

Unapproved Minutes
IEEE P802.3by 25 Gb/s Ethernet on a Single Lane Task Force
Interim Meeting
January 12-13, 2015
Atlanta, GA, USA
Prepared by Kent Lusted

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IEEE P802.3by 25 GbE Task Force Meeting – 12 January 2015:

Prepared by Kent Lusted

IEEE P802.3by 25 Gb/s Task Force interim meeting convened at 9:04 a.m., Monday, 12 January, 2015, by David Law, IEEE 802.3 Working Group Chair.

Mr. Law welcomes attendees to the IEEE P802.3by 25 Gb/s Ethernet Task Force.

David Law reviews agenda in

http://www.ieee802.org/3/by/public/Jan15/agenda_3by_01a_0115.pdf

As announced at the November Plenary meeting, David Law intends to appoint Mark Nowell as the IEEE P802.3by 25 Gb/s Ethernet Task Force chair.

David Law appoints Kent Lusted as the recording secretary for the IEEE P802.3by 25 GbE Task Force.

Motion 1:

Move to confirm Mark Nowell as the IEEE P802.3by 25 Gb/s Ethernet Task Force Chair

- Moved by: Steve Trowbridge
- Second by: Mike Dudek
- Y: 48 , N:0
- Motion passes!

Introductions were made.

Mark Nowell reviewed agenda in

http://www.ieee802.org/3/by/public/Jan15/agenda_3by_01a_0115.pdf

Motion #2:

Move to approve the agenda:

- Moved by: Brad Booth
- Second by: Arthur Marris
- Pass by voice without opposition

November 2014 plenary minutes were posted shortly after the meeting. No comments were received.

Motion #3:

Move to approve the November 2014 minutes:

- Moved by: Kent Lusted
- Second by: Mike Dudek
- Pass by voice without opposition

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 reviews the Bylaws and Rules slides in --

http://www.ieee802.org/3/by/public/Jan15/agenda_3by_01a_0115.pdf

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.

No Liaisons or communications were received or assigned.

Chair reviewed the adopted objectives in the agenda slides.

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

Chair reviewed a proposed Task Force timeline in the agenda slides.

Goals for the meeting:

- Task Force level setting
- Hear technical presentations
- Adopt timeline
- Adopt baseline proposals...
- Identify steps moving forward

Chair reviewed the presentation schedule for the meeting. All times listed are subject to change.

Chair noted that the architecture and optical ad hocs will continue. Ad hoc schedule will be sent to the email reflector.

Future Meetings:

- Mar 2015 Plenary - Week of Mar 8
 - Estrel Hotel and Convention Center, Berlin, Germany
- May 2015 interim – Week of May 18th
 - Pittsburgh, PA, USA

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

The opening plenary for the March 2015 meeting will be 10:30am-12:00pm on Monday. The P802.3by Task Force meeting will start at 1:00pm on Monday.

Presentation #1:

Title: The Road to a Completed Standard

By: Pete Anslow, Ciena

See: http://www.ieee802.org/3/by/public/Jan15/anslow_3by_01_0115.pdf

Presentation #2:

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

By: Matt Brown, APM

See: http://www.ieee802.org/3/by/public/Jan15/brown_3by_01_0115.pdf

Presentation #3:

Title: 25GE Study Group Optics ad hoc report

By: Jonathan King, Finisar

See: http://www.ieee802.org/3/by/public/Jan15/king_3by_01_0115.pdf

Presentation #4:

Title: 802.3by Draft Considerations

By: Matt Brown, APM

See: http://www.ieee802.org/3/by/public/Jan15/brown_3by_02a_0115.pdf

- Reviewed the proposed new clauses and annexes.

Chair thanks Matt Brown and the rest of the editorial staff for their hard work.

Presentation #5:

Title: Nomenclature Consensus Building

By: Kent Lusted, Intel

See: http://www.ieee802.org/3/by/public/Jan15/lusted_3by_01a_0115.pdf

- Clarifying questions were asked and answered.

Straw Poll #1 (Chicago Rules) – 10:32 a.m.

I prefer

(a) 25G-AUI = 50

(b) 25GAUI = 41

Break 10:35 a.m. Resume at 11:00 a.m.

Presentation #6:

Title: OTN Support for 25GbE

By: Steve Trowbridge, Alcatel-Lucent

See: http://www.ieee802.org/3/by/public/Jan15/trowbridge_3by_01_0115.pdf

- Several questions regarding OTN mapping impact on FEC and block marking.
- Discussed insertion and removal of alignment markers.
- The current PCS baseline proposal link supports the idle insertion and deletion desired for OTN.

Presentation #7:

Title: 25 Gb/s 100 m MMF reach objective baseline proposal

By: Jonathan King, Finisar

See: http://www.ieee802.org/3/by/public/Jan15/king_3by_02a_0115.pdf

- Noted that the current status of the PMD optical specifications on slides 9-11 is in IEEE 802.3bm, submitted to REVCOM.
- Clarifying question regarding the pre FEC error ratio and the post-FEC frame error ratio.

Break at 12:00 p.m. Resume at 1:05 p.m.

Presentation #8:

Title: A Baseline Proposal For RS, PCS, And FEC

By: Eric Baden, Broadcom

See: http://www.ieee802.org/3/by/public/Jan15/baden_3by_01b_0115.pdf

- Discussed idle insertion/removal in CI 49 vs. CI 46. Desire to leave Clause 49 mostly unchanged.
- Discussed concern over moving idle insertion/deletion into FEC instead of the PCS.
- Discussed concern of 3 reaches listed on slide 8. There are only 2 reach objectives.
- Discussed concern of idle insertion/removal in FEC and the transcode block type value impact to OTN.

Presentation #9:

Title: 25GE PMA sublayer baseline proposal

By: Matt Brown, APM

See: http://www.ieee802.org/3/by/public/Jan15/brown_3by_03a_0115.pdf

- Mike Dudek, Ali Ghiasi, Kapil Shrikhande, and Kent Lusted offered their support to the presentation.

Presentation #10:

Title: Energy Efficient Ethernet (EEE) for 802.3by

By: Arthur Marris, Cadence

See: http://www.ieee802.org/3/by/public/Jan15/marris_3by_02a_0115.pdf

Break at 2:25 p.m. Resume at 2:55 p.m.

Presentation #11:

Title: Auto-negotiation for 25G CR cables

By: Venu Balasubramonian, Marvell

See: http://www.ieee802.org/3/by/public/Jan15/balasubramonian_3by_01_0115.pdf

- Discussed concern with case of no management intervention and advertised capability on slides 13-14.

Presentation #12:

Title: Candidate Baseline Proposal for 802.3by Auto-Negotiation

By: Arthur Marris, Cadence

See: http://www.ieee802.org/3/by/public/Jan15/marris_3by_01_0115.pdf

- Clarifying questions were asked about the 3 different AN methods proposed in the presentation.

Presentation #13:

Title: Proposed Baseline text for: Chip-to-module 25 Gb/s one-lane Attachment Unit Interface (XXVAUI-1)

By: Tom Palkert

See: http://www.ieee802.org/3/by/public/Jan15/palkert_3by_01b_0115.pdf

- Tom Palkert to update presentation to change “RS-FEC” to “FEC” on slide 6.

Presentation #14:

Title: Proposed Baseline text for: Chip-to-chip 25 Gb/s one-lane Attachment Unit Interface (XXVAUI-1)

By: Tom Palkert

See: http://www.ieee802.org/3/by/public/Jan15/palkert_3by_02a_0115.pdf

- Request to update presentation to change “RS-FEC” to “FEC”.

Presentation #15:

Title: A Baseline Proposal for 25GBASE-KR PMD

By: Ade Ran, Intel

See: http://www.ieee802.org/3/by/public/Jan15/ran_3by_01_0115.pdf

- Discussed interest in 25 Gb/s single lane version of 100GBASE-KP4. Mark Nowell noted that no contribution for this PHY type was made during the Study Group phase.
- Discussed the desire to have a 25G backplane PHY solution that does not use FEC.

Straw Poll #2: 4:33 p.m.

I would support the adoption of the PCS, RS and FEC baseline proposal as defined in baden_3by_01b_0115.pdf

- yes = 37
- no = 7

Room count 76

Floor comments received during the straw poll discussion:

- Concern that the proposal detail does not allow the editors flexibility to implement. It is too specific.
- Concern that the table on slide 8 does not address the 2 objectives.
- Concern over proposal's choice to do the idle insertion/deletion in the FEC layer.
- Request to present the decisions made in the ad hoc that lead to the proposed baseline in baden_3by_01b_0115.pdf.

Break for Day at 5:05 p.m.

IEEE P802.3by 25 GbE Task Force Meeting – 13 January 2015:

Prepared by Kent Lusted

IEEE P802.3by 25 Gb/s Task Force interim meeting convened at 9:03 a.m., Tuesday, 13 January, 2015, by Mark Nowell, IEEE 25 Gb/s Ethernet Task Force Chair.

Chair displayed the agenda slides:

http://www.ieee802.org/3/by/public/Jan15/agenda_3by_01a_0115.pdf

Patent policy: Chair displayed the patent policy related slides in the agenda (http://www.ieee802.org/3/by/public/Jan15/agenda_3by_01a_0115.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 reviewed the plans for the day: hear presentations and perform straw polls and motions.

Chair noted that the webpage is refreshed with all of the updated presentations received to date.

Presentation #16:

Title: Use Cases for no-FEC on Short Cables

By: Mike Andrewartha, Microsoft

See: http://www.ieee802.org/3/by/public/Jan15/andrewartha_3by_01a_0115.pdf

- Request for more data on the low latency application and the latencies targeted.
- Comment on the tradeoff between FEC power and circuitry power.
- Kent Lusted offered his support to the presentation.
- “Bump-in-the-wire” applications can incur many latency impacts for each segment of the storage network.

Presentation #17:

Title: Analysis of Link Budget for 3m Cable Objective

By: Venu Balasubramonian, Marvell

See: http://www.ieee802.org/3/by/public/Jan15/sun_3by_01_0115.pdf

- Comment that P802.3bj used rotational bit muxing which impacted MTTFPA with transcoded data.

Presentation #18:

Title: 25Gb/s RX and Cable Test Proposals

By: Rich Mellitz, Intel

See: http://www.ieee802.org/3/by/public/Jan15/mellitz_3by_01d_0115.pdf

- Comment on test fixture for SFP+ vs. QSFP+ as it relates to option #4.
- Rich to update the presentation with additional clarity on the options.

Presentation #19:

Title: Analysis of 32AWG, 30AWG, 26AWG copper cables with IEEE802.3 Clause 74 FEC, Clause 91 FEC, and non-FEC conditions

By: Erdem Matoglu, Amphenol

See: http://www.ieee802.org/3/by/public/Jan15/matoglu_3by_01a_0115.pdf

Chair asked if there was objection to hearing a 3rd presentation from Chris Diminico with a summary of the parts necessary for a copper cable PMD baseline proposal. No one objected.

Presentation #20:

Title: 802.3by Task Group Baseline Proposal Cable Assembly Specifications

By: Chris Diminico, MC Communications

See: http://www.ieee802.org/3/by/public/Jan15/diminico_3by_02_0115.pdf

Presentation #21:

Title: 802.3by 25 Gb/s Task Group Considerations for Test Fixture Specifications

By: Chris Diminico, MC Communications

See: http://www.ieee802.org/3/by/public/Jan15/diminico_3by_01_0115.pdf

Presentation #22:

Title: 802.3by Task Group Baseline Proposal 25GBASE-CR PMD

By: Chris Diminico, MC Communications

See: http://www.ieee802.org/3/by/public/Jan15/diminico_3by_03b_0115.pdf

- Chris Diminico to update the presentation to denote slide numbers and add reference to the RX interference tolerance test.

Chair reminded participants to sign into the IEEE web attendance tool (IMAT) and to sign the attendance book.

Break at 12:05 p.m. Resume at 1:21 p.m.

Presentation #23:

Title: Background on 25GbE PCS/FEC Baseline Proposal

By: Gary Nicholl, Cisco

See: http://www.ieee802.org/3/by/public/Jan15/nicholl_3by_01_0115.pdf

Chair reviewed the proposed timeline in the agenda deck. See http://www.ieee802.org/3/by/public/Jan15/agenda_3by_01a_0115.pdf. Chair noted that an extra interim may be deemed necessary to keep alignment with the plenary approval cycle.

Motion #4: 2:08 p.m.

Move to adopt the timeline proposed in agenda_3by_01a_0115.pdf, slide 23

- M: J. D'Ambrosia
- S: B. Booth
- Technical ($\geq 75\%$),
- Y: 69 , N: 0 , A: 10
- Result: Passes

Motion #5: 2:14 p.m.

Move to adopt the draft outline, proposed in "brown_3by_02a_0115.pdf" slides 3 and 4 as the basis for the first draft of P802.3by.

- M: Matt Brown
- S: Tom Palkert
- Technical ($\geq 75\%$),
- Y: 69 , N: 0 , A: 10
- Result: Passes

Motion #6: 2:16 p.m.

Move to adopt the nomenclature presented in "lusted_3by_01a_0115.pdf" and select the AUI and MII nomenclature option to be "25G-AUI" and "25G-MII". This nomenclature supersedes any other P802.3by adopted baseline proposals accordingly.

- M: Kent Lusted
- S: Adee Ran
- Technical ($\geq 75\%$),
- Y: 72 , N: 0 , A: 7
- Result: Passes

Chair noted that the intention is to use the nomenclature from this motion as the nomenclature in the other baseline proposals adopted this week.

Motion #7: 2:17 p.m.

Move to adopt ran_3by_01a_0115.pdf as the baseline for the 25 GbE backplane PMD.

- M: Adee Ran
- S: Rich Mellitz
- Technical ($\geq 75\%$),
- Y: 72 , N: 0 , A: 8
- Result: passes

Chair noted that contributions for the no-FEC backplane case, if there is interest, are needed prior to the March meeting.

Motion #8: 2:25 p.m.

Move to adopt king_3by_02a_0115.pdf as the baseline for the 25G MMF PMD

- M: J. King
- S: Paul Kolesar
- Technical ($\geq 75\%$),
- Y: 78 , N: 0 , A: 3
- Result: passes

Motion #9: 2:28 p.m.

Move to adopt the RS, PCS, and FEC baseline proposed in baden_3by_01b_0115.pdf, slides 10-26.

- M: Gary Nicholl
- S: Brad Booth
- Technical ($\geq 75\%$),
- Y: 62 , N: 3 , A: 16
- Result: passes

Eric Baden agreed to update his presentation with correct code word size in bytes and submit it as baden_3by_01c_0115.pdf. The original baden_3by_01b_0115.pdf will be kept on the website. Chair noted that the MII is implicitly covered.

Motion #10: 2:39 p.m.

Move to adopt the PMA baseline proposed in brown_3by_03b_0115.pdf slides 4-9

- M: Matt Brown
- S: Dan Dove
- Technical ($\geq 75\%$)
- Y: 71 , N: 0 , A: 12
- Result: passes

Motion #11: 2:48 p.m.

Move to adopt the 25G-AUI Chip-to-Module and 25G-AUI Chip-to-Chip baselines proposed in palkert_3by_01b_0115.pdf slides 5-7 and 9 and palkert_3by_02b_0115.pdf slides 5-7, respectively.

- M: Tom Palkert
- S: Mike Li
- Technical ($\geq 75\%$),
- Y: 81 , N: 0 , A: 5
- Result: passes

Break at 2:55 p.m. Resume at 3:26 p.m.

Motion #12: 3:27 p.m.

Move to adopt the EEE baseline proposed in marris_3by_02a_0115.pdf slides 7-10.

- M: Arthur Marris
- S: Brad Booth
- Technical ($\geq 75\%$),
- Y: 67 , N: 0 , A: 5
- Result: passes

Motion #13: 3:41 p.m.

Move to adopt diminico_3by_03b_0115.pdf as the baseline for the 25G copper cable PMD

- M: Chris Diminico
- S: Mike Dudek
- Technical ($\geq 75\%$),
- Y: 73 , N: 0 , A: 6
- Result: passes

Straw poll #3: 3:43 p.m.

AN possibilities for FEC resolution

1. Use the base page. FEC request bit already exists in the base page. Add an extra bit so BASE-R and RS-FEC can be advertised separately
2. Define a new next page for FEC. Create a next page for FEC that advertises detailed FEC and host channel capabilities and a resolution function to select which FEC to use
3. Define two distinct 25GBASE-CR PHYs: 25GBASE-CR-S for 3m reach and 25GBASE-CR-L for 5m, with the short reach PHY having higher priority
4. More information needed

I support option :(chicago rules)

1. #1: 4, #2: 10 , #3: 16, #4: 56

There was much discussion on the AN options presented. Feedback from the task force is that more information is desired. Chair noted that more contributions are needed in the ad hoc meetings for consensus building.

Motion on auto-negotiation was modified to specific pages to include aspects of the baseline proposal that are independent of the FEC resolution approach taken.

Motion #14: 4:15 p.m.

Move to adopt the auto-negotiation baseline proposed in marris_3by_01a_0115.pdf, slides 8-14

- M: Arthur Marris
- S: Kapil Shrikhande
- Technical ($\geq 75\%$),
- Y: 44 , N: 0 , A: 17
- Result: passes

Motion #15: 4:17 p.m.

Move to direct the editorial team to create a preliminary draft with full editorial license based upon the adopted baseline proposals.

- M: Brad Booth
- S: Kent Lusted
- Technical ($\geq 75\%$)
- Y: 70 , N: 0 , A: 1
- Result: passes!

Attendance straw polls

- I will attend the IEEE 25 Gb/s meetings at the March plenary in Berlin, Germany (week of March 8, 2015)
 - Y: 59 , Maybe: 15 , N: 7
- I will attend the IEEE 25 Gb/s meetings at the May interim in Pittsburgh, PA, USA (week of May 18, 2015)
 - Y: 52 , Maybe: 13 , N: 3

At the March Plenary, the P802.3by Task Force will meet on Monday afternoon and Tuesday of the week of March 12. The P802.3bs Task Force will meet on Wednesday and Thursday morning.

Chair noted that the editors will generate an initial draft and post it into the Task Force private area on the website. The editors intend to use the comment tool for comment resolution. The focus should be on big gaps and issues. The Task Force private area will have a password for access. The password has not been created yet.

Brad Booth offered a tutorial on the comment tool after the meeting adjourns.

Chair noted the challenges in the timeline associated with the plenary approval cycle. If there is value in an additional interim meeting, it will be considered and announced over the reflector.

Motion #16:

Motion to Adjourn:

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

Meeting ends at 4:32 p.m.

Attendees

IEEE 25Gb/s Task Force, Jan 2015 Interim			12-Jan-15	13-Jan-15
Last Name	First Name	Affiliation	Monday	Tuesday
Andrewartha	Mike	Microsoft	X	X
Anslow	Pete	Ciena Corporation	X	X
Baden	Eric	Broadcom	X	X
Bains	Amrik	Cisco	X	
Balasubramanian	Vittal	Dell Force10	X	
Balasubramonian	Venugopal	Marvell	X	X
Baldwin	Thananya	Ixia	X	X
Belopolsky	Yakov	Stewart	X	
Booth	Brad	Microsoft	X	X
Bourgeois	Stephane	Belden	X	
Braun	Ralf-Peter	Deutsche Telekom	X	X
Brooks	Paul	JDSU	X	X
Brown	David	Semtech	X	X
Brown	Matt	Applied Micro	X	X
Brown	Tom	Vitesse Semiconductors	X	X
Butter	Adrian	IBM	X	X
Carty	Clark	Cisco	X	
Cates	Ron	Marvell Semiconductor		X
chang	Jacky	HP		X
Chang	Xin	Huawei	X	X
Chuang	Keng Hui	HP		X
Cober	Donald	Comira	X	X
D'Ambrosia	John	Dell	X	X
Dawe	Piers	Mellanox		X
DiMinico	Christopher	MC Communications/Panduit	X	X
Dove	Dan	Dove Networking Solutions (DNS)	X	X
Dudek	Mike	QLogic	X	X
Dupuis	Mark	Molex	X	X
Estes	Dave	Spirent Communications	X	X
Ewen	John	IBM	X	X
Feyh	German	Broadcom	X	
Flatman	Alan	LAN Technologies	X	
Ghiasi	Ali	Ghiasi Quantum	X	X
Goell	James	Nano Precision Prod		X
Gong	Zhigang	O-net	X	X
Gorshe	Steve	PMC Sierra	X	X
Gustlin	Mark	Xilinx	X	X
Healey	Adam	Avago Technologies	X	X
Hidaka	Yasuo	Fujitsu Laboratories of America	X	X
Hirai	Riu	Hitachi		X

IEEE 25Gb/s Task Force, Jan 2015 Interim			12-Jan-15	13-Jan-15
Last Name	First Name	Affiliation	Monday	Tuesday
Horner	Rita	Synopsys		X
Hormeyer	Bernd	Phoenix Contact	X	
Irwin	Scott	MoSys Inc.	X	X
Issenhuth	Tom	Microsoft	X	X
Jackson	Ken	Sumitomo	X	X
Jimenez	Andrew	Anixter Inc.	X	X
Jones	Mark	Xtera	X	X
King	Jonathan	Finisar Corp.	X	X
Kipp	Scott	Brocade	X	X
Kish	Paul	Belden	X	
Koenen	David	HP	X	X
Kohmu	Naohiro	Hitachi	X	X
Kolesar	Paul	CommScope	X	X
Lapak	Jeff	UNH-IOL		X
Law	David	HP	X	
LeCheminant	Greg	Keysight Technologies		X
Lewis	Dave	JDSU		X
Lewis	Jon	Dell	X	
Li	Lei	Fujitsu	X	X
Li	Mike	Altera		X
Liu	Zhenyu	Marvell Semiconductor	X	X
Lusted	Kent	Intel	X	X
Maki	Jeffery	Juniper Networks	X	X
Marris	Arthur	Cadence	X	X
Matoglu	Erdem	Amphenol		X
McDonough	John	NEC America	X	X
Mei	Richard	Commscope	X	
Mellitz	Richard	Intel	X	X
Motamedi	Amir	Cavium	X	X
Muir	Ron	JAE		X
Murray	Dale	Lightcounting	X	X
Nakamoto	Edward	Spirent Communications	X	X
Nishimura	Takeshi	Yamaichi Electronics	X	X
Nowell	Mark	Cisco	X	X
Ofelt	David	Juniper Networks	X	X
Ogura	Ichiro	Petra		X
Palkert	Tom	Luxtera	X	X
Pan	Hui	Broadcom	X	
Pepper	Gerald	Ixia	X	X
Pondillo	Peter	Corning	X	X
Ran	Adee	Intel	X	X
Rao	Ram	Oclaro	X	X

IEEE 25Gb/s Task Force, Jan 2015 Interim			12-Jan-15	13-Jan-15
Last Name	First Name	Affiliation	Monday	Tuesday
Roth	Christopher	Molex	X	X
Sambasivan	Sam	AT&T	X	X
Sella	Omer	Mellanox	X	X
Shanbhag	Megha	TE Connectivity		X
Shariff	Masood	Commscope	X	
Shrikhande	Kapil	Dell	X	X
Slavick	Jeff	Avago Technologies	X	X
Sommers	Scott	Molex		X
Sone	Yoshiaki	NTT	X	X
Sparrowhawk	Bryan	Leviton	X	
Stassar	Peter	Huawei	X	X
Stone	Rob	Broadcom	X	X
Sugitatsu	Atsushi	Mitsubishi Electric	X	X
Svendsen	Justin	CIT	X	X
Swanson	Steve	Corning	X	X
Szczepanek	Andre	Inphi	X	X
Tajima	Akio	NEC Corporation		X
Takaishi	Toru	Fujitsu Semiconductors	X	X
Teipen	Brian	ADVA Optical Networking	X	X
Toyserkani	Pirooz	Cisco	X	X
Tracy	Nathan	TE Connectivity	X	X
Trowbridge	Steve	Alcatel-Lucent	X	X
Upen Reddy	Kareti	Cisco	X	X
Vaddineni	Manoj	JDS Uniphase	X	X
Vallance	Ryan	Nano Precision Prod	X	
Vanderlaan	Paul	Nexans	X	
Wang	Tongtong	Huawei	X	X
Wang	Xinyuan	Huawei	X	
Wertheim	Oded	Mellanox	X	X
White	Martin	Cavium		X
Wilkie	Bill	Xilinx		X
Xu	Yu	Huawei	X	
Zambell	Andrew	FCI	X	X
Zortea	Tony	PMC Sierra	X	X