Approved Minutes
IEEE P802.3bs 400 GbE Task Force
Plenary Meeting
July 14-16, 2015
Waikoloa, HI, USA
Prepared by Kent Lusted

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IEEE P802.3bs 400 Gb/s Task Force interim meeting convened at 1:07 p.m., Monday, July 14, 2015, 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/15_07/agenda_3bs_01a_0715.pdf
Chair reviewed the agenda. There were 3 liaison letters to address in the meeting.

Chair noted that there will be two rounds of straw polls and motions.

Motion #1:
Move to approve the agenda
- Moved by: Pete Anslow
- Second by: Mark Gustlin
- Pass by voice without opposition

May 2015 interim meeting minutes were posted after the meeting. No comments were received against the posted minutes.

Motion #2:
Move to approve the IEEE P802.3bs May 2015 interim meeting minutes
- Moved by: Adee Ran
- Second by: Thananya Baldwin
- Pass by voice without opposition

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.

Chair reminded attendees to sign the book and sign into the IEEE Attendance tool.

Goals:
- 20 Technical Presentations

- o SMF (500m / 2km) baselines
- o PCS (FEC) / PMA
- o CDAUI electricals/ COM
- Decisions needed to generate D1.0
  - o PCS (FEC) / PMA Baseline
  - o 4x100G PAM4 PSM4 Baseline
  - o 2km SMF Baseline
  - o Timeline to be revisited @ meeting after all baseline decisions made.
- Liaisons & Communications
  - o Respond to COBO communication
  - o Status update to ITU-T and OIF

Chair displayed the reflector and web page information.

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
http://www.ieee802.org/3/bs/public/15_07/agenda_3bs_01a_0715.pdf

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

Chair reviewed the status of the ad hocs.

Chair reviewed the liaisons and communications.

Chair reviewed the plans for the week. The agenda was updated with presentation order.

Presentation #1:
Title: Consortium for On-Board Optics (COBO)
By: Brad Booth
See http://www.ieee802.org/3/bs/public/15_07/booth_3bs_01_0715.pdf
- Reviewed COBO status

Brad Booth noted that the purpose of the liaison letter was to notify the IEEE of the formation of the consortium. (See
http://ieee802.org/3/minutes/jul15/incoming/COBO_to_IEEE_802d3_April_2015.pdf)

Chair noted that Tuesday is scheduled to discuss FEC.   The schedule is subject to change.

Presentation #2:
Title: 400GbE PCS and PMA Baseline Proposals
By: Mark Gustlin
See http://www.ieee802.org/3/bs/public/15_07/gustlin_3bs_02a_0715.pdf

Presentation #3:
Title: 1x400G vs 4x100G FEC Implications
By: Mark Gustlin on behalf of Bill Wilkie
See: http://www.ieee802.org/3/bs/public/15_07/wilkie_3bs_01a_0715.pdf
- Mark Gustlin noted that the difference between rev '01' and '01a' was editorial changes.
- Clarifying questions were asked and answered.

Presentation #4:
Title: Further Clarification of FEC Performance over PAM4 links with Bit-multiplexing
By: Xinyuan Wang
See: http://www.ieee802.org/3/bs/public/15_07/wang_x_3bs_01_0715.pdf
- There was concern about the additional latency with 20k bits in the proposal.
- Discussed the effects of the burst error on FOM.

Break at 3:02 p.m. Resume at 3:23 p.m.

Presentation #5:
Title: Summary of 400GbE FEC Architecture
By: Tongtong Wang
See: http://www.ieee802.org/3/bs/public/15_07/wang_t_3bs_01_0715.pdf

- There were questions on the BER target assumptions
- Martin Langhammer asked the author to correct references in the presentation to his latest ad hoc contribution.
- There were questions on the term "BER" as the detector error ratio.

Presentation #6:
Title: FEC performance with PAM4 precoding
By: Pete Anslow
See: http://www.ieee802.org/3/bs/public/15_07/anslow_3bs_04_0715.pdf

Presentation #7:
Title: 1 x 400G vs. 4 x 100G FEC performance
By: Pete Anslow
See: http://www.ieee802.org/3/bs/public/15_07/anslow_3bs_05a_0715.pdf

- Presentation was updated to reflect additional supporters. Version 05a

Chair asked if there was objection to hearing the next presentation anslow_3bs_06_0715 before Q&A on both presentations. There was no objection.

Presentation #8:
Title: 1 x 400G vs. 4 x 100G FEC performance further analysis
By: Pete Anslow
See: http://www.ieee802.org/3/bs/public/15_07/anslow_3bs_06_0715.pdf

- Clarifying questions were asked and answered.
- Adee Ran offered his support to the first presentation '05a'

Chair confirmed a start time of 8:30 a.m. on Wednesday.

Break at 5:30 p.m.

IEEE P802.3bs Task Force Meeting – July 15, 2015:

Prepared by Kent Lusted

Resumed at 8:30 a.m. on July 15, 2015 by John D'Ambrosia, IEEE P802.3bs Task Force Chair.

Chair displayed agenda slides:
http://www.ieee802.org/3/bs/public/15_07/agenda_3bs_01a_0715.pdf

Patent policy: Chair displayed the patent policy related slides in the agenda (http://www.ieee802.org/3/bs/public/15_07/agenda_3bs_01a_0715.pdf) . 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.

Chair noted that David Ofelt's presentation ofelt_3bs_01_0715 was updated with an additional graphic for clarification on the FEC operation. Chair asked if there was objection to the updated presentation. No one objected.

Chair reminded participants to sign the book and sign into the IEEE Attendance tool.

Presentation #9:
Title: Reduced-Complexity Data Alignment Scheme for 400GE
By: Zongfang Wang
See: http://www.ieee802.org/3/bs/public/15_07/wang_z_3bs_01_0715.pdf
- Chair reminded Zongfang Wang that supporters can be added until the end of the presentation, not after the presentation.
- Much discussion on the data matching algorithm.

Chair reminded participants to circulate proposals and build consensus offline prior to presenting in the task force.

Presentation #10:
Title: 1x400GE FEC Implementation
By: Martin Langhammer
See: http://www.ieee802.org/3/bs/public/15_07/langhammer_3bs_01_0715.pdf
- Author noted that this presentation covers an implementation of a FEC proposal.
- Clarifying questions were asked and answered.

Presentation #11:
Title: 400GE FEC Breakout Architecture Analysis
By: Martin Langhammer
See: http://www.ieee802.org/3/bs/public/15_07/langhammer_3bs_02_0715.pdf
- Clarifying questions were asked and answered.

Presentation #12:
Title: FEC Architecture and Breakout
By: Phil Sun
See: http://www.ieee802.org/3/bs/public/15_07/sun_3bs_01_0715.pdf
- Clarifying questions were asked and answered.

Break at 10:07 a.m. Resume at 10:30 a.m.

Presentation #13:
Title: Views on the FEC Architecture Decision
By: David Ofelt
See: http://www.ieee802.org/3/bs/public/15_07/ofelt_3bs_01a_0715.pdf
- Clarifying questions were asked and answered.

Chair noted that Mark Gustlin has an update to his proposal based on further consensus building.

Presentation #14:
Title: 400GbE PCS and PMA Baseline Proposals
By: Mark Gustlin
See http://www.ieee802.org/3/bs/public/15_07/gustlin_3bs_02c_0715.pdf
- Red text highlights the changes from version 02a that was originally presented.
- There was a request to remove the "using 1x400 FEC architecture" on the conclusion slide.

Straw poll #1: 11:19 a.m.
I would support a motion to adopt gustlin_3bs_02c_0715 as the baseline for the 400GbE PCS and PMA
- Yes: 80
- No: 0
- Abstain: 11

Chair asked if there was objection to swapping the order of the nicholl_3bs_01_0715 and cole_3bs_01_0715 presentations. No one objected.

Break at 11:28 a.m. Resumed at 1:11 p.m.

Presentation #15:
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_07/welch_3bs_01a_0715.pdf
- Clarifying questions were asked and answered.

Presentation #16:
Title: 400Gb/s 8x50G PAM-4 WDM 2km SMF PMD Baseline Specifications
By: Chris Cole
See: http://www.ieee802.org/3/bs/public/15_07/cole_3bs_01a_0715.pdf

Presentation #17:
Title: 400Gb/s 2km SMF PMD Considerations
By: Gary Nicholl
See: http://www.ieee802.org/3/bs/public/15_07/nicholl_3bs_01c_0715.pdf

Presentation #18:
Title: Consideration for CRU BW and Jitter Tolerance
By: Ali Ghiasi
See: http://www.ieee802.org/3/bs/public/15_07/ghiasi_3bs_01_0715.pdf
- Clarifying questions were asked and answered.

Chair reminded participants to sign the book and sign into the IEEE Attendance tool.

Presentation #19:
Title: Optical Transmitters and Receivers Compliance Test Methodogy
By: Ali Ghiasi
See: http://www.ieee802.org/3/bs/public/15_07/ghiasi_3bs_02a_0715.pdf
- There was an error on CDAUI-8 (83E) on slide 3. Author to send an updated presentation '02a'.
- There was a request for a clarification note on slide 15.

Break at 2:56 p.m. Resume at 3:25 p.m.

Presentation #20:
Title: COM Parameter Refinements for CDAUI Chip to Chip 8x50Gbps PAM4
By: Rich Mellitz
See: http://www.ieee802.org/3/bs/public/15_07/mellitz_3bs_01a_0715.pdf

Presentation #21:
Title: Channel Operating Margin (COM) Proposal for CDAUI-8
By: Raj Hegde
See: http://www.ieee802.org/3/bs/public/15_07/hegde_3bs_01a_0715.pdf
- Chair noted that an updated 01a presentation was received with additional supporters.
- Clarifying questions were asked and answered.

Presentation #22:
Title: Effects of Additional FIR Taps to the CDAUI-8 Chip-to-Chip (C2C) Link Performance
By: Mike Li
See: http://www.ieee802.org/3/bs/public/15_07/li_3bs_01a_0715.pdf
- There was a request to perform the same analysis on more than the 1 channel listed in the presentation.

Presentation #23:
Title: 802.3bs - 400 Gb/s Task Group Considerations for Test Fixture Specifications
By: Chris Diminico
See: http://www.ieee802.org/3/bs/public/15_07/diminico_3bs_01a_0715.pdf

- Discussed the need to confirm that the electrical parameters for the CAUI-4 test fixtures will apply to CDAUI-16 and CAUI-8.

Chair announced a start time of 8:30 a.m. for Thursday morning.

Break for the day at 5:01 p.m.

IEEE P802.3bs Task Force Meeting – July 16, 2015:
Prepared by Kent Lusted

Resumed at 8:31 a.m. on July 16, 2015 by John D'Ambrosia, IEEE P802.3bs Task Force Chair.

Chair gave a reminder to sign the attendance book. IMAT not available until the closing plenary.

Chair displayed agenda slides:
http://www.ieee802.org/3/bs/public/15_07/agenda_3bs_01a_0715.pdf

Patent policy: Chair displayed the patent policy related slides in the agenda (http://www.ieee802.org/3/bs/public/15_07/agenda_3bs_01a_0715.pdf) . 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.

Presentation #24:
Title: PMD naming
By: Pete Anslow
See: http://www.ieee802.org/3/bs/public/15_07/anslow_3bs_03_0715.pdf

Discussion of strawpoll.

Strawpoll #2:
For the name of the 500m PMD, I would prefer
- A: 400GBASE-DR4
- B: 400GBASE-MR4
- C: 400GBASE-VR4
- A: 52   B: 26   C: 11

Chief Editor noted that he intends to have a future motion that uses the "400GBASE-DR4" term. He asked that the Task Force tell him during that motion if he or she will vote no on the motion because they don't like the term.

Presentation #25:
Title: Chief Editor's Report
By: Pete Anslow
See: http://www.ieee802.org/3/bs/public/15_07/anslow_3bs_01_0715.pdf
- Reviewed new clause list for adopted and missing baseline proposals.

Motion #3: 9:26 a.m.
Move to adopt a baseline for the 500m SMF proposal based on welch_3bs_01a_0715 as
400GBASE-DR4.
   • M: Brian Welch
   • S: Brad Booth
   • Technical (>= 75%),
   • Y: 75 , N: 0 , A: 20
   • Result: passed 9:29 a.m.

Discussion of Motion #3: The motion text was appended to add the term 400GBASE-DR4.

Motion #4: 9:30 a.m.
Move to adopt a baseline for the 2km SMF PMD objective based on the 2km proposal in slides 6-9
of cole_3bs_01a_0715
   • M: Chris Cole
   • S: Peter Stassar
   • Technical (>= 75%),
   • Y: 68 , N: 0   , A: 25
   • Result: passed 9:36 a.m.

Discussion of Motion #4: The motion text was appended to add specific slides.

Chair thanked the participants for the hard work to build consensus on the optical PMDs.

Motion #5: 9:37 a.m.
Move to adopt pages 6-22 from gustlin_3bs_02c_0715.pdf as the baseline for the 400GbE PCS
and PMA.
   • M: Mark Gustlin
   • S: Dave Ofelt
   • Technical (>= 75%),
   • Y: 83 , N: 0   , A: 17
   • Result: passed 9:46 a.m.

Discussion of motion #5: Mark Gustlin noted that the proposal does not specify the FEC as
1x400G or 4x100G; the process to the PCS data to the PMA via FEC is future work.

Attendance straw polls:
   • I will attend the IEEE 400 Gb/s meetings at the September interim in Bonita Springs, FL,
     USA (week of Sept 14, 2015)
        – Y: 69   , Maybe: 19   , N: 13
   • I will attend the IEEE 400 Gb/s meetings at the November plenary in Dallas, TX, USA (week
     of November 9, 2015)
        – Y: 73   , Maybe: 21   , N: 1

Break at 9:50 a.m. Resume at 10:37 a.m.

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Chair noted that there are pending rule changes for IEEE 802.3 that might change the way that liaison communications can be approved at interim meetings. Chair noted that there are 4 communications to deal with: 1 OIF (informal communication), 2 ITU-T (liaison) and COBO (liaison). Liaison letters require EC approval.

Steve Trowbridge reviewed the OIF informal communication letter. (http://www.ieee802.org/3/bs/public/15_07/trowbridge_3bs_01_0715.pdf) Some text changes were made.

Motion #6: 10:51 a.m.
Move that the IEEE P802.3bs 400 GbE Task Force approve the text in trowbridge_3bs_01_0715.pdf with editorial license granted to the Chair (or his appointed agent) as an informal communication by the Chair to OIF.
- M: Steve Trowbridge
- S: Mike Dudek
- Procedural (>50%)
- Result: passes by voice vote without opposition 10:52 a.m.

Steve Trowbridge reviewed the ITU-T liaison letter. (http://www.ieee802.org/3/bs/public/15_07/trowbridge_3bs_02_0715.pdf) Some text changes were made.

Motion #7: 10:57 a.m.
Move to approve the text in trowbridge_3bs_02_0715.pdf with editorial license granted to the IEEE 802.3 WG Chair (or his appointed agent) as a liaison communication from the IEEE 802.3 Working Group to ITU-T SG15.
- M: Steve Trowbridge
- S: Tom McDermott
- Procedural (>50%)
- Result: Passed by voice vote without opposition 10:58 a.m.

Chair noted that for the next motion, the task force intends to send Draft 1.0 after the September interim pending adoption of Draft 1.0. ITU-T does not meet until after the September 2015 interim meeting. David Law noted that, if approved by the Working Group, he will wait until Draft 1.0 is published before sending the liaison request to the EC for approval. The EC has 5 days to respond. David Law does not plan to take it to the EC at the July 2015 closing EC meeting.

Steve Trowbridge reviewed the ITU-T liaison letter for Draft 1.0. (http://www.ieee802.org/3/bs/public/15_07/trowbridge_3bs_03_0715.pdf) Some text changes were made.

Motion #8: 11:06 a.m.
Move to approve the text in trowbridge_3bs_03_0715.pdf with editorial license granted to the IEEE 802.3 WG Chair (or his appointed agent) as a liaison communication from the IEEE 802.3 Working Group to ITU-T SG15 pending adoption of Draft 1.0 by the IEEE P802.3bs Task Force.
- M: Steve Trowbridge
- S: Tom McDermott
- Procedural (>50%)
- Result: passed by vote without opposition 11:07 a.m.

Chair reviewed the liaison letter to COBO
(http://www.ieee802.org/3/bs/public/15_07/dambrosia_3bs_01_0715.pdf). Some text changes
were made.

Motion #9: 11:09 a.m.
Move to approve the text in dambrosia_3bs_01_0715.pdf with editorial license granted to the IEEE
802.3 WG Chair (or his appointed agent) as a liaison communication from the IEEE 802.3 Working
Group to COBO.
   • M: Brad Booth
   • S: Tom Palkert
   • Procedural (>50%)
   • Result: passed by voice vote without opposition 11:10 a.m.

Chair noted that he will update the filenames at the closing plenary per Pete Anslow's
recommendation.

Chair noted that he intends to recharter the ad hoc meetings in the future after he and the Chief
Editor review the outcome of this meeting.

Chair reviewed the future meeting schedule.

Future Meetings
   • Sept 2015 Interim – Week of Sept 14
      o – Hyatt Regency Coconut Point, Bonita Springs, FL
   • Nov 2015 Plenary
      o Hyatt Regency Dallas, Dallas, TX, USA
   • Jan 2015 Interim
      o Week of Jan 18
      o Atlanta, GA, USA
   • Mar 2016 Interim
      o Week of Mar 18
      o Macau, China

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

Chair thanked everyone for their hard work to reach adoption of the baseline proposals.

Motion #10:
Motion to Adjourn:
   - M: David Ofelt
   - S: Steve Trowbridge
   - Pass by voice without opposition.

Meeting ended at 11:12 a.m.

Attendees

IEEE P802.3bs 400GbE Task Force			7/14/2015	7/15/2015	7/16/2015
Last Name	**First Name**	**Employer / Affiliation**	**Tues**	**Wed**	**Thur**
Ali	Hassan	Texas Instruments	x	x	x
Andrewartha	Mike	Microsoft	x	x	
Anslow	Pete	Ciena Corporation	x	x	
Baldwin	Thananya	Ixia	x	x	x
Bennett	Mike	3MG Consulting	x	x	
Berger	Catherine	IEEE			x
Bliss	Will	Broadcom	x		
Booth	Brad	Microsoft	x	x	x
Bouda	Martin	Fujitsu	x	x	x
Brooks	Paul	JDSU	x	x	x
Brown	Matt	Applied Micro	x	x	
Butter	Adrian	Global Foundries	x	x	x
Caggioni	Francesco	APM		x	x
Carroll	Martin	Verizon	x	x	x
Chacon	Geoffrey	HP			x
Chang	Xin	Huawei	x	x	x
Cheng	Weiying	Coriant	x	x	x
Chuang	Keng Hua	HP Networking			x
Cober	Don	Comira	x	x	x
Cole	Chris	Finisar	x		x
Conroy	Keith	MultiPhy	x	x	x
Dai	Yuxin	Cox		x	x
D'Ambrosia	John	Dell	x	x	x
Dawe	Piers	Mellanox	x	x	x
Dekun	Liu	Huawei			x
Dillow	Daniel	FCI		x	
Dudek	Mike	QLogic	x	x	
Elbakolry	Hesham	Huawei	x		
Estes	Dave	Spirent Communications			x
Ewen	John	Global Foundries	x	x	x
Feyh	German	Broadcom			x
Fife	James	eTopus Tech	x	x	x
Filip	Jan	Maxim Integrated Products Inc.	x	x	x
Flatman	Alan	LAN Technologies			x
Ghiasi	Ali	Ghiasi Quantum	x	x	x
Goergen	Joel	Cisco	x	x	x
Gong	Zhigang	D-Net	x	x	x
Gorshe	Steve	PMC_Sierra	x	x	x
Gustlin	Mark	Xilinx	x	x	x
Healey	Adam	Avago Technologies	x	x	x
Hegde	Raj	Broadcom	x	x	x
Hirai	Riu	Hitachi	x	x	x
Hiramoto	Kiyo	Oclaro	x	x	
Holden	Brian	Kandou Bus	x	x	x
Ishibe	Kazuhiko	Anristu	x	x	x
Isono	Hideki	Fujitsu Ltd.	x	x	x
Issenhuth	Tom	Microsoft	x	x	x
Jackson	Kenneth	Sumitomo	x	x	x

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IEEE P802.3bs 400GbE Task Force			7/14/2015	7/15/2015	7/16/2015
Last Name	First Name	Employer / Affiliation	Tues	Wed	Thur
Kang	Vincent	GUC	x	x	x
Kareti	Upen Reddy	Cisco	x	x	x
Kawamoto	Takashi	Hitachi	x	x	
Kawatsu	Yasuaki	Hitachi-Metals	x	x	x
Kelsen	Michael	Time Warner Cable	x	x	x
King	Jonathan	Finisar Corp.	x	x	
Kipp	Scott	Brocade	x	x	
Kojima	Keisuke	Mitsubishi Electric Res. Lab	x	x	x
Kolesar	Paul	CommScope		x	
Lackner	Hans	QoSCom		x	x
Lai	Angus	Macom	x	x	x
Langhammer	Martin	Altera	x	x	x
Lapak	Jeff	UNH-IOL	x	x	x
Lee	Arthur	MediaTek Inc	x	x	
Lewis	Dave	JDSU	x	x	x
Li	Mike	Altera	x	x	x
Li	Shaohua	Brocade	x	x	x
Lillie	Andrew	Intel	x	x	x
Liquan	Yuan	ZTE			x
Liu	Hai-Feng	Intel	x	x	x
Lusted	Kent	Intel	x	x	x
Maki	Jeffery	Juniper Networks	x	x	x
Malicoat	David	HP	x	x	x
Malkman	Yonaton	Mellanox	x		
Martinez	Joel	Altera	x		x
Matoglu	Erdem	Amphenol	x		x
McDermott	Tom	Fujitsu	x	x	x
McDonough	John	NEC America	x	x	x
McSorley	Greg	Amphenol	x	x	x
Mehta	Anil	Brocade	x	x	x
Mellitz	Richard	Intel	x	x	x
Mooney	Paul	Spirent Communications	x	x	x
Muir	Ron	JAE	x	x	x
Nowell	Mark	Cisco	x	x	
Ofelt	David	Juniper Networks	x	x	x
Ogura	Ichiro	Petra	x	x	x
Palkert	Tom	Luxtera	x	x	x
Pancholy	Rajiv	Broadcom	x		
Park	Moon	OE Solutions	x	x	x
Parthasarathay	Vasudevan	Broadcom	x		
Pepeljugoski	Petar	IBM	x	x	x
Pepper	Gerald	Ixia	x	x	x
Peters	Michael	Sumitomo		x	x
Pondillo	Peter	Corning	x	x	x
Rabinovich	Rick	ALE	x	x	x
Ran	Adee	Intel	x	x	
Roth	Chris	Molex	x	x	x
Shirao	Mizuki	Mitsubishi Electric	x	x	x
Sommers	Scott	Molex	x	x	x

IEEE P802.3bs 400GbE Task Force			7/14/2015	7/15/2015	7/16/2015
Last Name	**First Name**	**Employer / Affiliation**	**Tues**	**Wed**	**Thur**
Sone	Yoshiaki	NTT	x	x	x
Sprague	Ted	Infinera	x	x	x
Stassar	Peter	Huawei	x	x	x
Sun	Phil	Marvell Semiconductor	x	x	x
Swanson	Steve	Corning	x	x	x
Szczepanek	Andre	Inphi	x	x	
Szeto	William	Xtera	x	x	x
Tailor	Bharat	Semtech Corp	x	x	x
Takahara	Tomoo	Fujitsu Laboratories	x	x	x
Takahata	Kiyoto	NTT	x	x	x
Tamura	Kohichi	Oclaro Japan		x	
Tooyserkani	Pirooz	Cisco	x	x	x
Tracy	Nathan	TE Connectivity	x	x	
Trowbridge	Steve	Alcatel-Lucent	x	x	x
Ulrichs	Ed	Source Photonics	x	x	x
Walker	Clint	Intel	x		
Wang	Tongtong	Huawei	x	x	x
Wang	Xinyuan	Huawei	x	x	x
Wang	Zhongfeng	Broadcom	x	x	x
Welch	Brian	Luxtera	x	x	x
Wertheim	Oded	Mellanox	x	x	
White	Martin	Cavium	x	x	x
Xu	Yu	Huawei	x	x	x
Zambell	Andrew	FCI		x	x
Zivny	Pavel	Tektronix	x	x	x