# Approved Minutes IEEE P802.3bs 400 GbE Task Force

Plenary Meeting May 18-20, 2015 Pittsburgh, PA, USA Prepared by Kent Lusted

# **Table of Contents**

Table of Contents	1
IEEE P802.3bs Task Force Meeting – 18 May 2015:	2
IEEE P802.3bs Task Force Meeting – 19 May 2015:	
IEEE P802.3bs Task Force Meeting – 20 May 2015:	
Attendees	

# IEEE P802.3bs Task Force Meeting - 18 May 2015:

Prepared by Kent Lusted

IEEE P802.3bs 400 Gb/s Task Force interim meeting convened at 8:33 a.m., Monday, 18 May 2015, by John D'Ambrosia, IEEE P802.3bs Task Force Chair.

Chair thanks Ethernet Alliance for hosting the interim meeting.

Introductions were made.

Agenda & General Information
By – John D'Ambrosia
See -- <a href="http://www.ieee802.org/3/bs/public/15\_05/agenda\_3bs\_01\_0515.pdf">http://www.ieee802.org/3/bs/public/15\_05/agenda\_3bs\_01\_0515.pdf</a>
Chair reviewed the agenda. Kent Lusted suggested the Chair to change "Mar 2015 interim" to "Mar 2015 Plenary".

#### Motion #1:

Move to approve the agenda

- Moved by: Steve Trowbridge
- Second by: Pete Anslow
- Pass by voice without opposition

March 2015 Plenary meeting minutes were posted after the meeting. No comments were received against the posted minutes.

#### Motion #2:

Move to approve the IEEE P802.3bs March 2015 plenary meeting minutes

- Moved by: Pete Anslow
- Second by: Steve Trowbridge
- Pass by voice without opposition

Chair noted that one presentation was not accepted because it was considered a new proposal (Chair noted the adopted time line where last meeting for new proposals was November 2014) and not within the announced scope of the meeting. Chair noted that in March 2015 meeting, the 500m NRZ proposal ownership was assigned to Atsushi Takai. Takai presented recently in the SMF ad hoc.

**From the March meeting minutes:** Chris Cole withdrew both 500m PSM4 proposals. Chris Cole asked to put the 500m NRZ proposal back on the table. Chair emphasized that proposals need support from multiple company. Chair assigned Atsushi Takai ownership for the 500m MRZ proposal.

Chair noted that, if motion #3 passes, he will need to report to the IEEE Working Group that the group had agreed to hearing a new proposal even though it was already past the scheduled date for new presentations. Chair noted that the presentation had not been posted.

# Motion #3: 8:48 a.m.

- Move to hear the following new proposal
  - Takai\_3bs\_02\_0515 titled "Baseline Proposal for 500m using 8x50G NRZ"
- M: Atsushi Sugitatsu
- S: Tomoo Takahara
- Procedural (>50%)
- Y: 36 , N: 7 , A: 34
- Result: passes! 8:59 a.m.

\_

There were questions from the floor on the changes to the presentation from the version shown in the SMF ad hoc meeting. Chair noted that the presentation will be scheduled for today.

Chair noted that photography and recording not allowed without permission.

Chair called for members of the press. John D'Ambrosia noted that as Chairman of the Ethernet Alliance he talks with press but will only disclose high level details available from published meeting material. No one else responded.

Chair continued with the introductory presentation.

Chair reminded attendees to observe decorum rules.

#### Goals:

- Hear technical proposals and supporting presentations
- Assess Resolution of Big Ticket Items (BTI)
- Make decisions
- Re-evaluate timeline

Chair 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.

Chair displays the Bylaws and Rules slides in <a href="http://www.ieee802.org/3/bs/public/15\_05/agenda\_3bs\_01\_0515.pdf">http://www.ieee802.org/3/bs/public/15\_05/agenda\_3bs\_01\_0515.pdf</a>

**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. 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, 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.

No one responded.

Chair reviewed the ground rules.

Chair reviewed the IEEE 802.3 Standards process.

Chair noted that the Standards Process flow diagrams will be updated in the future due to reflect the changes associated with the CSD.

Chair displayed links to the adopted objectives, PAR, CSD and timeline.

Chair showed the BTI progress including an assessment of the BTI status which was provided in http://www.ieee802.org/3/bs/public/15 03/bti 3bs 01 0315.pdf.

Chair noted that a liaison letter was received from OIF with the VSR-56G PAM4 draft and MSR-56G PAM4 draft. These documents and the liaison letter were posted on the website. Nathan Tracy stated that both draft specifications are subject to change as the draft evolves. Nathan also noted that a response from IEEE to OIF is not necessary; the intent was to facilitate communication.

Chair noted that rule changes now prevent informal communications to the ITU-T because it is a government agency. Chair noted that the ITU-T liaison letter will be drafted in July for approval by the Work Group and the Executive Committee.

Chair reviewed the status of the ad hocs.

Chair reminded attendees to sign into the IEEE-SA Meeting Attendance Tool and to sign book. Update affiliation, if necessary.

Chair reviewed the plans for the week.

# Presentation #1:

Title: Chief Editor's Report By: Pete Anslow, Ciena

See http://www.ieee802.org/3/bs/public/15 05/anslow 3bs 01 0515.pdf

Chair thanked the volunteer editors.

# Presentation #2:

Title: SMF Ad Hoc Report

By: Pete Anslow

See http://www.ieee802.org/3/bs/public/15 05/anslow 3bs 02 0515.pdf

# **Presentation #3:**

Title: Logic Ad Hoc Updates

By: Mark Gustlin

See: http://www.ieee802.org/3/bs/public/15\_05/gustlin\_3bs\_01\_0515.pdf

Chair noted that he had updated the website with the

# Presentation #4:

Title: MMF Ad Hoc Updates

By: Jonathan King

See: http://www.ieee802.org/3/bs/public/15\_05/king\_3bs\_01\_0515.pdf

# Presentation #5:

Title: Experimental validation of compatibility for heterogeneous DMT transmitters

By: Tomoo Takahara

See: http://www.ieee802.org/3/bs/public/15 05/takahara 3bs 01b 0515.pdf

Presenter noted that the presentation was updated to '01b' due to a change in the supporter list.

Broke at 9:58 a.m. Resume at 10:20 a.m.

Chair reminded attendees to sign into the IEEE-SA Meeting Attendance Tool and to sign book. Update affiliation, if necessary.

# Presentation #6:

Title: 8x50G NRZ Baseline Update

By: Mizuki Shirao

See: http://www.ieee802.org/3/bs/public/15\_05/shirao\_3bs\_01a\_0515.pdf

Presenter noted that the presentation was updated to '01a' due to a change in the supporter list.

# **Presentation #7:**

Title: BTI Supporting Data for 8x50G NRZ

By: Atsushi Takai

See: http://www.ieee802.org/3/bs/public/15 05/takai 3bs 01b 0515.pdf

 Version presented was different the posted version and contains new data. Chair noted that the presenter had not requested permission to present the updated version.

- Presenter to send updated presentation '01b' for posting.
- Piers Dawe offered his support to the presentation.
- Dan Dove asked the presenter to update the presentation to remove specific vendor information on the CDR slide in version 01a.

Chair noted that keeping up with posting of presentation update requests has become unmanageable. Chair noted that in the future, updated presentations will not be posted until the end of the meeting.

#### Presentation #8:

Title: Baseline Proposal for 500m using 8x50G NRZ

By: Atsushi Takai

See: http://www.ieee802.org/3/bs/public/15 05/takai 3bs 02 0515.pdf

# Presentation #9:

Title: 400G-PSM4: A Proposal for the 500m Objective using 100 Gb/s per Lane Signaling

By: Brian Welch

See: http://www.ieee802.org/3/bs/public/15\_05/welch\_3bs\_01a\_0515.pdf

Chair received a request from Alan Tipper to show an updated presentation that adds additional slides with more analysis. No one objected.

Chair received a request to move Alan Tipper's presentation after Winton Way and Keith Conroy. No one objected.

#### Presentation #10:

Title: Proposal for 400GE Optical PMD for 2km SMF Objective based on 4 x 100G PAM4

By: David Lewis

See: http://www.ieee802.org/3/bs/public/15 05/lewis 3bs 01a 0515.pdf

- Clarifying questions were asked and answered.
- Discussed TBD entries on received optical specifications on slide 9.

Broke at 11:51 a.m. Resume at 1:00 p.m.

# Presentation #11:

Title: 4x100G PAM4 Big Ticket Item: Dispersion Penalty Worst Case

By: Winston Way

See: http://www.ieee802.org/3/bs/public/15\_05/way\_3bs\_01a\_0515.pdf

# Presentation #12:

Title: 120Gb/s/Lambda PAM4 2km MZM Experimental Results

By: Keith Conrov

See: http://www.ieee802.org/3/bs/public/15\_05/conroy\_3bs\_01a\_0515.pdf

- Presenter to send updated presentation '01b' with additional supporters for posting.
- Clarifying questions were asked and answered.
- Received comments regarding non-linearity assumptions in the presentation

#### Presentation #13:

Title: 100Gb/s/Lambda PAM4 Status of BTIs

By: Alan Tipper

See: http://www.ieee802.org/3/bs/public/15 05/tipper 3bs 01a 0515.pdf

# Presentation #14:

Title: 400GBase-LR8: A Proposal for 10 km Objective Using 50 Gb/s PAM4 Signaling

By: Ali Ghiasi

See: <a href="http://www.ieee802.org/3/bs/public/15\_05/ghiasi\_3bs\_01b\_0515.pdf">http://www.ieee802.org/3/bs/public/15\_05/ghiasi\_3bs\_01b\_0515.pdf</a>

- Presenter to send updated presentation '01b' with additional supporters for posting.
- Dan Dove requested to have his name removed from the support list because he was not asked to re-affirm his support prior to the submission.

Chair reminded attendees to sign into the IEEE-SA Meeting Attendance Tool and to sign book. Update affiliation, if necessary.

#### Presentation #15:

Title: 400Gb/s 2km & 10km duplex SMF PAM-4 PMD Baseline Specifications

By: Chris Cole

See: http://www.ieee802.org/3/bs/public/15 05/cole 3bs 01a 0515.pdf

- Presenter to send updated presentation '01a' with additional supporters for posting.
- Several questions regarding PAM4 cross talk assumptions.

Broke at 3:20 p.m. Resumed at 3:54 p.m.

# Presentation #16:

Title: 400Gb/s 2km & 10km duplex SMF PAM-4 PMD Analysis & Measurements

By: Chris Cole

See: http://www.ieee802.org/3/bs/public/15\_05/cole\_3bs\_02\_0515.pdf

Clarifying questions were asked and answered.

# Presentation #17:

Title: Updated considerations and test results on 8x50G PAM4

By: Peter Stassar

See: http://www.ieee802.org/3/bs/public/15\_05/stassar\_3bs\_01\_0515.pdf

• There was a request for more information on the test setup to be included in the future.

# Presentation #18:

Title: Receiver technical feasibility and cost trends on 10-km 8x50G proposals

By: Atul Srivastava

See: http://www.ieee802.org/3/bs/public/15 05/srivastava 3bs 01a 0515.pdf

Broke at 5:15 p.m. Resume at 5:36 p.m.

#### Presentation #19:

Title: SMF Proposal Summary

By: John D'Ambrosia

See: http://www.ieee802.org/3/bs/public/15\_05/dambrosia\_3bs\_02\_0515.pdf

• Reviewed the 400 GbE SMF summary on slide 6 and the notes associated with the terms "x1 fibers", "x4 fibers" and "BiDi".

Performed a room count: 116 people.

# **Straw poll #1:** 5:45pm

I would support adopting an NRZ-based baseline solution for all SMF reach objectives

- Yes = 15
- No = 85
- Abstain = 8

# **Straw poll #2:** 5:51pm

I would support a PAM4 based baseline solution for all SMF reach objectives

Yes: 74No: 25Abstain: 7

# **Straw poll #3:** 6:00pm

I would support a 8 x 50G based baseline solution for all SMF reach objectives

Yes: 31No: 53Abstain: 12

# **Straw poll #4:** 6:03pm

I would support a 4 x 100G based baseline solution for all SMF reach objectives

Yes: 26No: 66Abstain: 16

# **Straw poll #5:** 6:05pm

For the 10km SMF reach objective I would support

- a. 8λ x 50G baseline solutions.
- b. 4λ x 100G DMT baseline solutions
- c. None of the above
- A: 75
- B: 19
- C: 1
- Abstain: 15

# Straw Poll #6: 6:11pm

For the 2km SMF reach objective I would support

- a. 8 λ x 50G baseline solutions
- b. 4 λ x 100G PAM-4 baseline solutions
- C. None of the above
- A: 50
- B: 36
- C: 0
- Abstain 21

# **Straw Poll #7:** 6:15pm

For the 500m reach objective I would support

- a. "BiDi x 50G NRZ x8 Fiber" Baseline
- b. "2 λ x 50G NRZ x4 Fiber" Baseline
- c. "1 λ x 100G PAM-4 x4 Fiber" Baseline
- D. None of the above
- A: 7
- B: 4
- C: 50
- D: 15
- Abstain: 29

# Straw Poll #8: 6:20pm

I would support a motion to adopt a baseline for the 10km SMF PMD objective based on the 10km proposal in cole\_3bs\_01a\_0515. (8x50G PAM4 WDM)

- Yes: 69
- No: 26
- Abstain: 15

# **Straw Poll #9:** 6:31pm

I would support a motion to adopt a baseline for the 2km SMF PMD objective based on the 2km proposal in cole\_3bs\_01a\_0515. (8x50G PAM4 WDM)

- Yes: 43
- No: 37
- Abstain: 20

# **Straw Poll #10:** 6:43pm

I would support a motion to adopt a baseline for the 500m SMF PMD objective based on welch\_3bs\_01a\_0515. (4x100G PAM4 PSM4)

Yes: 52No: 25Abstain: 27

# **Straw Poll #11:** 6:47pm

I would support a motion to adopt a baseline for the 2km SMF PMD objective based on lewis\_3bs\_01a\_0515. (4x100G PAM4 WDM)

Yes: 36No: 37Abstain: 31

# **Straw Poll #12:** 6:53pm

I would support a motion to adopt a baseline for the 10km SMF PMD objective based on 4x100G DMT WDM

Yes: 20No: 58Abstain: 30

Chair noted that the straw polls provide information on the topics for consensus building.

Chair announced a start time of 9:00 a.m. Tuesday.

Broke at 6:58 p.m.

# IEEE P802.3bs Task Force Meeting – 19 May 2015:

Prepared by Kent Lusted

Resumed at 9:08 a.m. on 19 May 2015 by John D'Ambrosia, IEEE P802.3bs Task Force Chair.

Chair displayed agenda slides:

http://www.ieee802.org/3/bs/public/15\_05/agenda\_3bs\_01\_0515.pdf

**Patent policy:** Chair displayed the patent policy related slides in the agenda (<a href="http://www.ieee802.org/3/bs/public/15\_05/agenda\_3bs\_01\_0515.pdf">http://www.ieee802.org/3/bs/public/15\_05/agenda\_3bs\_01\_0515.pdf</a>). Chair asked if anyone is unfamiliar with the IEEE patent policy. No one responded. Chair called for potentially essential patents. No one responded. Chair displayed the other guidelines for IEEE WG meetings.

Chair outlined the plans for the day.

#### Presentation #20:

Title: 400GbE PCS and PMA Baseline Proposals

By: Mark Gustlin

See: http://www.ieee802.org/3/bs/public/15\_05/gustlin\_3bs\_02\_0515.pdf

- Clarifying questions were asked and answered.
- Discussed the need to build consensus on FEC architecture.
- There was a request to reconsider the removal of the precoder in the proposal.
- There was a request for more data on error propagation on bit muxing.

Chair reminded attendees to sign into the IEEE-SA Meeting Attendance Tool and to sign book. Update affiliation, if necessary.

#### Presentation #21:

Title: OTN Reference Point Clarifications

By: Juan-Carlos Calderon

See: http://www.ieee802.org/3/bs/public/15\_05/calderon\_3bs\_01\_0515.pdf

•

Break at 10:07 a.m. Resume at 10:33 a.m.

# Presentation #22:

Title: Thoughts on the FEC Architecture

Bv: Mark Gustlin

See: http://www.ieee802.org/3/bs/public/15\_05/gustlin\_3bs\_03\_0515.pdf

• Clarifying questions were asked and answered.

Chair reminded attendees to sign into the IEEE-SA Meeting Attendance Tool and to sign book. Update affiliation, if necessary.

#### Presentation #23:

Title: Investigation on Technical Feasibility of FEC Architecture with 1X400Gbps or 4X100Gbps By: Xinyuan Wang

See: http://www.ieee802.org/3/bs/public/15 05/wang x 3bs 01 0515.pdf

- Clarifying questions were asked and answered.
- Much discussion on the 1x400G vs. 4x100G tradeoffs.

Broke at 11:47 a.m. Resume at 1:15 pm.

#### Presentation #24:

Title: Configurations and Analyses of FEC and Alignment Markers for 400GE

By: Zhongfeng Wang

See: <a href="http://www.ieee802.org/3/bs/public/15\_05/wang\_z\_3bs\_01\_0515.pdf">http://www.ieee802.org/3/bs/public/15\_05/wang\_z\_3bs\_01\_0515.pdf</a>

Clarifying questions were asked and answered.

# Presentation #25:

Title: FEC Performance over PAM4 links with Bit-multiplexing

By: Tongtong Wang

See: http://www.ieee802.org/3/bs/public/15 05/wang t 3bs 01 0515.pdf

• Much discussion on the breakout usage case and the optical module

#### Presentation #26:

Title: FEC performance with PAM4 on multi-part links

By: Pete Anslow

See: http://www.ieee802.org/3/bs/public/15\_05/anslow\_3bs\_03\_0515.pdf

Clarifying questions were asked and answered.

Chair reminded participants that the social is Tuesday evening.

Break at 3:10pm. Resume at 3:44pm.

#### Presentation #27:

Title: CDAUI-8 Simulation Results And Transmitter Specification Proposal By: Raj Hegde

See: <a href="http://www.ieee802.org/3/bs/public/15\_05/hegde\_3bs\_01a\_0515.pdf">http://www.ieee802.org/3/bs/public/15\_05/hegde\_3bs\_01a\_0515.pdf</a>

- Presenter to send updated presentation '01a' for posting.
- Request to include the package information in a future presentation.

# Presentation #28:

Title: CDAUI-8 PAM4 Reference Receiver CDR

By: Andre Szczepanek

See: http://www.ieee802.org/3/bs/public/15\_05/szczepanek\_3bs\_01\_0515.pdf

• Discussed the jitter tolerance limits.

Chair reminded attendees to sign into the IEEE-SA Meeting Attendance Tool and sign the book. Update affiliation, if necessary.

Chair noted that the Wednesday start time is 9:00 a.m.

Chair encouraged participants to work offline to build consensus.

Break for the day at 5:37 p.m.

# IEEE P802.3bs Task Force Meeting – 20 May 2015:

Prepared by Kent Lusted

Resumed at 9:00 a.m. on 20 May 2015 by John D'Ambrosia, IEEE P802.3bs Task Force Chair.

Chair thanked Lynn Kennedy for her work on the meeting planning.

Chair displayed agenda slides:

http://www.ieee802.org/3/bs/public/15\_05/agenda\_3bs\_01\_0515.pdf

**Patent policy:** Chair displayed the patent policy related slides in the agenda (<a href="http://www.ieee802.org/3/bs/public/15\_05/agenda\_3bs\_01\_0515.pdf">http://www.ieee802.org/3/bs/public/15\_05/agenda\_3bs\_01\_0515.pdf</a>). Chair asked if anyone is unfamiliar with the IEEE patent policy. No one responded. Chair called for potentially essential patents. No one responded.

Chair displayed the Guidelines for IEEE WG meetings.

Chair reminded participants of task force decorum.

Chair reminded attendees to sign the book and into the IEEE Attendance Tool. Update affiliation, if necessary.

Chair noted that the dambrosia\_3by\_01\_0515 file does not exist.

#### **Attendance Straw Polls**

- I will attend the IEEE 400 Gb/s meetings at the July plenary in Hawaii, USA (week of July 12, 2015)
  - Y: 64 , Maybe: 14 , N: 17
- I will attend the IEEE 400 Gb/s meetings at the September interim in Bonita Springs, FL, USA (week of Sept 14, 2015)
  - Y: 57 , Maybe: 36 , N: 3

Chair reviewed dambrosia\_3by\_02\_0515.

#### **Motion #4:** 9:12am

Move to adopt 4 lambda x 100 Gb/s as the basis for the 10 km SMF PMD objective

- M: Markus Weber
- S: Tomoo Takahara
- Technical (>= 75%),
- Y: 36 , N: 55 , A: 26
- Result: fails 9:26 am

# Motion #5: 9:15am

Move to change the text of motion #4 to be:

- Move to adopt 4 lambda x 100 Gb/s DMT as the basis for the 10 km SMF PMD objective
- M: Ali Ghiasi
- S:
- Motion fails due to lack of second

Discussion and vote on Motion 4 proceeded. (See Motion 4)

# Motion #6: 9:27am

Move to adopt 8 lambda x 50 Gb/s as the basis for the 10 km SMF PMD objective

- M: Peter Stassar
- S: Ali Ghiasi
- Technical (>= 75%),
- Y: 74 , N: 29 , A: 16
- Result: fails 9:37 am

John D'Ambrosia passed Chair responsibility to Bob Grow.

John D'Ambrosia discussed his observations and the steps to progress forward.

Participants discussed observations in the task force.

There was a request from the floor to collect counts of motion #6 by 802.3 voters.

John D'Ambrosia noted that based on IEEE 802.3 rules a motion will pass or fail based on the "all in the room" counts not the "802.3 voter" count, which is only used for informative purposes.

# Motion #7: 10:11am

Move to reconsider motion #6

- M: Dave Lewis
- S: Dan Dove
- Procedural (>50%)
- Y: 92 N: 13 A: 8
- Motion passes 10:49 am

Bob Grow as acting Chair asked Dave Lewis to reconfirm was on the prevailing side. Dave Lewis confirmed that he was on the prevailing side.

David Law noted that there is a motion on the floor when the task force broke.

Broke at 10:13 a.m. Resume at 10:41 a.m.

Bob Grow, acting Chair, resumed the Task Force at 10:41 a.m. Bob Grow noted that motion #7 is on the floor.

Bob Grow gave a brief overview of the rules associated with 'motion to reconsider' in Robert's Rules of Order.

Vote on Motion #7 @ 10:49am.

# Reconsideration of Motion #6 10:50am

Move to adopt 8 lambda x 50 Gb/s as the basis for the 10 km SMF PMD objective

- M: Peter Stassar
- S: Ali Ghiasi
- Technical (>= 75%),
- All: Y: 87, N: 22, A: 18 motion passes! 10:53 am
- 802.3 (informative): Y: 65 N: 18 A: 11

Bob Grow returned the Chair responsibility to John D'Ambrosia.

# Motion #8: 10:58am

Move to Adopt NRZ as the modulation format for the SMF (Single Mode Fiber) PMD objectives

- M: Ali Ghiasi
- S: Adee Ran
- Technical (>= 75%),
- All: Y: 24 , N: 84 , A: 13 motion fails 11:11 am
- 802.3 voters (informative): Y: 17 N: 62 A: 9

Chair noted that a voted yes would adopt NRZ for all 3 SMF reach objectives. Chair noted that based on IEEE 802.3 rules a motion will pass or fail based on the "all in the room" counts not the "802.3 voter" count.

Chair noted that a similar follow-on motion is expected for PAM4 is expected.

# Motion #9: 11:15am

Move to adopt PAM4 as the modulation format for the SMF (single mode fiber) PMD objectives

- M: Ali Ghiasi
- S: Peter Stassar
- Technical (>= 75%),
- All: Y: 74 , N: 27 , A: 15 motion fails. 11:21 am
- 802.3 voters (informative): Y: 57, N: 22, A: 9

Chair noted that a voted yes would adopt PAM4 for all 3 SMF reach objectives. Chair noted that based on IEEE 802.3 rules a motion will pass or fail based on the "all in the room" counts not the "802.3 voter" count.

# Motion #10: 11:26am

Move to adopt 8x50G PAM4 as the modulation format for the 10km SMF (single mode fiber) PMD objective

- M: Chris Cole
- S: Dan Dove
- Technical (>= 75%)
- All: Y: 86 , N: 24 , A: 12 motion passes 11:39 am
- 802.3 (informative) Y: 65 N: 17 A: 10

Chair allowed 10 minutes for discussion of the motion.

# **Motion #11:** 11:44am

Move to adopt a baseline for the 10km SMF PMD objective based on the 10km proposal in cole\_3bs\_01a\_0515

- M: Chris Cole
- S: Ali Ghiasi
- Technical (>= 75%),
- All: Y: 62 N: 6 A: 34 motion passes 11:53 am.

Chair asked Chief Editor if there was sufficient information in the proposal to implement the baseline. Pete Anslow confirmed yes.

# Motion #12: 11:53am

Move to adopt 4x100G PAM4 PSM4 as the modulation format for the 500m SMF (single mode fiber) PMD objective

- M: Brian Welch
- S: Brad Booth
- Technical (>= 75%)
- All: Y: 66 , N: 5 , A: 37
- Result: passes 11:59 am

Chair asked Pete Anslow to lead some ad hocs to address the missing baselines.

Chair reviewed the future meeting schedule.

# **Future Meetings**

- July 2015 Plenary Week of July 12
  - Hilton Waikoloa Village
- Sept 2015 Interim Week of Sept 14
  - o Hyatt Regency Coconut Point, Bonita Springs, FL
- Nov 2015 Plenary
  - Hyatt Regency Dallas, Dallas, TX, USA

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

# Motion #13:

Motion to Adjourn:

- M: Steve Trowbridge
- S: Mark Gustlin
- Pass by voice without opposition.

Meeting ended at 12:02 p.m.

# **Attendees**

IEEE P802.3bs 400GbE Task Force			5/18/2015	5/19/2015	5/20/2015
Last Name	First Name	Employer / Affiliation	Mon	Tues	Wed
Andrewartha	Mike	Microsoft			Х
Anslow	Pete	Ciena Corporation	х	Х	х
Araj	Tomoyuki	Socionext	Х	Х	х
Baden	Eric	Broadcom	Х	Х	х
Balasubramanian	Vittal	Dell Force10	Х	Х	х
Balasubramonian	Venu	Marvell	Х	Х	х
Baldwin	Thananya	Ixia		Х	
Bernstein	Gary	Leviton	Х	Х	Х
Bhatt	Vipul	Inphi		Х	Х
Bliss	Will	Broadcom	Х	Х	
Bouda	Martin	Fujitsu	Х	Х	х
Bower	Patricia	Socionext		Х	
Brooks	Paul	JDSU	х	Х	Х
Brown	Matt	Applied Micro	х	Х	Х
Burt	Kevin	Samtec	х	Х	
Butter	Adrian	IBM	Х	Х	х
Caggioni	Francesco	APM	Х	Х	х
Calderon	Juan-	Cortina Systems		Х	
	Carlos	, and the second			
Carroll	Martin	Verizon	Х		х
Chang	Xin	Huawei	Х	Х	Х
Chen	David	Nokia	Х		
Cheng	Wheling	Ericsson	Х	Х	Х
Chuang	Keng Hua	HP Networking	Х		
Cober	Don	Comira		Х	
Cole	Chris	Finisar	Х	Х	Х
Conroy	Keith	MultiPhy	Х	Х	х
Cui	Zhenwei	Huawei	Х	Х	Х
D'Ambrosia	John	Dell	х	Х	Х
Dawe	Piers	Mellanox	Х	Х	Х
Dedic	lan	Socionext	х	Х	
Dillow	Daniel	FCI	х		Х
Dove	Dan	Dove Networking	Х		
		Solutions (DNS)			
Dudek	Mike	QLogic	х	Х	Х
Estes	Dave	Spirent			Х
		Communications			
Furukawa	Tetsuji	NTT	х	Х	Х
Ghiasi	Ali	Ghiasi Quantum	х	Х	
Gong	Zhigang	D-Net	х	Х	Х
Gorshe	Steve	PMC_Sierra	х	Х	Х
Gravel	Mark	HP Networking	Х		

Grow	Bob	RMG Consulting			Х
Gustlin	Mark	Xilinx	Х	Х	
Hall	Eric	Aurrion	Х		
Hansen	Per	OE Solutions	Х	Х	х
Healey	Adam	Avago Technologies	Х	Х	Х
Hegde	Raj	Broadcom	Х		х
Hyakutake	Yasuhiro	Adamant Co. Ltd			х
Ingham	Jonathan	Avago Technologies	Х	Х	
Irwin	Scott	Mosys	Х	Х	х
Isono	Hideki	Fujitsu Ltd.	Х	Х	
Issenhuth	Tom	Microsoft	Х	Х	х
Jackson	Kenneth	Sumitomo	Х	Х	х
Kareti	Upen Reddy	Cisco	Х	Х	х
Kawahara	Keisuke	Furukawa Electric			Х
Kelsen	Michael	Time Warner Cable	Х	Х	
Kipp	Scott	Brocade	Х	Х	Х
Kobayashi	Shoukei	NTT	Х	Х	Х
Kojima	Keisuke	Mitsubishi Electric Res. Lab	х	Х	Х
Kolesar	Paul	CommScope	Х	Х	Х
Lane	Brett	Panduit Corp.		Х	
Langhammer	Martin	Altera	Х	Х	
Latchman	Ryan	MACOM	Х	Х	
Law	David	HP	Х		
LeCheminant	Greg	Keysight	х	X	Х
		Technologies			
Lewis	Dave	JDSU	Х	X	
Li	Mike	Altera	X	X	X
Li	Shaohua	Brocade	Х	X	Х
Lingle, Jr.	Robert	OFS	Х	X	
Liu	Hai-Feng	Intel	Х	X	X
Lusted	Kent	Intel	Х	X	X
Maki	Jeffery	Juniper Networks	Х	X	X
Marris	Arthur	Cadence	Х	X	
McDermott	Tom	Fujitsu	Х	X	X
McDonough	John	NEC America		X	X
McSorley	Greg	Amphenol		X	
Mehta	Anil	Brocade		X	
Mei	Richard	Commscope	Х		X
Mellitz	Richard	Intel	Х	X	X
Mitsunori	Hamada	Fujitsu Optical Components	Х	Х	Х
Mooney	Paul	Spirent Communications	Х	X	
Murray	Dale	Light Counting	Х	Х	Х
Nakamoto	Edward	Spirent Communications	Х	Х	

Nishimura	Takeshi	Yamaichi Electronics	Х	Х	Х
Nowell	Mark	Cisco	Х		Х
Ofelt	David	Juniper Networks	Х	Х	Х
Ogura	Ichiro	Petra	Х	Х	Х
Palkert	Tom	Luxtera	Х	Х	
Park	Moon	OE Solutions	Х	Х	Х
Parthasarathay	Vasudevan	Broadcom		Х	Х
Pepeljugoski	Petar	IBM		Х	
Pham	Phong	US Conec Ltd	Х	Х	
Piencich	Walter	IEEE	Х		
Pimpinella	Rick	Panduit Corp.	Х	Х	Х
Rabinovich	Rick	Alcatel-Lucent	Х	Х	Х
		Enterprise			
Ran	Adee	Intel	Х	Х	Х
Ressl	Mike	Hitachi Cable	Х	Х	Х
		America			
Roth	Chris	Molex	Х	Х	Х
Rotolo	Salvatore	STM Microelectronics	Х	Х	Х
Sakai	Toshiaki	Socionext	Х	Х	
Sakamoto	Hisaya	Fujitsu Optical	Х	Х	Х
		Components			
Sambasivan	Sam	AT&T	X		
Satake	Toshiaki	US Conec Ltd	Х	Х	
Schube	Scott	Intel	Х		
Sella	Omer	Mellanox	Х	Х	Х
Serizawa	Naoshi	Yazaki			Х
Shanbhag	Megha	TE Connectivity	Х	Х	
Shirao	Mizuki	Mitsubishi Electric	Х	Х	Х
Sommers	Scott	Molex	X	X	Х
Sone	Yoshiaki	NTT	X	X	Х
Sparacin	Daniel	Aurrion	X		
Sprague	Ted	Infinera	Х	Х	Х
Srivastava	Atul	NEC/NTT	Х	Х	
Stassar	Peter	Huawei	Х	Х	Х
Stone	Rob	Broadcom	Х	Х	Х
Sugitatsu	Atsushi	mitsubishi Electric	Х	Х	Х
Sun	Phil	Marvell	Х	Х	Х
		Semiconductor			
Swanson	Steve	Corning	Х	Х	Х
Szczepanek	Andre	Inphi	Х	Х	
Szeto	William	Xtera	Х	Х	
Tailor	Bharat	Semtech Corp	Х	Х	Х
Tajima	Takayuki	Yazaki			Х
Takahara	Tomoo	Fujitsu Laboratories	Х	Х	
Takahashi	Satoshi	POR Promotion			Х
Takahata	Kiyoto	NTT	Х	Х	Х
Takai	Atsushi	Oclaro	Х	Х	Х
Tamura	Kohichi	Oclaro Japan	Х	Х	Х

Tanaka	Toshiki	Fujitsu Laboratories	Х	Х	Х
Ten	Sergey	Corning	X	X	
Tipper	Alan	Semtech	X	X	Х
Tracy	Nathan	TE Connectivity	X	X	Х
Trowbridge	Steve	Alcatel-Lucent	X	X	
Tsukamoto	Yoshihiro	Mitsubishi Rayon			Х
Ulrichs	Ed	Source Photonics	Х	Х	Х
Walker	Clint	Intel		Х	
Wang	Roy	HP Networking	Х		
Wang	Tongtong	Huawei	Х	Х	Х
Wang	Xinyuan	Huawei	Х	Х	Х
Wang	Zhongfeng	Broadcom	Х	Х	Х
Way	Winston	NeoPhotonics	Х	Х	
Weber	Markus	Socionext	Х	Х	
Welch	Brian	Luxtera	Х	X	Х
Wertheim	Oded	Mellanox	Х	Х	Х
White	Martin	Cavium	Х	Х	Х
Xu	Yu	Huawei	Х	Х	Х
Yuki	Hayato	AutoNetworks Tech			Х