

Approved Minutes  
**IEEE P802.3by 25 Gb/s Ethernet on a Single Lane Task Force**  
Interim Meeting  
May 20-22, 2015  
Pittsburgh, PA, USA  
Prepared by Kent Lusted and Kapil Shrikhande

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## **IEEE P802.3by 25 GbE Task Force Meeting – May 20, 2015:**

*Prepared by Kent Lusted*

IEEE P802.3by 25 Gb/s Task Force interim meeting convened at 1:10 p.m., 20 May, 2015, by Mark Nowell, IEEE P802.3by Task Force Chair.

Chair displayed the agenda slides:

[http://www.ieee802.org/3/by/public/May15/agenda\\_3by\\_01\\_0515.pdf](http://www.ieee802.org/3/by/public/May15/agenda_3by_01_0515.pdf)

Introductions were made.

Mark Nowell reviewed agenda in

[http://www.ieee802.org/3/by/public/May15/agenda\\_3by\\_01\\_0515.pdf](http://www.ieee802.org/3/by/public/May15/agenda_3by_01_0515.pdf)

### **Motion #1:**

Move to approve the agenda:

- Moved by: Jonathan King
- Second by: Rich Mellitz
- Pass by voice without opposition

March 2015 plenary minutes were posted shortly after the meeting. No comments were received.

### **Motion #2:**

Move to approve the March 2015 minutes:

- Moved by: Mike Dudek
- Second by: Nathan Tracy
- Pass by voice without opposition

Chair asked for a participant to assist with secretary responsibilities on Thursday and Friday.

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

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

Chair reviewed the attendance procedures.

Chair reviewed the IEEE structure.

Chair reviewed the Bylaws and Rules slides in --

[http://www.ieee802.org/3/by/public/May15/agenda\\_3by\\_01\\_0515.pdf](http://www.ieee802.org/3/by/public/May15/agenda_3by_01_0515.pdf)

Chair noted that the IEEE recently adopted a new IEEE-SA Patent Policy.

**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 noted that the adopted timeline shows the Task Force requesting Work Group ballot at the July meeting. The desire is to keep the changes to Draft 1.1 limited.

Chair noted that motion #5 in the Berlin meeting specified that the Task Force would create an informal communication to the SFF committee to inform them of our decision. Chair noted that the Task Force will need to review and approve the information communication proposal on Friday.

Chair reviewed the adopted objectives in the agenda slides.

Chair reviewed a summary of the Study Group's March Plenary meeting.

Chair reviewed the adopted timeline. Chair noted that a special interim meeting may be used in the future to keep the adopted schedule.

**Goals for the meeting:**

- Review D1.0 comments and resolve
- Big ticket item closure
  - FEC/PCS topics (CWM removal, EEE)
  - 3m Cable operation without FEC
- Decisions and motions
- Direct editorial team to generate D1.1

Chair reviewed the Big Ticket items that need decisions, as shown in the agenda.

Chair reviewed the presentation schedule for the meeting but defaults to order given by the Chief Editor. All times listed are subject to change.

Chair noted that the published schedule shows evening sessions for Wednesday and Thursday in order to close open comments.

Chair noted that the presentation `dove_3by_02_0515` was not considered late and will be addressed during comment resolution.

Chair noted that the architecture ad hoc will continue. The ad hoc schedule will be sent to the email reflector.

**Future Meetings:**

- July 2015 Plenary – Week of July 12<sup>th</sup>
  - Waikoloa, Hawaii, USA
- September 2015 interim – Week of Sept 14<sup>th</sup>
  - Bonita Springs, FL, USA
- November 2015 Plenary – Week of Nov 8
  - Dallas, TX, USA

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

**25 Gb/s Ethernet Task Force Architecture Ad Hoc Report:**

By: Matt Brown

See: [http://www.ieee802.org/3/by/public/May15/brown\\_3by\\_01\\_0515.pdf](http://www.ieee802.org/3/by/public/May15/brown_3by_01_0515.pdf)

- No comments from participants.

**Chief Editor's Report:**

By: Matt Brown

See: [http://www.ieee802.org/3/by/public/May15/brown\\_3by\\_02\\_0515.pdf](http://www.ieee802.org/3/by/public/May15/brown_3by_02_0515.pdf)

- Matt Brown thanked the editorial team for their efforts to generate Draft 1.0.
- Matt Brown thanked Adam Healey, Jeff Slavick, and Kent Lusted for their assistance in reviewing the implementations of Draft 0.1 closed comments.

Matt Brown noted that comments deemed non-controversial are listed in proposed comment “bucket” list. (See [http://www.ieee802.org/3/by/public/May15/Comment\\_proposed\\_bucket\\_list\\_0515.pdf](http://www.ieee802.org/3/by/public/May15/Comment_proposed_bucket_list_0515.pdf)). These comments will be considered in a “bucket” motion during closing business. Please contact the Chief Editor to have a comment pulled from the list and considered in the Task Force meeting.

Matt Brown noted that comment #101 and #102 were pulled from the bucket list.

Comment resolution begins at 2:02 p.m.

**Presentation #1:**

Title: MTTFPA considerations for 25GbE no-FEC operation

By: Phil Sun

See: [http://www.ieee802.org/3/by/public/May15/sun\\_3by\\_01\\_0515.pdf](http://www.ieee802.org/3/by/public/May15/sun_3by_01_0515.pdf)

Broke at 2:53pm. Resume at 3:15 p.m.

**Presentation #2:**

Title: Electrical Parameters for 3m Cable no-FEC and 4m cable BASE-R FEC operation. Ref: comments 86-89

By: Rich Mellitz

See: [http://www.ieee802.org/3/by/public/May15/mellitz\\_3by\\_01\\_0515.pdf](http://www.ieee802.org/3/by/public/May15/mellitz_3by_01_0515.pdf)

- Discussed impact of changing COM margin and the long term effects on volume manufacturing.

**Presentation #3:**

Title: Proposed COM Changes

By: Chris Roth

See: [http://www.ieee802.org/3/by/public/May15/roth\\_3by\\_01a\\_0515.pdf](http://www.ieee802.org/3/by/public/May15/roth_3by_01a_0515.pdf)

- Discussed assumptions of changing transmitter margin
- Discussed assumptions of package capacitance.

Chair noted that further discussion on the subject is necessary and that the architecture ad hoc will be used for further contributions.

Comment resolution continues.

Break at 5:34 pm. Resume 5:45 p.m.

Rich Mellitz withdrew comment #92.

Mike Andrewartha withdrew comment #157 and comment #167.

Piers Dawe withdrew comment #192.

Chief Editor noted that the legacy clauses modified by P802.3by are subject to change based upon resolved comments in the P802.3bx base standard revision project. The chief editor added Comment #197 to the comment database to formally request from the task force permission for the editorial team to implement such changes, as appropriate.

Chair noted that Thursday session starts at 8:00 a.m. and must halt by 5:00 p.m.

Broke at 8:45 p.m.

## **IEEE P802.3by 25 GbE Task Force Meeting – May 21 2015:**

*Prepared by Kapil Shrikhande*

IEEE P802.3by 25 Gb/s Task Force interim meeting convened at 8:03 a.m., 21 May, 2015, by Mark Nowell, IEEE 25 Gb/s Ethernet Task Force Chair.

Chair displayed the agenda slides:

[http://www.ieee802.org/3/by/public/May15/agenda\\_3by\\_01\\_0515.pdf](http://www.ieee802.org/3/by/public/May15/agenda_3by_01_0515.pdf)

**Patent policy:** Chair displayed the patent policy related slides in the agenda ([http://www.ieee802.org/3/by/public/May15/agenda\\_3by\\_01\\_0515.pdf](http://www.ieee802.org/3/by/public/May15/agenda_3by_01_0515.pdf)) . Chair asked if anyone is unfamiliar with the IEEE patent policy. No one responded. Chair called for potentially essential patents. No one responded.

### **Presentation #:4**

Title: RCWMS in RSFEC EEE

By: Don Cober

See: [http://www.ieee802.org/3/by/public/May15/cober\\_3by\\_01\\_0515.pdf](http://www.ieee802.org/3/by/public/May15/cober_3by_01_0515.pdf)

Eric Baden withdrew his presentation on AM0 Selection.

Eric Baden withdrew the associate comment #68.

### **Presentation #5:**

Title: Support of comments #169 & #171

By: Jeff Slavick

See: [http://www.ieee802.org/3/by/public/May15/slavick\\_3by\\_01a\\_0515.pdf](http://www.ieee802.org/3/by/public/May15/slavick_3by_01a_0515.pdf)

Updated presentation was presented, uploaded after the presentation

Adrian Butter offered support.

### **Presentation #6**

Title: CWMs IN IEEE 25GE (802.3by)

By: Eric Baden

See: [http://www.ieee802.org/3/by/public/May15/baden\\_3by\\_01a\\_0515.pdf](http://www.ieee802.org/3/by/public/May15/baden_3by_01a_0515.pdf)

Updated presentation was presented, uploaded after the presentation

Gary Nicholl offered support

Francesco Caggioni offered support

### **Motion # 3**

Move to adopt slides 7-12 of slavick\_3by\_01a\_0515.pdf to remove CWMs from 25GE RS-FEC data streams.

- M: Jeff Slavick
- S: Adrian Butter
- Technical ( $\geq 75\%$ )
- Y: 8 , N: 36 , A: 27
- Result: fails 10 a.m.

The Chair asked if there was any objection to bringing the motion to adopt RCWM for EEE during comment resolution later in the meeting. There was no objection raised.

**Presentation #:7**

Title: Auto-Negotiation of FEC

By: Dan Dove

See: [http://www.ieee802.org/3/by/public/May15/dove\\_3by\\_02\\_0515.pdf](http://www.ieee802.org/3/by/public/May15/dove_3by_02_0515.pdf)

Dan Dove will provide updated file for uploading to the web-page.

The Chair indicated to the Task Force that the motion proposed in the presentation will be brought up later in the meeting when comments on CL73 are addressed. No objections raised.

Break at 10:40 a.m.

Break ends 11:02 a.m.

Comment Resolution Start.

The Chief Editor asked participants to review the comments in the Bucket List posted in the Editor's opening report, and noted that these comments will be closed at the end of the meeting, and any concerns regarding specific comments should be brought to the attention of the Chair and Chief Editor.

Comment # 179: the response refers to an updated presentation cober\_3by\_01a\_0515.pdf that will be uploaded to the web-page (update made was to Supporters list)

Don Cober withdrew Comment # 75.

Adee Ran withdrew Comment # 38.

Don Cober withdrew Comment # 74.

Break for Lunch 12 p.m.

Reconvened at 1:08 p.m.

Comment resolution resumes

The Editor noted that comments # 111, 112, 113, 114 were withdrawn.

Piers Dawe withdrew Comment # 188.

**Presentation #:8**

Title: Two ways of showing 25G-AUI compliance

By: Piers Dawe

See: [http://www.ieee802.org/3/by/public/May15/dawe\\_3by\\_01\\_0515.pdf](http://www.ieee802.org/3/by/public/May15/dawe_3by_01_0515.pdf)

**Straw-poll # 1**

I would support specification of an additional 25G-AUI C2M specification for the host board per daw\_e\_3by\_01\_0515.pdf

- Y: 6
- N: 24
- A: 1

Closed at 2:55 p.m.

Piers Dawe withdrew Comment # 130.

Break at 3:05 p.m.

Reconvened at 3:25 p.m.

Comment # 195: Chief Editor asked if there were any supporters in the room, other than the commenter: seeing none, the comment was rejected and closed.

Jeff Slavick withdrew Comment # 176.

Comment # 193: the Chief Editor discussed the removal of the hyphen from 25G-AUI to make it 25GAUI in the draft.

**Straw poll # 2**

I would support changing 25G-AUI to 25GAUI, and 25G-MII to 25GMII.

- Y: 24
- N: 3
- A: 5

Closed at 4:30 p.m.

Comment # 175 was withdrawn.

The meeting was moved into a new room.

Reconvened at 5:10 p.m.

Comments # 58 and 59 were withdrawn.

Comment # 62 was withdrawn.

Comment #64 was requested to be reopened for consideration. Seeing no opposition from the Task Force, the comment was reopened, and addressed.

Recess at 6:30 p.m.



## **IEEE P802.3by 25 GbE Task Force Meeting – May 22 2015:**

*Prepared by Kapil Shrikhande*

IEEE P802.3by 25 Gb/s Task Force interim meeting convened at 9:09 a.m., 22 May, 2015, by Mark Nowell, IEEE 25 Gb/s Ethernet Task Force Chair.

Chair displayed the agenda slides:

[http://www.ieee802.org/3/by/public/May15/agenda\\_3by\\_01\\_0515.pdf](http://www.ieee802.org/3/by/public/May15/agenda_3by_01_0515.pdf)

**Patent policy:** Chair displayed the patent policy related slides in the agenda ([http://www.ieee802.org/3/by/public/May15/agenda\\_3by\\_01\\_0515.pdf](http://www.ieee802.org/3/by/public/May15/agenda_3by_01_0515.pdf)). Chair asked if anyone is unfamiliar with the IEEE patent policy. No one responded. Chair called for potentially essential patents. No one responded.

Dan Dove reviewed the draft of the proposed informal communication to the SFF Committee. The file reviewed by the Task Force can be found at

[http://www.ieee802.org/3/by/public/May15/dove\\_3by\\_01a\\_0515.pdf](http://www.ieee802.org/3/by/public/May15/dove_3by_01a_0515.pdf)

### **Motion # 4**

Move that the IEEE 802.3by 25 Gb/s Ethernet Task Force approve the text in dove\_3by\_01a\_0515.pdf, with editorial license granted to the Chair (or his appointed agent), as an informal communication by the Chair to the SFF Committee.

- M: Dan Dove
- S: Tom Palkert
- Technical ( $\geq 75\%$ )
- Y:     N:     A:
- Passes by voice without opposition     (9:25 a.m.)

### **Motion # 5**

Move to:

- Adopt proposed responses to bucket comments (slide 24) as indicated in brown\_3by\_02\_0515.pdf
- Generate Draft 1.1 for Task Force review from Draft 1.0 and closed comments
- Pre-submit Draft 1.1 to IEEE 802.3 in anticipation of requesting WG ballot at the July Plenary
- M: Mike Dudek
- S: Omer Sella
- Technical ( $\geq 75\%$ )
- Y: 40   N: 0   A: 1
- Result: passes     (10:05 am)

### **Motion #: 6**

Motion to Adjourn:

- Moved by: Mike Andrewartha
- Second by: Mike Dudek
- Passed by voice without opposition.

Meeting ended at 10:15 a.m.

## **Attendees**

<b>IEEE 25Gb/s Task Force, May 2015 interim</b>			<b>20-May-15</b>	<b>21-May-15</b>	<b>22-May-15</b>
<b>Last Name</b>	<b>First Name</b>	<b>Affiliation</b>	<b>Wednesday</b>	<b>Thursday</b>	<b>Friday</b>
Andrewartha	Mike	Microsoft	x	x	x
Anslow	Pete	Ciena Corporation	x	x	x
Bacasubramonian	Venu	Marvell	x	x	x
Baden	Eric	Broadcom	x	x	x
Bains	Amrik	Cisco	x	x	
Balasubramanian	Vittal	Dell Force10	x	x	
Balasubramonian	Venugopal	Marvell		x	
Baldwin	Thananya	Ixia	x	x	
Bernstein	Gary	Leviton	x		
Booth	Brad	Microsoft	x	x	x
Brooks	Paul	JDSU	x	x	
Brown	Matt	Applied Micro	x	x	x
Burt	Kevin	Samtec	x		
Butter	Adrian	IBM	x	x	x
Caggioni	Francesco	APM	x	x	x
Calderon	Juan-Carlos	Inphi	x	x	
Chacon	Geoffrey	HP	x	x	x
Chuang	Keng Hua	HP	x	x	x
Cober	Donald	Comira	x	x	x
D'Ambrosia	John	Dell		x	
Dawe	Piers	Mellanox	x	x	x
Deborde	William	Intel	x		
Diab	Wael	Huawei		x	x
Dillow	Daniel	FCI	x	x	x
DiMinico	Christopher	MC Communications/Panduit	x	x	
Dinh	Thuyen	Pulse	x		
Donahue	Curtis	UNH-IOL		x	
Dove	Dan	Dove Networking Solutions (DNS) & Emulex		x	
Dudek	Mike	QLogic	x	x	x
Estes	Dave	Spirent Communications	x	x	
Feyh	German	Broadcom	x	x	
Flatman	Alan	LAN Technologies	x		
Frazier	Howard	Broadcom		x	
Ghiasi	Ali	Ghiasi Quantum	x	x	
Gong	Zhigang	O-net	x	x	
Gorshe	Steve	PMC Sierra	x	x	
Gustlin	Mark	Xilinx	x	x	

IEEE 25Gb/s Task Force, May 2015 interim			20-May-15	21-May-15	22-May-15
Last Name	First Name	Affiliation	Wednesday	Thursday	Friday
Healey	Adam	Avago Technologies	x		
Hrai	Tomoyuki	Socionext		x	
Ingham	Jonathan	Avago Technologies		x	x
Irwin	Scott	MoSys Inc.	x	x	x
Jackson	Ken	Sumitomo	x		
Kareti	Upen Reddy	Cisco	x	x	x
Kilduff	Rick	JDSU	x	x	
King	Jonathan	Finisar Corp.	x		
Kipp	Scott	Brocade	x	x	
Klempa	Mike	UNH-IOL	x	x	
Kobayashi	Shoukei	NTT	x	x	x
Kolesar	Paul	CommScope	x		
Lapak	Jeff	UNH-IOL	x	x	x
Lau	Evan	General Cable	x		
LeCheminant	Greg	Keysight Technologies	x	x	
Lewis	Dave	JDSU			x
Li	Mike	Altera	x	x	
Li	Shaohua	Brocade	x	x	
Lusted	Kent	Intel	x		
Maki	Jeffery	Juniper Networks		x	x
Marris	Arthur	Cadence	x	x	
Matoglu	Erdem	Amphenol	x		
McDermott	Tom	Fujitsu	x	x	
McDonough	John	NEC America	x	x	x
McSoley	Greg	Amphenol	x		
Mei	Richard	Commscope	x		
Mellitz	Richard	Intel	x	x	x
Mooney	Paul	Spirent Communications	x	x	
Murray	Dale	Lightcounting	x		
Nelson	John	Arista Networks	x	x	x
Nishimura	Takeshi	Yamaichi Electronics	x	x	
Nowell	Mark	Cisco	x	x	x
Ofelt	David	Juniper Networks	x	x	
Ogura	Ichiro	Petra	x		
Palkert	Tom	Luxtera - Molex - MoSys	x	x	
Pepper	Gerald	Ixia	x	x	
Pham	Phong	US Conec	x	x	x
Rabinovich	Rick	Alcatel-Lucent Enterprise	x	x	x
Ran	Adee	Intel	x	x	x
Remein	Duane	Huawei			x
Ressl	Mike	Hitachi Cable America	x		

IEEE 25Gb/s Task Force, May 2015 interim			20-May-15	21-May-15	22-May-15
Last Name	First Name	Affiliation	Wednesday	Thursday	Friday
Roth	Christopher	Molex	x	x	x
Rotolo	Salvatore	ST Microelectronics	x	x	x
Sakai	Toshiaki	Socionext	x	x	
Schube	Scott	Intel	x		
Sella	Omer	Mellanox	x	x	x
Shami	Qusim	Comira	x	x	x
Shanbhag	Megha	TE Connectivity	x	x	
Shrikhande	Kapil	Dell	x	x	x
Slavick	Jeff	Avago Technologies	x	x	x
Sommers	Scott	Molex	x		
Sone	Yoshiaki	NTT		x	x
Stassar	Peter	Huawei	x	x	
Stone	Rob	Broadcom	x	x	
Sugitatsu	Atsushi	Mitsubishi Electric	x	x	
Sun	Phil	Marvell Semiconductor	x	x	x
Swanson	Steve	Corning	x	x	
Szczepanek	Andre	Inphi	x		
Tabutabae	Vahid	Broadcom	x		
Takahata	Kiyoto	NTT		x	
Tamura	Kohichi	Oclaro	x	x	x
Tracy	Nathan	TE Connectivity	x	x	x
Trowbridge	Steve	Alcatel-Lucent		x	x
Ulrichs	Ed	Source Photonics	x		
Wagner	Bob	Panduit Corp.	x		
Walker	Clint	Intel	x		
Wang	Roy	HP	x	x	x
Wang	Tongtong	Huawei	x	x	
Wang	Xinyuan	Huawei	x		
Wertheim	Oded	Mellanox	x	x	x
White	Martin	Cavium	x	x	x
Xu	Yu	Huawei	x		
Yohannan	Joe	Arista Networks	x	x	
Zambell	Andrew	FCI	x	x	