

Approved Minutes  
**IEEE P802.3cd 50 Gb/s, 100 Gb/s, 200 Gb/s Ethernet Task Force**  
Plenary Meeting  
March 13-14, 2017  
Vancouver, BC, Canada  
Prepared by Kent Lusted

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## **IEEE P802.3cd 50 Gb/s, 100 Gb/s, 200 Gb/s Ethernet Task Force – March 13, 2017**

*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 Kent Lusted.

Mr. Lusted welcomed attendees. Mr. Lusted announced that he was the appointed IEEE 802.3cd Task Force Chair for the week due to Mark Nowell's absence.

Chair reviewed agenda in [http://www.ieee802.org/3/cd/public/Mar17/agenda\\_3cd\\_01\\_0317.pdf](http://www.ieee802.org/3/cd/public/Mar17/agenda_3cd_01_0317.pdf)

### **Motion #1:**

Move to approve the agenda:

- Moved by: Thananya Baldwin
- Second by: Adee Ran
- Passed by voice without opposition

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

### **Motion #2:**

Move to approve the January 2017 minutes:

- Moved by: Thananya Baldwin
- Second by: Pavel Zivny
- Passed by voice without opposition

Introductions were made.

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/Mar17/agenda\\_3cd\\_01\\_0317.pdf](http://www.ieee802.org/3/cd/public/Mar17/agenda_3cd_01_0317.pdf)

Chair noted that there was a new slide with a statement on the participation in IEEE 802 Meetings.

**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/mar17/incoming/OIF\\_to\\_IEEE\\_P802d3bs\\_cd\\_Feb\\_2017.pdf](http://www.ieee802.org/3/minutes/mar17/incoming/OIF_to_IEEE_P802d3bs_cd_Feb_2017.pdf) ) Mike Dudek noted that the OIF would appreciate a response. Chair agreed to work offline with John D'Ambrosia and Mike Dudek to provide a response for consideration by the Task Force.

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

Chair reviewed the adopted objectives.

Chair reviewed the adopted timeline.

The technical presentations will be addressed during comment resolution.

Goals for the meeting:

- Comment Resolution
- Review Technical presentations
- Generate Draft 1.3

Chair reviewed the meeting agenda and noted that tutorials on Monday evening prevent the Task Force from running late on Monday. The Task Force will run late Tuesday night and will likely overlap with other scheduled IEEE 802.3 meetings.

Chair noted that the 3 new proposed MDI interfaces will be discussed Tuesday after lunch.

Future Meetings:

- May 2017 Interim

- Week of May 22, 2017 – New Orleans, LA
- July 2017 Plenary
  - Week of July 20, 2017 – Berlin, Germany
- Sept 2017 Interim
  - Week of September 11, 2017 – NA location

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/Mar17/lusted\\_3cd\\_01\\_0317.pdf](http://www.ieee802.org/3/cd/public/Mar17/lusted_3cd_01_0317.pdf)

- Calls to resume on March 29<sup>th</sup>, 2017

**Presentation #1:**

“Chief Editor’s Report”, Matt Brown

See: [http://www.ieee802.org/3/cd/public/Mar17/brown\\_3cd\\_01a\\_0317.pdf](http://www.ieee802.org/3/cd/public/Mar17/brown_3cd_01a_0317.pdf)

**Presentation #2:**

“Comment Agenda”, Matt Brown

See: [http://www.ieee802.org/3/cd/public/Mar17/comment\\_agenda\\_march\\_2017.pdf](http://www.ieee802.org/3/cd/public/Mar17/comment_agenda_march_2017.pdf)

- Matt reviewed the list of comments considered “bucket” worthy. (see: [http://www.ieee802.org/3/cd/comments/8023cd\\_D12\\_comment\\_proposed\\_responses\\_bucket\\_list.pdf](http://www.ieee802.org/3/cd/comments/8023cd_D12_comment_proposed_responses_bucket_list.pdf) )
- 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 motion during closing business.

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 unresolved bucket comments will be adopted in a motion during closing business.

Chair noted that a late presentation from Greg McSorely entitled “OSFP MDI proposal” was received. Chair asked if there was objection to hearing the presentation. No one responded.

Pete Anslow noted that the comment agenda was not posted to the Task Force website. Chair noted that it was a mistake and the comment agenda will be posted as soon as possible.

Chair announced that the webpage was updated with the comment agenda.

Comment resolution began.

Chair noted that a presentation from Matt Traverso entitled “Proposed modifications to 100GBASE-DR Support for comments #120-126” was received on time but was not posted due to a communication issue. It was posted to the Task Force meeting website. No one responded.

Chair noted that the meeting will resume at 1:00 p.m. for more comment resolution before breaking into tracks for the remainder of the afternoon.

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

Chair noted that the Task Force will break into two tracks. The optical track will be in the Boardroom and lead by Peter Stassar and Jonathan King. The electrical track will be in the British Columbia room lead by Adee Ran and Matt Brown.

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 unresolved bucket comments will be adopted in a motion during closing business. (see: [http://www.ieee802.org/3/cd/comments/8023cd\\_D12\\_comment\\_proposed\\_responses\\_bucket\\_list.pdf](http://www.ieee802.org/3/cd/comments/8023cd_D12_comment_proposed_responses_bucket_list.pdf) )

Chair noted that a late presentation from Greg McSorely with supporting material for the OSFP MDI proposal was received. Chair asked if there was objection to hearing the presentation. No one responded.

Chair noted that the 3 new proposed MDI interfaces will be discussed Tuesday after lunch.

Chair noted that there is a hard stop at 6:00 p.m. Monday night due to evening tutorials.

At ~1:10pm, the Task Force went to separate tracks.

***Optical track minutes:***

Comment resolution on Clause 138, 139, 140.

**Presentation #3:**

“Proposed modifications to 100GBASE-DR (Support for comments #120-126)”, Gary Nicholl  
See: [http://www.ieee802.org/3/cd/public/Mar17/traverso\\_3cd\\_01\\_0317.pdf](http://www.ieee802.org/3/cd/public/Mar17/traverso_3cd_01_0317.pdf)

Break at ~3:00 p.m. Resume ~3:40 p.m.

**Presentation #4:**

“Tx ‘OFF’ specs (comment 129, 130)”, Jonathan King  
See: [http://www.ieee802.org/3/cd/public/Mar17/king\\_3cd\\_01\\_0317.pdf](http://www.ieee802.org/3/cd/public/Mar17/king_3cd_01_0317.pdf)

**Presentation #5:**

“50GBASE-FR and 100GBASE-DR, ER and MPI (Comment 138, 139)”, Jonathan King

See: [http://www.ieee802.org/3/cd/public/Mar17/king\\_3cd\\_02\\_0317.pdf](http://www.ieee802.org/3/cd/public/Mar17/king_3cd_02_0317.pdf)

**Presentation #6:**

“50GBASE-FR and 100GBASE-DR, RIN specs (Comment 140, 141)”, Jonathan King

See: [http://www.ieee802.org/3/cd/public/Mar17/king\\_3cd\\_03\\_0317.pdf](http://www.ieee802.org/3/cd/public/Mar17/king_3cd_03_0317.pdf)

Optical track completed comment resolution at ~5:50 p.m.

**Electrical track:**

Comment resolution

Break at ~3:15 p.m. Resume at ~3:45 p.m.

Chair noted that the optical track completed comment resolution. The updated responses will be posted to the website tonight for participant review. If there is a comment that was closed in a track that should be addressed by the broader Task Force, please notify the Chair and the Chief Editor.

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 unresolved bucket comments will be adopted in a motion during closing business.

Chair reminded participants of the 8:00 am start in the “British” conference room (Fairmont).

Chair noted that the 3 new proposed MDI interfaces will be discussed Tuesday after lunch.

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

## **IEEE P802.3cd 50 Gb/s, 100 Gb/s, 200 Gb/s Ethernet Task Force – March 14, 2017**

*Prepared by Kent Lusted*

Meeting convened at ~8:00 a.m. by Kent Lusted.

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

[http://www.ieee802.org/3/cd/public/Mar17/agenda\\_3cd\\_01\\_0317.pdf](http://www.ieee802.org/3/cd/public/Mar17/agenda_3cd_01_0317.pdf)

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

The updated responses were posted to the website for participant review. If there is a comment that was closed in a track that should be addressed by the broader Task Force, please notify the Chair and the Chief Editor.

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 unresolved bucket comments will be adopted in a motion during closing business. (see: [http://www.ieee802.org/3/cd/comments/8023cd\\_D12\\_comment\\_proposed\\_responses\\_bucket\\_list.pdf](http://www.ieee802.org/3/cd/comments/8023cd_D12_comment_proposed_responses_bucket_list.pdf) )

Chair noted that the 3 new proposed MDI interfaces will be discussed Tuesday after lunch. Plans discussion and straw polls on the subject.

Chair noted that a response to OIF will be reviewed during closing business for consideration by the Task Force.

Matt Brown announced that a logic focused track will occur in the Boardroom (Fairmont) after the morning break to address comments #30, 33, 31, 149, 86, 151, 87, 88, 150, 152, and 81. Chair asked if there was objection to the break out. No one responded.

### **Presentation #7:**

“Interaction of package parameters”, Yasuo Hidaka

See: [http://www.ieee802.org/3/cd/public/Mar17/hidaka\\_3cd\\_01a\\_0317.pdf](http://www.ieee802.org/3/cd/public/Mar17/hidaka_3cd_01a_0317.pdf)

- Clarifying questions were asked and answered.

Chair noted that he received a late presentation request from Pete Anslow in regards to comment #30 for the logic track. Chair asked if there was opposition to hearing the presentation. No one responded.

Chair noted that the updated presentation from Yasuo Hidaka was posted to the website.

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

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 unresolved bucket comments will be adopted in a motion during closing business.

**Straw Poll #1:**

See comment #145 for the details

**Straw Poll #2:**

See comment #145 for the details

Break at ~10:10 a.m. Resume at ~10:30 a.m.

***Logic track minutes:***

Resume at ~10:30 a.m.

Comment resolution

Break for lunch at ~12:20 p.m.

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

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 unresolved bucket comments will be adopted in a motion during closing business.

Comment resolution continued.

Chair noted that the 3 new proposed MDI interfaces will be discussed after lunch. Plans discussion and straw polls on the subject.

Chair noted that he received a late contribution with text related to the proposed MDIs. It was posted to the website.

Break at ~12:00 p.m. Resume at ~1:10 p.m.

Chair outlined the plans for the day: discuss MDI proposals, finish resolving comments, discussed resolved comments from other tracks, then closing business.

Chair noted that the NEA meeting is scheduled for Tuesday evening, 7-10pm. Chair asked for a show of hands from participants interested in the NEA meeting. Most of the room indicated.



Chair asked for a show of hands from participants that want a dinner break before the NEA meeting. Most of the room indicated.

Chair opened the floor to discussion on adopting the 3 proposed MDIs. There was opposition to having discussion on the proposed MDIs without having seen the presentations in the Task Force meeting.

**Presentation #8:**

“QSFP-DD MDI overview (re: comment 83)”, Tom Palkert

See: [http://www.ieee802.org/3/cd/public/Mar17/palkert\\_3cd\\_01\\_0317.pdf](http://www.ieee802.org/3/cd/public/Mar17/palkert_3cd_01_0317.pdf)

- Clarifying questions were asked and answered.

**Presentation #9:**

“MDI Proposal for P802.3cd (re: comment 106)”, Nathan Tracy

See: [http://www.ieee802.org/3/cd/public/Mar17/tracy\\_3cd\\_01a\\_317.pdf](http://www.ieee802.org/3/cd/public/Mar17/tracy_3cd_01a_317.pdf)

- Clarifying questions were asked and answered

**Presentation #10:**

“OSFP MDI Proposal”, Greg McSorley

See: [http://www.ieee802.org/3/cd/public/Mar17/mcsorley\\_3cd\\_01a\\_0317.pdf](http://www.ieee802.org/3/cd/public/Mar17/mcsorley_3cd_01a_0317.pdf)

- Clarifying questions were asked and answered

Chair asked if there was opposition to adopting the 3 proposed MDIs. There was discussion on the various proposals. Chair asked again if there was opposition to adopting all 3 proposed MDIs. There was opposition. Chair displayed straw poll #3.

**Straw Poll #3:**

I would support adopting all 3 of the proposed MDIs (QSFP-DD, OSFP, micro QSFP)

- Yes
- No
- Abstain:
- Y: 66 N: 0 A: 16

**Presentation #11:**

“Proposed MDI text”, Tom Palkert

See: [http://www.ieee802.org/3/cd/public/Mar17/palkert\\_3cd\\_04\\_0317.pdf](http://www.ieee802.org/3/cd/public/Mar17/palkert_3cd_04_0317.pdf)

- Reviewed the proposed text and noted changes.

Break at ~3:10 p.m. Resume at ~3:30 p.m.

Chair noted that there were ~50 comments remaining to resolve before the end of the meeting. At the current pace, the meeting will overlap with the NEA meeting.

Continued review of Proposed MDI text. The changes were saved as palkert\_3cd\_04a\_0317.pdf. (see [http://www.ieee802.org/3/cd/public/Mar17/palkert\\_3cd\\_04a\\_0317.pdf](http://www.ieee802.org/3/cd/public/Mar17/palkert_3cd_04a_0317.pdf))

Comment #136 was withdrawn by Jonathan King.

Chief Editor noted that all comments were closed, except the bucket. There were no requests to pull comments from the bucket worthy list.

There was a request to discuss the resolved response to comment #213 from the optical track. Chair asked if there were any others to discussion. No other comments were requested. Discussed #213 and no change was made.

Room count is ~41 people.

### **Motion #3:**

Move to:

- Accept the proposed responses to any unresolved comments listed in 8023cd\_D12\_comment\_proposed\_responses\_bucket\_list.pdf
  - Generate Draft 1.3 for Task Force recirculation from Draft 1.2 and the closed comments
  - Pre-submit Draft 1.3 to IEEE 802.3 in anticipation of requesting WG Ballot in May 2017
- M: Matt Brown
  - S: Adee Ran
  - Technical ( $\geq 75\%$ ),
  - Results: passed by voice without opposition!

Chair displayed the liaison letter to the OIF. Changes were made and saved as v2. (See [http://www.ieee802.org/3/cd/public/Mar17/IEEE\\_802d3cd\\_to\\_OIF\\_CEI\\_0317\\_liaison\\_v2.pdf](http://www.ieee802.org/3/cd/public/Mar17/IEEE_802d3cd_to_OIF_CEI_0317_liaison_v2.pdf))

### **Motion #4:**

Move that the IEEE P802.3cd Task Force approve with editorial license granted to the IEEE 802.3 WG Chair (or his appointed agent) the text in “IEEE\_802d3\_to\_OIF\_CEI\_0317\_liaison\_v2.pdf” as a liaison to OIF

- M: Pete Anslow
- S: Steve Trowbridge
- Technical ( $\geq 75\%$ ),
- Results: passed by voice without opposition

### **Motion #5:**

Move to Adjourn:

- Moved by: Steve Trowbridge
- Second by: Peter Stassar
- Passed by voice vote without opposition

Meeting ended at ~6:00 p.m.

## Attendees

P802.3cd, March 2017			13-Mar-17	14-Mar-17
Last Name	First Name	Affiliation	Monday	Tuesday
Anslow	Pete	Ciena Corporation	X	X
Baden	Eric	Broadcom	X	X
Baldwin	Thananya	Ixia	X	
Beadoin	Denis	TI	X	
Booth	Brad	Microsoft	X	
Bouda	Martin	Fujitsu	X	X
Braun	Ralf-Peter	Deutsche Telekom	X	X
Brown	Matt	MACOM	X	X
Butter	Adrian	Global Foundries	X	X
Cady	Ed	Luxshare	X	X
Chalupsky	David	Intel	X	X
chang	Jacky	HPE	X	X
Chen	David	Applied Optoelectronics	X	X
Chen	Jay	Maxlinear	X	
Choudhury	G. Mabud	OFS		X
Chuang	Keng Hua	HPE	X	X
Cober	Donald	Comira		X
Coenen	Robert	Advantage Optics	X	
Cole	Chris	Finisar	X	X
Dawe	Piers	Mellanox	X	X
DiMinico	Christopher	MC Communications/Panduit		X
Djahanshahi	Hormoz	microsemi	X	X
Ellison	Jason	the Siemon Company	X	X

P802.3cd, March 2017			13-Mar-17	14-Mar-17
Last Name	First Name	Affiliation	Monday	Tuesday
Estes	Dave	Spirent Communications	x	x
Ewen	John	Global Foundries	x	x
Gong	Zhigang	O-net	x	
Gorshe	Steve	microsemi	x	
Guckenberger	Drew	Luxtera	x	x
Gustlin	Mark	Xilinx	x	
Hashimoto	Tomohiro	Socionext	x	
Hayakawa	Akinori	Fujitsu Laboratories		x
Hegde	Raj	Broadcom	x	x
Hidaka	Yasuo	Fujitsu Laboratories of America	x	x
Horner	Rita	Synopsys	x	x
Huang	Yifan	AFLI	x	
Hutchinson	Michael	IXIA	x	
Ishibe	Kazuhiko	Anristu	x	x
Isono	Hideki	Fujitsu Optical Components	x	x
Jackson	Ken	Sumitomo	x	
Jimenez	Andrew	Anixter Inc.	x	
Johnson	John	Broadcom	x	
Kareti	Upen Reddy	Cisco	x	x
Kawatsu	Yasuaki	Apresia Systems		x
Kimber	Mark	Semtech	x	x
King	Jonathan	Finisar Corp.	x	
LeCheminant	Greg	Keysight Technologies	x	x

<b>P802.3cd, March 2017</b>			<b>13-Mar-17</b>	<b>14-Mar-17</b>
<b>Last Name</b>	<b>First Name</b>	<b>Affiliation</b>	<b>Monday</b>	<b>Tuesday</b>
Lee	JuneHee	Samsung	X	X
Leizerovich	Hanan	Multiphy	X	X
Lewis	Dave	Lumentum	X	X
Lim	Jane	Cisco	X	X
Liu	Hai-Feng	Intel	X	X
Lusted	Kent	Intel	X	X
Maki	Jeffery	Juniper Networks	X	X
Malicoat	David	Kazan	X	
Matoglu	Erdem	Amphenol	X	X
McDonough	John	NEC America	X	X
Medina	Marcel	Spirent Communications	X	X
Mellitz	Richard	Samtec	X	X
Mizuki	Shirao	Mitsubishi Electric		X
Nakamoto	Edward	Spirent Communications	X	X
Ofelt	David	Juniper Networks	X	
Palkert	Tom	Molex - MACOM	X	X
Pepper	Gerald	Ixia	X	
Pham	Phong	US Conec	X	X
Piehler	David	Dell EMC	X	X
Pimpinella	Rick	Panduit Corp.	X	X
Pozzebon	Dino	microsemi	X	X
Rabinovich	Rick	IXIA	X	X
Ran	Adee	Intel	X	X
Ressl	Mike	Hitachi Cable America	X	X
Rotolo	Salvatore	ST Microelectronics	X	X
Sayre	Edward	Samtech LTD	X	X

<b>P802.3cd, March 2017</b>			<b>13-Mar-17</b>	<b>14-Mar-17</b>
<b>Last Name</b>	<b>First Name</b>	<b>Affiliation</b>	<b>Monday</b>	<b>Tuesday</b>
Shrikhande	Kapil	Innovium	X	
Slavick	Jeff	Broadcom Limited	X	X
Sleigh	Robert	Keysight Technologies	X	X
Sommers	Scott	Molex	X	X
Srivastava	Atul	NTT Electronics	X	
Stassar	Peter	Huawei	X	X
Stauffer	David	Kandou Bus	X	
Sun	Phil	Credo	X	X
Surre	Frederic	City, University of London	X	
Swanson	Steve	Corning	X	X
Szczepanek	Andre	Inphi	X	X
Takahara	Tomoo	Fujitsu Laboratories	X	X
Tan	Kan	Tektronix	X	X
Toyserkani	Pirooz	Cisco	X	X
Tracy	Nathan	TE Connectivity	X	X
Trowbridge	Steve	Nokia	X	X
Uchzyna	Asami	Mitsubishi Electric	X	X
Ulrichs	Ed	Source Photonics	X	
Wang	Roy	HPE	X	X
Wertheim	Oded	Mellanox	X	X
White	Martin	Cavium	X	X
Young	Adrian	Leviton	X	X
Zhang	Huanlin	Applied Optoelectronics	X	
Zivny	Pavel	Tektronix	X	X