

Unapproved Minutes  
**IEEE P802.3bs 200 GbE & 400 GbE Task Force**  
Interim Meeting – Mar 12, 2017  
Plenary Meeting – Mar 15-16, 2017  
Vancouver, BC, Canada

Prepared by John D'Ambrosia, Futurewei, subsidiary of Huawei

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## **IEEE P802.3bs Task Force Interim Meeting – Mar 12, 2017:**

*Prepared by John D'Ambrosia*

Interim meeting convened at 1:09pm, Chaired by John D'Ambrosia, IEEE P802.3bs Task Force Chair

Introductions were made.

Agenda & General Information

By – John D'Ambrosia

See - [http://www.ieee802.org/3/bs/public/17\\_03/agenda\\_3bs\\_01c\\_0317.pdf](http://www.ieee802.org/3/bs/public/17_03/agenda_3bs_01c_0317.pdf)

Chair reviewed the agenda.

Chair noted he had received 3 late requests, and asked if there were any objections to hearing them:

- [Comments 109, 130, 133, 145: Characteristics of pattern in dawe 3bs\\_01\\_0317](#) by Pete Anslow, Ciena
- [Comment #7- Four lane Interleaving and SSPRQ](#) by Pete Anslow, Ciena
- [Comment 7: Restricted Muxing Update](#) by Kapil Shrikhande, Innovium

There were no objections.

### **Motion #1:**

Move to approve the agenda

- Moved by: Mike Dudek
- Second by: Thananya Baldwin
- Pass by voice vote without opposition

Chair reminded attendees to observe decorum rules.

Chair noted that photography and recording not allowed without permission.

Chair called for members of the press or individuals reporting publicly on the meeting to identify themselves. No one responded.

Chair reviewed "Participation in IEEE 802 Meetings" slide.

Chair reviewed attendance, IMAT and attendance book.

### **Motion #2:**

Move to approve

- Jan 2017 Interim Minutes - [http://www.ieee802.org/3/bs/public/17\\_01/minutes\\_3bs\\_0117\\_unapproved.pdf](http://www.ieee802.org/3/bs/public/17_01/minutes_3bs_0117_unapproved.pdf)
- Moved by: Mark Gustlin
- Second by: Ali Ghiasi
- Pass by voice vote without opposition

Chair went over D3.0 Initial Sponsor Ballot Summary

- Results
  - 134 Voters
  - 88 Approve
  - 14 Disapprove
  - 5 Abstain

– 107 Ballots returned

- 79.85% Response Rate ( $\geq 75\%$  required)
- 4.67% Abstain Rate ( $< 30\%$  required)
- 86.27% Approval Rate ( $\geq 75\%$  required)

Chair thanked everyone who voted / submitted comments.

Chair went over goals for week.

Goals:

- Consider 166 comments
- Hear 14 Technical presentations
- Approve generation of Draft 3.1
- Big Ticket Items
  - Resolve Clock Content Analysis
  - TDECQ
  - FEC Degrade Signaling

Chair displayed the reflector and web page information.

Chair went over Private Area information, and noted that the draft, and any other content, is posted for Task Force review only, and neither the content nor access information should be copied or redistributed to others in violation of document copyrights.

**IEEE Patent Policy:** Chair reviewed the Patent related slides on the 5 slides contained in the agenda. Chair calls for potentially essential patents. No one responded. Chair read the Guidelines for IEEE-SA meetings.

**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, neither 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.

Chair reviewed the ground rules. Chair reviewed IEEE Structure. Chair displays the Bylaws and Rules & References slide. Chair reviewed IEEE 802.3 Standards Process slides.

Chair noted the Task Force had the following communications to consider at this meeting.

- OIF -  
[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)

It was not felt that a response was necessary, but it was suggested that D3.1 should be sent to the OIF. It was also noted that D3.1 should be sent to the ITU-T and T11.2. Mike Dudek agreed to

write draft responses to the OIF and T11.2, and John D'Ambrosia agreed to write the draft response to the ITU-T. The chair noted that the proposed responses will be considered Thursday morning.

Chair noted the Task Force ad hocs and reports for those ad hocs (SMF, Electrical) that had met since the Jan Interim.

Chair went over the schedule for the week.

**Presentation #1:**

Title: Chief Editor's Opening Report

By: Pete Anslow

See [http://www.ieee802.org/3/bs/public/17\\_01/anslow\\_3bs\\_01\\_0117.pdf](http://www.ieee802.org/3/bs/public/17_01/anslow_3bs_01_0117.pdf)

Chief editor thanked the editorial team for their hard work and support.

Chief Editor resumed Chief Editor's Report discussing plan on addressing comments.  
Task Force Comment Review started at 1:45pm approximately.

Break at 4:27pm

Meeting reconvened at approximately 4:48pm

Comment resolution continued. Pete Anslow noted he was asking D'Ambrosia to chair the Clock Content portion of the comment resolution session.

**Presentation #2:**

Title: Comments #7, 92, 102, 160: 4 Lanes Muxing Limited Clock Content Analysis

By: Oded Wertheim

See [http://www.ieee802.org/3/bs/public/17\\_03/wertheim\\_3bs\\_01\\_0317.pdf](http://www.ieee802.org/3/bs/public/17_03/wertheim_3bs_01_0317.pdf)

**Presentation #3:**

Title: Comment #7- Possible Solutions for Clock content Issue

By: Mark Gustlin

See [http://www.ieee802.org/3/bs/public/17\\_03/gustlin\\_3bs\\_02\\_0317.pdf](http://www.ieee802.org/3/bs/public/17_03/gustlin_3bs_02_0317.pdf)

**Presentation #4:**

Title: Comment #7-Text for 7bit scrambler solution

By: Mark Gustlin

See [http://www.ieee802.org/3/bs/public/17\\_03/gustlin\\_3bs\\_03\\_0317.pdf](http://www.ieee802.org/3/bs/public/17_03/gustlin_3bs_03_0317.pdf)

**Presentation #5:**

Title: Comment 7: Restricted Muxing Update

By: Kapil Shrikhande

See [http://www.ieee802.org/3/bs/public/17\\_03/shrikhande\\_3bs\\_02\\_0317.pdf](http://www.ieee802.org/3/bs/public/17_03/shrikhande_3bs_02_0317.pdf)

**Presentation #6:**

Title: Comments: 92, 93: Impact of Clock Content on the CDR with Propose Resolution

By: Ali Ghiasi

See [http://www.ieee802.org/3/bs/public/17\\_03/ghiasi\\_3bs\\_01b\\_0317.pdf](http://www.ieee802.org/3/bs/public/17_03/ghiasi_3bs_01b_0317.pdf)

## **Presentation #7:**

Title: Four lane interleaving and SSPRQ

By: Pete Anslow

See [http://www.ieee802.org/3/bs/public/17\\_03/anslow\\_3bs\\_06\\_0317.pdf](http://www.ieee802.org/3/bs/public/17_03/anslow_3bs_06_0317.pdf)

Discussion regarding comments related to clock content issue commenced.

### **Straw Poll #1**

I would support the following options for solving the clock content concern (Chicago rules):

- A. Do nothing
- B. Add a note warning of low clock content possibility
- C. Define a new test pattern to ensure receivers are capable of dealing with the reduced clock content
- D. Restricted muxing (natural pairs)
- E. Add the additional 7-bit scrambler for the messages before FEC encoding

### **Results**

- A. 4,
- B. 43
- C. 12
- D. 26
- E. 11

### **Straw Poll #2**

I support the following option for solving the clock content concern (pick one):

- A. Do nothing
- B. Add a note warning of low clock content possibility
- C. Define a new test pattern to ensure receivers are capable of dealing with the reduced clock content
- D. Restricted muxing (natural pairs)
- E. Add the additional 7-bit scrambler for the messages before FEC encoding

### **Results**

- A. 0
- B. 31
- C. 0
- D. 12
- E. 3

After clock content discussion ended, Anslow resumed chairing comment resolution session. Interim meeting ended approximately 7:45pm.

## **IEEE P802.3bs Logic Track Comment Review Meeting – Mar 15, 2017:**

Prepared by Mark Gustlin

Convened at 9:05am, Chaired by Mark Gustlin, IEEE P802.3bs Clauses 117, 118, 119, 119A  
Editor

Comment resolution started.

### **Presentation #1:**

Title: FEC degrade signaling

By: Steve Trowbridge

See [http://www.ieee802.org/3/bs/public/17\\_03/trowbridge\\_3bs\\_01\\_0317.pdf](http://www.ieee802.org/3/bs/public/17_03/trowbridge_3bs_01_0317.pdf)

General discussion.

Meeting break at 10:37am

Meeting reconvened at 10:50am.

Comment resolution continued.

Logic Track broke for day at 11:32am.

## **IEEE P802.3bs Optical Track Comment Review Meeting – Mar 15, 2017:**

*Prepared by Pete Anslow*

IEEE P802.3bs 400 Gb/s optical track meeting convened at 8:05 a.m., Wednesday, 15 March, 2017, chaired by Pete Anslow, IEEE P802.3bs Chief Editor.

Chair asked if anyone was not familiar with the IEEE patent policy. There was no response.

Comment resolution started at 8:12 a.m.

### **Presentation #1:**

Title: TDECQ update

By: Jonathan King

See [http://www.ieee802.org/3/bs/public/17\\_03/king\\_3bs\\_01\\_0317.pdf](http://www.ieee802.org/3/bs/public/17_03/king_3bs_01_0317.pdf)

Comment resolution continued.

### **Presentation #2:**

Title: DR4 Tx 'off' specs

By: Jonathan King

See [http://www.ieee802.org/3/bs/public/17\\_03/king\\_3bs\\_02\\_0317.pdf](http://www.ieee802.org/3/bs/public/17_03/king_3bs_02_0317.pdf)

Comment resolution continued.

Break at 10:10 a.m.

Resume at 10:24 a.m.

Comment resolution continued.

Break for lunch at 11:58 a.m. Resume at 1:20 p.m.

Pete asked if there was any objection to Piers showing a revised version of dawe\_3bs\_01\_0317 with additional technical information. There was no objection.

### **Presentation #3:**

Title: Improved SSPRQ pattern for testing optical transmitters

By: Piers Dawe

See [http://www.ieee802.org/3/bs/public/17\\_03/dawe\\_3bs\\_01a\\_0317.pdf](http://www.ieee802.org/3/bs/public/17_03/dawe_3bs_01a_0317.pdf)

### **Presentation #4:**

Title: Characteristics of pattern in dawe\_3bs\_01\_0317

By: Pete Anslow

See [http://www.ieee802.org/3/bs/public/17\\_03/anslow\\_3bs\\_05\\_0317.pdf](http://www.ieee802.org/3/bs/public/17_03/anslow_3bs_05_0317.pdf)

Comment resolution continued.

Break at 3:00 p.m. Resume at 3:23 p.m.

Comment resolution completed and Break for the day at 3:45 p.m.

## **IEEE P802.3bs Electrical Track Comment Review Meeting – Mar 15, 2017:**

*Prepared by Andre Szczepanek*

IEEE P802.3bs 200 & 400 Gb/s electrical track meeting convened at 8:05 a.m., Wednesday, Mar 15, 2017,  
chaired by Andre Szczepanek, IEEE P802.3bs Annex 120D/E Editor.

Comment resolution started.

**Presentation #1:** Title: Differential Return Loss for Annex 120D

By: Richard Mellitz

See [http://www.ieee802.org/3/bs/public/17\\_03/mellitz\\_3bs\\_01\\_0317.pdf](http://www.ieee802.org/3/bs/public/17_03/mellitz_3bs_01_0317.pdf)

Break at 10:05 a.m. Resume at 10:25 a.m.

Comment resolution continued.

Break at 11:55 a.m.

Resumed at 2:20 pm

Comment resolution continued.

**Presentation #2:** Title: Chip-to-module far-end TX eye measurement proposal

By: Adam Healey

See [http://www.ieee802.org/3/bs/public/17\\_03/healey\\_3bs\\_01a\\_0317.pdf](http://www.ieee802.org/3/bs/public/17_03/healey_3bs_01a_0317.pdf)

Break at 3:12 p.m. Resume at 3:30 p.m.

Comment resolution continued.

**Presentation #3:** Title: Addressing the Gap in the 50G C2M Specifications

By: Ali Ghiasi

See [http://www.ieee802.org/3/bs/public/17\\_03/ghiasi\\_3bs\\_02a\\_0317.pdf](http://www.ieee802.org/3/bs/public/17_03/ghiasi_3bs_02a_0317.pdf)

**Presentation #4:** Title: Chip to Module simulations and the effect of crosstalk

By: Mike Dudek

See [http://www.ieee802.org/3/bs/public/17\\_03/dudek\\_3bs\\_01a\\_0317.pdf](http://www.ieee802.org/3/bs/public/17_03/dudek_3bs_01a_0317.pdf)

Electrical Track broke for day at 5:50 p.m.



## **IEEE P802.3bs Task Force Meeting – Mar 16, 2017:**

*Prepared by John D'Ambrosia*

Reconvened at 8:05am, Chaired by John D'Ambrosia, IEEE P802.3bs Task Force Chair

Opening comments by Chair.

Comment resolution started.

Comments for reconsideration were then addressed.

### **Presentation #8:**

Title: Optical Track Closing Report

By: Pete Anslow

See [http://www.ieee802.org/3/bs/public/17\\_03/anslow\\_3bs\\_03\\_0317.pdf](http://www.ieee802.org/3/bs/public/17_03/anslow_3bs_03_0317.pdf)

### **Presentation #9:**

Title: Logic Track Closing Report

By: Mark Gustlin

See [http://www.ieee802.org/3/bs/public/17\\_03/gustlin\\_3bs\\_04\\_0317.pdf](http://www.ieee802.org/3/bs/public/17_03/gustlin_3bs_04_0317.pdf)

### **Presentation #10:**

Title: Electrical Track Closing Report

By: Andre Szczepanek

See [http://www.ieee802.org/3/bs/public/17\\_03/szczepanek\\_3bs\\_03\\_0317.pdf](http://www.ieee802.org/3/bs/public/17_03/szczepanek_3bs_03_0317.pdf)

Chief editor asked if there were any comments to be removed from the bucket. Two comments [#39, #40] were removed from the bucket and resolved. The Chief editor also informed the meeting that he would add editor's notes to some comments before uploading to the IEEE myBallot system in order to comply with RevCom guidelines.

### **Motion #3:**

Move to:

- Adopt proposed responses to remaining comments, noted as “bucket” on slide 12 of anslow\_3bs\_01\_0317.pdf
- Generate Draft 3.1 for WG Recirculation from D3.0 and closed comments

M: Pete Anslow

S: Andre Szczepanek

Technical ( $\geq 75\%$ )

Results All (y/n/a): 63 / 0 / 0

Motion Passes

Liaisons to OIF, ITU-T, and T11.2 were considered.

**Motion #4:**

- Move that the IEEE P802.3bs Task Force approve as liaison communications:
  - to INCITS Fibre Channel T11.2: IEEE\_802d3bs\_to\_FC\_0317\_liaison
  - to ITU-T Study Group 15: IEEE\_802d3bs\_to\_ITU\_0317\_liaison
  - to OIF: IEEE\_802d3bs\_to\_OIF\_CEL\_0317\_liaison
- with editorial license granted to the Chair (or his appointed agent) from the IEEE 802.3 Working Group
- M: Mike Dudek
- S: Steve Trowbridge
- Technical ( $\geq 75\%$ )
- Results: Passes by voice vote without opposition

**Attendance Straw Poll – May 2017 – New Orleans**

- For May 2017 Interim
  - a) I will attend
  - b) I may attend
  - c) I will not attend
- Results
  - a) 34
  - b) 18
  - c) 9

**Attendance Straw Poll – July 2017 – Berlin**

- For July 2017 Plenary
  - a) I will attend
  - b) I may attend
  - c) I will not attend
- Results
  - a) 53
  - b) 16
  - c) 5

**Presentation #11:**

Title: Chief Editor's Closing Report

By: Pete Anslow

See [http://www.ieee802.org/3/bs/public/17\\_03/anslow\\_3bs\\_04\\_0317.pdf](http://www.ieee802.org/3/bs/public/17_03/anslow_3bs_04_0317.pdf)

Chair reviewed future meetings.

- See: <http://www.ieee802.org/3/interims/index.html>
- May 2017 Interim
  - Week of May 22
  - New Orleans, LA, USA
- July 2017 Plenary
  - Week of July 9
  - Berlin, Germany
- Sept 2017 Interim
  - Week of Sept 11
  - Charlotte, NC, USA
- Nov 2017 Plenary

- Week of Nov 6
- Orlando, FL, USA

Chair noted agenda was complete.

Motion to adjourn

M: Steve Trowbridge

S: Mike Dudek

Motion passes by voice vote without opposition.

Meeting adjourned at 9:54am.

## Attendees

IEEE P802.3bs Task Force			3/12	3/15	3/16
Last Name	First Name	Employer / Affiliation	Sun	Wed	Thurs
Abbott	Justin	Lumentum		x	
Anslow	Pete	Ciena Corporation	x	x	x
Baden	Eric	Broadcom		x	
Baldwin	Thananya	Ixia	x	x	
Booth	Brad	Microsoft		x	
Bouda	Martin	Fujitsu	x	x	x
Braun	Ralf-Peter	Deutsche Telekom		x	x
Brooks	Paul	Viavi Solutions	x		
Brown	Matt	Macom	x	x	x
Butter	Adrian	Global Foundries		x	x
Carlson	Steve	HSD	x		
Chalupsky	David	Intel		x	
Chang	Jacky	Hewlett Packard Enterprise			x
Chang	Xin	Huawei	x		
Chen	C.C David	AOI			x
Chen	David	AOI		x	x
Chen	Jay	Maxlinear	x	x	x
Cheng	Weiying	Coriant			x
Choudhury	Mabud	OFS		x	
Chuang	Keng Hua	HP Enterprise		x	x
Cober	Don	Comira		x	x
Coenen	Robert	Interoptic	x		
Cole	Chris	Finisar		x	x
D'Ambrosia	John	Futurewei, subsidiary of Huawei	x	x	x
Dawe	Piers	Mellanox	x	x	x
Djahanshahi	Hormoz	Microsemi		x	
Dudek	Mike	Cavium	x	x	x
Ellison	Jason	The Siemon Company		x	
Estes	Dave	Spirent Communications		x	x
Ewen	John	Global Foundries	x	x	x
Ghiasi	Ali	Ghiasi Quantum, Ghiasi Quantum / Huawei	x	x	x
Gorshe	Steve	Microsemi		x	x
Grow	Bob	RMG Consulting	x		
Guckenberger	Drew	Luxtera		x	
Gustlin	Mark	Xilinx	x	x	x
Hashimoto	Tomohiro	Socionext	x	x	x
Hayakawa	Akinoh	Fujitsu Laboratories	x	x	
Healey	Adam	Broadcom LTD		x	
Hegde	Raj	Broadcom		x	
Hidaka	Yasuo	Fujitsu Laboratories of America	x		x

Horner	Rita	Synopsys		x	
Huang	Xi	Huawei	x	x	x
Ishibe	Kazuhiko	Anristu		x	x
Isono	Hideki	Fujitsu Optical Components		x	
Jackson	Kenneth	Sumitomo	x	x	
Kareti	Upen Reddy	Cisco	x	x	
Kawatsu	Yasuaki	Apresia Systems	x	x	x
Kim	Yong	Broadcom		x	
Kimber	Mark	Semtech	x	x	x
King	Jonathan	Finisar Corp.			x
Lackner	Hans	QoSCom		x	
LeCheminant	Greg	Keysight Technologies		x	
Lee	Junhee	Samsung Electronics		x	x
Leizerorich	Hanan	MultiPhy	x	x	x
Lewis	Dave	Lumentum	x	x	x
Lim	Jane	Cisco			x
Liu	Hai-Feng	Intel	x	x	x
Lusted	Kent	Intel	x		x
Maki	Jeffery	Juniper Networks	x	x	
Malicoat	David	Malicoat Networking Solutions / Kazan Networks	x	x	x
McDonough	John	NEC America		x	x
McSorley	Greg	Amphenol		x	x
Medina	Marcel	Spirent Communications			x
Mellitz	Richard	Samtec	x		
Nakamoto	Edward	Spirent Communications	x		
Ofelt	David	Juniper Networks	x	x	x
Palkert	Tom	Molex / Macom		x	x
Pepper	Gerald	Ixia	x	x	
Pham	Phong	US Conec Ltd		x	x
Piehler	David	Dell EMC		x	x
Pimpinella	Rick	Panduit Corp.		x	x
Poelstra	Henry	Teledyne LeCroy		x	
Pozzebon	Dino	Microsemi	x	x	x
Rabinovich	Rick	IXIA		x	x
Ran	Adee	Intel	x	x	x
Ressl	Mike	Hitachi Cable America		x	x
Rotolo	Salvatore	STM Microelectronics	x	x	x
Sayre	Edward	Samtec		x	
Shirao	Mizuki	Mitsubishi Electric		x	x
Shrikhande	Kapil	Innovium	x		
Slavick	Jeff	Broadcom, Ltd.	x	x	x
Sleigh	Robert	Keysight Technologies	x	x	x

Sommers	Scott	Molex		x	x
Stassar	Peter	Huawei	x	x	x
Sun	CK	Titan Photonics	x		x
Swanson	Steve	Corning		x	
Szczepanek	Andre	Inphi	x	x	x
Takahara	Tomoo	Fujitsu Laboratories		x	x
Tamura	Kohichi	Oclaro Japan		x	
Tan	Kan	Tektronix		x	x
Tooyserkani	Pirooz	Cisco			x
Tracy	Nathan	TE Connectivity		x	
Trowbridge	Steve	Nokia	x	x	x
Uchiyama	Asami	Mitsubishi Electric	x	x	
Ulrichs	Ed	Source Photonics		x	
Wang	Tongtong	Huawei	x		
Wang	Xinyuan	Huawei	x		x
Wang	Roy	Hewlett Packard Enterprise		x	x
Wertheim	Oded	Mellanox	x	x	x
White	Martin	Cavium		x	
Xu	Yu	Huawei	x		
Young	Adrian	Leviton Mfg		x	x
Zhang	Huanlin	Applied Optoelectronics		x	
Zivny	Pavel	Tektronix	x	x	x