asked participants to review the proposed responses for the “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 unresolved bucket comments will be adopted in a motion during closing business.

Completed review of consensus document dudek_3cd_02_0318.

Comment resolution resumed.

Kent made a final call for comments to be pulled from the bucket. No one responded. Kent noted that the remaining bucket comments would adopt the proposed responses during motions in the closing business.

Break at ~12:05 p.m. Resumed at ~1:20 p.m.

Comment resolution continued.

Straw Poll #ET4:

(see comment #r01-27 in the comment database)

I support adding the ERL specifications to Annexes 135D, 135E, 135F or 135G.

Y: 3, N: 17

Matt Brown asked if there was objection to resolving the 2 late comments. No one objected.

Comment resolution finished.

Mark Nowell noted that there was a request by Tom Palkert to liaise a draft of P802.3cd to the T11. There will be a liaison letter for review and approval after the break. Reviewed http://www.ieee802.org/3/cd/public/Mar18/IEEE_802d3cd_to_T11_CEI_0318_liaison_draft.doc
[CX](#)

Break at ~3:00 p.m. End of track.

Optical Track

By Mark Nowell

Meeting resumed Tuesday March 6th @ ~8:10 am

The optical track started in the LAX room. There were approximately 50 people in the room.

Discussed the path forward to resolve TDECQ comments. Plan was to assess consensus on whether we make a change or not and then focus in on what the change would be assuming there was interest to make a change.

Strawpoll #OT1

I support modifying the TDECQ test methodology to allow threshold adjustment

Yes: 20 No:17

Strawpoll #OT2

I would support setting a max limit on threshold adjustment to:

A.2% of OMAouter

B.1.5% of OMAouter

C.1% of OMAouter

D.0.5% of OMAouter

A: 10 B: 0 C: 21 D:2

Comment resolution begins.

Break @ ~10:05 a.m. Resumed @ ~10:30 a.m.

Discussion on whether TDECQ comments would be closed with only the modifications as per the straw polls (i.e. just the max variable threshold adjustment amount) or whether the TF would work in the meeting to propose additional modifications such as the TDECQ penalty and the associated changes that would follow. It will take time to figure out what the consensus modifications. Chair clarified that the threshold adjustment changes will go into the draft as a consequence of the previous straw poll and that these additional changes to TDECQ would be considered in-scope for the next recirculation.

Comment #74 Withdrawn by Piers Dawe

Comment #78 Withdrawn by Piers Dawe

Break for lunch @ ~12pm. Resumed meeting @ ~1:15 p.m.

Update from Jonathan King who had met with some key stakeholders over lunch to see whether there was consensus on the need to make any additional changes at this time. The summary was that there would be no additional changes proposed against the TDECQ comments at this time and the various stakeholders would work offline before the next Interim meeting to submit any comments to propose additional modifications.

Comment #75 was withdrawn by Piers Dawe

Optical track finished at 1:45 p.m.

Resumed at ~3:20 p.m. as a single task force.

Chair noted there was a new liaison letter proposed for the OIF. and displayed it. (see: http://www.ieee802.org/3/cd/public/Mar18/IEEE_8023_to_OIF_CEI_0318_liaison.docx) Chair asked if there was feedback. No one responded.

Motion #3:

Move that the Task Force approve the text in:

- IEEE_802d3cd_to_T11_CEI_0318_liaison_draft.docx with editorial license granted to the Chair (or his appointed agent) as a liaison to T11
- IEEE_802d3cd_to_OIF_CEI_0318_liaison_draft.docx with editorial license granted to the Chair (or his appointed agent) as a liaison to OIF

M: Tom Palkert

S: Mike Dudek

Procedural (>50%)

Results: passed by voice vote without opposition

Motion #4:

Move to:

- Accept the proposed responses to any unresolved comments listed in 8023cd_D31_comment_proposed_responses_bucket_list.pdf
- Generate Draft 3.2 from Draft 3.1 and closed comments

M: Matt Brown

S: Mike Dudek

Technical (>=75%),

Results: passed by voice without opposition

Chair noted that the Draft 3.2 will be prepared and posted in the coming weeks. The Sponsor Ballot will be opened with a delay after posting to enable participants to use the draft for technical work prior to submitting comments.

Chair noted that there might be a special interim between May and July meetings to progress the draft towards closure.

Chair noted that the D3.2 sponsor ballot recirculation might be delayed after the draft's availability in order to provide time for people to review changes and perform any experimental verification they may need to do before needing to submit comments.

Robert Lingle noted that the NGMMF Study Group will start shortly after the P802.3cd meeting closes in the LAX conference room.

Motion #5:

Move to Adjourn:

- Moved by: Mike Dudek
- Second by: Dave Malicoat
- Passed by voice vote without opposition

Meeting ended at ~3:30 p.m.

Attendees

P802.3cd, March 2018			5-Mar-18	6-Mar-18
Last Name	First Name	Affiliation	Monday	Tuesday
Abbott	John	Corning		x
Anslow	Pete	Ciena Corporation	x	x
Baca	Rich	Microsoft	x	x
Baldwin	Thananya	Keysight Technologies	x	
Ben Artsi	Liav	Marvell Semiconductor	x	x
Bernstein	Gary	Leviton		x
Braun	Ralf-Peter	Deutsche Telekom	x	x
Brooks	Paul	Viavi Solutions	x	x
Brown	Matt	MACOM	x	x
Burrell	Gary	Elenion Technologies	x	
Butter	Adrian	Global Foundries	x	x
Calvin	John	VTM	x	x
Carlson	Craig	Cavium		x
Chalupsky	David	Intel		x

Chang	Frank	Inphi	x	x
Chen	C. C. David	Applied Optoelectronics	x	x
Choudhury	G. Mabud	OFS	x	x
Dawe	Piers	Mellanox	x	x
DiMinico	Christopher	MC Communications/Panduit	x	x
Djahanshahi	Hormoz	microsemi	x	x
Dudek	Mike	Cavium	x	x
Ewen	John	Global Foundries	x	x
Ferretti	Vince	Corning	x	
Fukutoku	Mitsunori	NTT	x	x
Ghiasi	Ali	Ghiasi Quantum, Huawei	x	x
Goergen	Joel	Cisco	x	
Gong	Zhigang	O-net	x	
Gorshe	Steve	microsemi	x	
Hajduczenia	Marek	Charter	x	
Hayakawa	Akinori	Fujitsu Laboratories	x	x
Haynes	Hayden	UNH-IOL	x	x

Healey	Adam	Broadcom Limited	x	x
Heck	Howard	Intel	x	x
Hegde	Raj	Broadcom	x	
Holden	Brian	Kandou Bus	x	x
Horner	Rita	Synopsys	x	x
Isono	Hideki	Fujitsu Optical Components	x	x
Issenhuth	Tom	Huawei	x	x
Jackson	Ken	Sumitomo	x	x
Johnson	John	Broadcom	x	
Kabra	Lokesh	Synopsys	x	
Kao	Chien-Ping	Intel	x	x
Kareti	Upen Reddy	Cisco	x	
Kim	Andrew	Spectra7	x	x
Kimber	Mark	Semtech	x	
Kipp	Scott	Brocade	x	
Kiuchi	Hideki	JAE	x	x
Kochuparambil	Beth	Cisco	x	
Kolesar	Paul	CommScope	x	
Lapak	Jeff	UNH-IOL		x
Law	David	HPE		x

LeCheminant	Greg	Keysight Technologies	x	x
Lee	JuneHee	Samsung	x	x
Lewis	Jon	Dell	x	
Li	Mike	Intel	x	
Lim	Jane	Cisco	x	x
Lingle, Jr.	Robert	OFS	x	x
Liu	Karen	Kaiam	x	x
Liu	Zhenyu	Credo Semiconductor	x	x
Lusted	Kent	Intel	x	x
Maki	Jeffery	Juniper Networks	x	x
Malicoat	David	Senko/Aquantia	x	
Marques	Flavio	Furukawa	x	
Matoglu	Erdem	Amphenol	x	x
Mazzini	Marco	Cisco	x	x
McMillan	Larry	Western Digital	x	
McSorley	Greg	Amphenol		x
Mein	John	Dust Photonics	x	
Mellitz	Richard	Samtec	x	x
Moritake	Toshiyuki	JAE	x	x

Nakamoto	Edward	Spirent Communications	x	x
Neveux	Paul	Superior Essex	x	x
Nolan	John	QLogic	x	x
Nordin	Ron	Panduit Corp.	x	
Nowell	Mark	Cisco	x	x
Pachon	Arturo	TE Connectivity	x	
Palkert	Tom	Molex - MACOM	x	x
Pepper	Gerald	Keysight Technologies	x	
Pham	Phong	US Conec	x	x
Piehler	David	Dell EMC	x	
Pimpinella	Rick	Panduit Corp.	x	x
Pondillo	Peter	Corning	x	x
Pozzebon	Dino	microsemi	x	x
Rabinovich	Rick	Keysight Technologies	x	x
Rechtman	Zvi	Mellanox	x	x
Ressl	Mike	Hitachi Cable America	x	x
Rotolo	Salvatore	ST Microelectronics	x	x

Rysin	Alexander	Mellanox	x	x
Sakai	Toshiaki	Socionext	x	
Samamra	Raed	Prysmian Group	x	x
Sambasivan	Sam	AT&T	x	
Santalli	Jennifer	IEEE-SA		x
Sayre	Edward	Samtec	x	x
Sekel	Steve	Keysight Technologies	x	x
Shirao	Mizuki	Mitsubishi Electric		x
Slavick	Jeff	Broadcom Limited	x	x
Sommers	Scott	Molex	x	x
Sprague	Ted	Infinera	x	
Stassar	Peter	Huawei	x	x
Sun	Liyang	Huawei	x	
Tailor	Bharat	Semtech Corp		x
Takahara	Tomoo	Fujitsu Laboratories	x	x
Tooyserkani	Pirooz	Cisco	x	x
Tracy	Nathan	TE Connectivity	x	
Trowbridge	Steve	Nokia	x	x
Tseng	Tachin	Realtek	x	

Ulrichs	Ed	Source Photonics	x	x
Vitali	Marco	Sicoya	x	x
Wang	Roy	HPE	x	x
Wen	Yida	Huawei	x	
White	Martin	Cavium	x	x
Withey	James	Fluke	x	
Xu	Li	Huawei	x	
Xu	Yu	Huawei	x	x
Yamamoto	Shuto	NTT	x	x
Young	Adrian	Leviton		x
Young	James	Commscope	x	x
Zambell	Andrew	Amphenol	x	x
Zhang	Kevin	IDT	x	x
Zhang	Yun	Huawei	x	
Zivny	Pavel	Tektronix	x	x