

Unapproved Minutes

IEEE P802.3ck 100 Gb/s, 200 Gb/s and 400 Gb/s Electrical Interfaces Task Force

Telephonic series for May-June 2021 Meeting:

May 4, May 5, May 18, May 19, May 25, May 26, May 31, June 1 and June 2, 2021

Online Meeting

Prepared by Beth Kochuparambil and Kent Lusted

Table of Contents

[Table of Contents](#)

[IEEE P802.3ck 100 Gb/s Electrical Lane Task Force – May 4, 2021](#)

[Chief Editor’s Report - Matt Brown](#)

[Comment Resolution Agenda - Matt Brown](#)

[Presentation #1:](#)

[Presentation #2:](#)

[Straw Poll #1:](#)

[Presentation #3:](#)

[IEEE P802.3ck 100 Gb/s Electrical Lane Task Force – May 5, 2021](#)

[Presentation #4:](#)

[Presentation #5:](#)

[Straw Poll #2:](#)

[Straw Poll #3:](#)

[Presentation #6:](#)

[IEEE P802.3ck 100 Gb/s Electrical Lane Task Force – May 18, 2021](#)

[Motion #1:](#)

[Motion #2:](#)

[Comment Resolution Agenda - Matt Brown](#)

[Consensus Discussion Slides - Matt Brown](#)

[Presentation #7:](#)

[Presentation #8:](#)

[Straw Poll #4:](#)

[Straw Poll #5](#)

[Consensus Discussion Slides - Howard Heck](#)

[IEEE P802.3ck 100 Gb/s Electrical Lane Task Force – May 19, 2021](#)

[Comment Resolution Agenda - Matt Brown](#)

[Consensus Discussion Slides - Howard Heck](#)

[Presentation #9:](#)

[Straw Poll #6:](#)

[Straw poll #7](#)

[Consensus Discussion Slides - Howard Heck](#)

[Presentation #10:](#)

[Consensus Discussion Slides - Howard Heck](#)

[Consensus Discussion Slides - Chris Diminico](#)

[Consensus Discussion Slides - Chris Diminico](#)

[Consensus Discussion Slides - Howard Heck](#)

[Straw Poll #8:](#)

[IEEE P802.3ck 100 Gb/s Electrical Lane Task Force – May 25, 2021](#)

[Motion #3:](#)

[Comment Resolution Agenda - Matt Brown](#)

[Consensus Discussion Slides - Matt Brown](#)

[Straw Poll #9:](#)

[Straw Poll #10:](#)

[Presentation #11:](#)

[IEEE P802.3ck 100 Gb/s Electrical Lane Task Force – May 26, 2021](#)

[Comment Resolution Agenda - Matt Brown](#)

[Consensus Discussion Slides - Matt Brown](#)

[Presentation #12:](#)

[IEEE P802.3ck 100 Gb/s Electrical Lane Task Force – May 31, 2021](#)

[Motion #4:](#)

[Comment Resolution Agenda - Matt Brown](#)

[Consensus Discussion Slides - Phil Sun and Matt Brown](#)

[IEEE P802.3ck 100 Gb/s Electrical Lane Task Force – June 1, 2021](#)

[Comment Resolution Agenda - Matt Brown](#)

[Consensus Discussion Slides - Phil Sun and Matt Brown](#)

[Presentation #13:](#)

[Consensus Discussion Slides - Chris Diminico](#)

[Presentation #14:](#)

[Straw Poll #11:](#)

[Presentation #15:](#)

[Presentation #16:](#)

[Presentation #17:](#)

[Straw Poll #12:](#)

[Straw Poll #13:](#)

[Straw Poll #14:](#)

[Straw Poll #15:](#)

[IEEE P802.3ck 100 Gb/s Electrical Lane Task Force – June 2, 2021](#)

[Comment Resolution Agenda - Matt Brown](#)

[Consensus Discussion Slides - Matt Brown](#)

[Straw Poll #16:](#)

[Straw Poll #17](#)

[Presentation #18:](#)

[Motion #5:](#)

[Attendees](#)

IEEE P802.3ck 100 Gb/s Electrical Lane Task Force – May 4, 2021

Prepared by Kent Lusted and Beth Kochuparambil

Proposed Agenda:

- Approval of the Agenda
- IEEE Patent Policy reminder
- IEEE Copyright reminder
- IEEE Participation Requirements reminder
- Ground Rules and Operations
- Task Force Status
- Liaisons
- Chief Editor's Report
- Comment agenda
- Comment resolution
 - Clause 45, counter size: 214
 - Clause 162, PRBS9Q for EOJ test:
 - hidaka_01_041421 (recap)
 - li_01a (recap)
 - zivny_01
 - 133, 141, 236
 - Cross Clause list
 - Cl 162/163, Channel COM bmax: 205, healey_01
 - Cl 120F/162/163, abbreviations: 215
 - Cl 162/163, AC coupling: 37, 38
 - Cl 162/163, COM Tau value: 51, 52
 - Cl 120G/162, Jitter tolerance frequency: [13, 43], 35
 - Cl 120F/120G/162/163, Input signal rate and UI: 8, 10, 11, 12, 137, 9
 - Cl 120F/162/163, RIT jitter: 135, 209, 134, li_02
 - Cl 120G/162, ERL Tfx: 174, 185, 184
 - Clause 162, dERL: *Will jump to this topic on Wednesday's start
 - dudek_01
 - wu_02
 - 189
 - Clause 162, RIT Noise: healey_02, 207
 - Continue with Cross-Clause list (above)

Presentations posted at: https://www.ieee802.org/3/ck/public/21_05/index.html

Meeting began at ~7:05 a.m. Pacific by Beth Kochuparambil, IEEE 802.3ck Task Force Chair.
(Note: all times are Pacific time zone unless otherwise indicated)

Meeting began with the agenda presentation

https://www.ieee802.org/3/ck/public/21_05/agenda_3ck_01a_0521.pdf

Chair reminded participants that Task Force attendance would be taken from the webex logs.

The chair reminded participants to indicate full names and employer/affiliation correctly for the meeting minutes. Reminded participants to mute lines when not speaking and reviewed the steps to unmute.

Presented the proposed agenda and noted that the agenda would cover the meetings on 4 and 5 May.

Chair asked if there was objection to the shown agenda. No one responded.

Chair noted that the minutes for the 28 April ad hoc were posted to the website. Chair asked if there were modifications or corrections to the posted version. No one responded. Chair asked if there was objection to approving the posted minutes. No one responded.

Chair reviewed the slide with the Participation requirements.

Chair asked if anyone participating was unfamiliar with the copyright slide set – no one responded. Chair showed the IEEE-SA copyright slides.

Chair asked if anyone participating was unfamiliar with the patent slide set – no one responded. Chair showed the patent policy slides and did the call for Potentially Essential Patents – no one responded.

Reviewed the Draft 2.0 Telephonic interim meeting series details. Meetings 1-9 are for resolving all open comments. It was noted that the meeting on 31 May may be cancelled.

It was noted that comments currently collected in the “bucket1” are to be reviewed by participants and if any of them are to be taken out of the bucket, participants are to notify Task Force leadership by 16 May AOE. See:

https://www.ieee802.org/3/ck/comments/draft2p0/8023ck_D2p0_comments_proposed_bucket1.pdf

Chair noted that editors may use a “closed-as-a-result bucket” for comments related to closed topics and deemed non-controversial. The bucket proposed responses would be adopted with motions later in the meeting series.

Reviewed the Task Force timeline.

Chair called for members of the press. No one responded.

Chair noted that there was a liaison letter from the OIF. (see:

https://www.ieee802.org/3/ck/private/OIF_liaison_letter_IEEE802.3_08Apr21_CEI_Projects.pdf

and

https://www.ieee802.org/3/ck/private/OIF_liaison_IEEE802.3_08Apr21_CEI_cover_wnotes.pdf)

Chair asked participants if liaisons should be sent to Fibre Channel, COBO and Gen-Z. There was support from the participants. Any liaison letters would be considered at the Working Group meeting on 20 May. Chair recommended to prepare liaisons to be sent and make them contingent on the publication of Draft 2.1. The Vice Chair volunteered to prepare responses for consideration by the Task Force and asked for participants interested in drafting the responses to contact him.

Chair reminded participants that the attendance would be taken from the Webex meeting logs.

Chief Editor’s Report - Matt Brown

See: https://www.ieee802.org/3/ck/public/21_05/editorsrep_3ck_01_0521.pdf

- Matt Brown thanked the editorial team for their work on the draft and to prepare the initial responses to the comments.

Comment Resolution Agenda - Matt Brown

See: https://www.ieee802.org/3/ck/public/21_05/comagenda_3ck_01_0521.pdf

- It was noted that the comment resolution agenda was subject to change.

Comment resolution began.

Chair noted there was an updated version '01b' of Mike Li's presentation on PRBS9Q with an Appendix B and asked if there was opposition to seeing this update. No one responded.

Presentation #1:

"PRBS9Q Pattern and PAM4 Symbols Used for Jitter/EOJ Measurement", Mike Li

See: https://www.ieee802.org/3/ck/public/21_05/li_3ck_01b_0521.pdf

Chair noted there was an updated version '01b' of Pavel Zivny's presentation on PRBS9Q with additional supporters and editorial changes. No one responded.

Presentation #2:

"Selection of edges for jitter measurements on PRBS9Q pattern (comment #228)", Pavel Zivny

See: https://www.ieee802.org/3/ck/public/21_05/zivny_3ck_01a_0521.pdf

- Author noted that the text "zivny_3ck_01a_0521" in the lower left on the title page was incorrect. It should be "zivny_3ck_01b_0521".
- Discussed the test setup details
- There was a request for the TX EQ settings used in the measurement. The results are taken without any pre or post equalization.

Straw Poll #1:

I support addressing comments #133 and #236 using:

- A. The suggested remedy for comment #133 (Yasuo Hidaka)
- B. The suggested remedy for comment #236 (Mike Li)
- C. Need more information

Results: A: 9, B: 10, C: 9

(see comment #133)

During the discussion of straw poll #1, it was noted that comment #236 was complemented by li_3ck_01b_0521.

Break at ~9:05 a.m. Resumed at ~9:10 a.m.

Presentation #3:

"Feedback coefficient constraints", Adam Healey

See: https://www.ieee802.org/3/ck/public/21_05/healey_3ck_01_0521.pdf

- Discussed the channels used in the analysis for slide 4 and slide 5.

Chair noted that comments currently collected in the “bucket1” are to be reviewed by participants and if any of them are to be taken out of the bucket, participants are to notify Task Force leadership by 16 May AOE. See:

https://www.ieee802.org/3/ck/comments/draft2p0/8023ck_D2p0_comments_proposed_bucket1.pdf

Chair reminded participants of the Task Force meeting on Wednesday, 5 May. The meeting series would resume with the dERL topic.

Meeting ended at ~10:00 a.m.

IEEE P802.3ck 100 Gb/s Electrical Lane Task Force – May 5, 2021

Prepared by Kent Lusted and Beth Kochuparambil

Continue approved agenda from 4 May 2021.

Presentations posted at: https://www.ieee802.org/3/ck/public/21_05/index.html

Meeting began at ~7:05 a.m. Pacific by Beth Kochuparambil, IEEE 802.3ck Task Force Chair. (Note: all times are Pacific time zone unless otherwise indicated)

Beth welcomed attendees.

Meeting began with the agenda presentation:

https://www.ieee802.org/3/ck/public/21_05/agenda_3ck_01a_0521.pdf

Chair reminded participants that Task Force attendance would be taken from the webex logs.

The chair reminded participants to indicate full names and employer/affiliation correctly for the meeting minutes. Reminded participants to mute lines when not speaking and reviewed the steps to unmute.

Chair reviewed the slide with the Participation requirements.

Chair asked if anyone participating was unfamiliar with the copyright slide set – no one responded. Chair showed the IEEE-SA copyright slides.

Chair asked if anyone participating was unfamiliar with the patent slide set – no one responded. Chair showed the patent policy slides and did the call for Potentially Essential Patents – no one responded.

Chair reviewed the updated comment agenda order (see:

https://www.ieee802.org/3/ck/public/21_05/agenda_3ck_02_0521_mini.pdf)

Chair noted that comments currently collected in the “bucket1” are to be reviewed by participants and if any of them are to be taken out of the bucket, participants are to notify Task Force leadership by 16 May AOE. See:

https://www.ieee802.org/3/ck/comments/draft2p0/8023ck_D2p0_comments_proposed_bucket1.pdf

The Vice Chair asked for participants interested in drafting the liaison responses to contact him.

Presentation #4:

“Effect of relaxed Tx dERL specification on interoperability”, Mike Dudek

See: https://www.ieee802.org/3/ck/public/21_05/dudek_3ck_01_0521.pdf

- Discussed the conclusions on slide 22.
- Discussed the proposed restriction on the channel ERL value.
- On slide 11, the red vertical line indicates passing channels on the left and failing channels on the right.

Presentation #5:

“Further Analysis of Transmitter dERL”, Mau-Lin Wu

See: https://www.ieee802.org/3/ck/public/21_05/wu_3ck_02_0521.pdf

- Reviewed the analysis on slide 4.
- There was a request to check the Av settings used in the analysis.

Comment resolution resumed.

Straw Poll #2:

For KR and C2C TX dERL (min) value, I support the following:

- A. No change, -3 dB
- B. Change to -1 dB
- C. Need more information

(choose one)

Results: A: 22, B: 11, C: 9

(see comment #189)

Straw Poll #3:

For KR and C2C TX dERL (min) value, I support the following:

- A. No change, -3 dB
- B. Change to -1 dB
- C. Need more information

(chicago rules)

Results: A: 27, B: 14, C: 26

(see comment #189)

Chair noted that there was an updated '02a' presentation from Adam Healey with editorial and technical changes. Chair asked if there was opposition to hearing the updated presentation. No one responded.

Break at ~8:35 a.m. Resumed at ~8:40 a.m.

Chair reminded participants that Task Force attendance would be taken from the webex logs.

Chair noted that comments currently collected in the "bucket1" are to be reviewed by participants and if any of them are to be taken out of the bucket, participants are to notify Task Force leadership by 16 May AOE. See:

https://www.ieee802.org/3/ck/comments/draft2p0/8023ck_D2p0_comments_proposed_bucket1.pdf

Matt Brown noted that there would be an update to the "bucket1" file with an update to a proposed response.

Presentation #6:

"Clause 162 interference tolerance noise calibration", Adam Healey

See: https://www.ieee802.org/3/ck/public/21_05/healey_3ck_02b_0521.pdf

- Discussed the high pass filter requirements needed to generate the curves on slide 7.
- On slide 8, it was noted that the f1 and f2 values were incorrect. They should be f1 = 8 GHz and f2 = 5 GHz. An updated '01b' presentation would be provided with a correction.

Comment #8 was withdrawn by Matt Brown.

Chair reminded participants of the next meeting on 18 May.

Chair noted that comments currently collected in the "bucket1" are to be reviewed by participants and if any of them are to be taken out of the bucket, participants are to notify Task Force leadership by 16 May AOE. See:

https://www.ieee802.org/3/ck/comments/draft2p0/8023ck_D2p0_comments_proposed_bucket1.pdf

Chair noted that there would be an update to the “bucket1” file with an update to a proposed response for comment #162. The updated file would be announced over the email reflector.

Chair asked for participants interested in drafting the liaison responses to contact Kent Lusted.

Chair noted that the comments related to the COM Tau value were tabled and needed offline consensus building prior to the start of the next meeting.

Meeting ended at ~10:00 a.m.

IEEE P802.3ck 100 Gb/s Electrical Lane Task Force – May 18, 2021

Prepared by Kent Lusted and Beth Kochuparambil

Proposed Agenda:

- Approval of the Agenda
- IEEE Patent Policy reminder
- IEEE Copyright reminder
- IEEE Participation Requirements reminder
- Reminder of Ground Rules and Operations
- Task Force Status
- Liaisons
- Comment Resolution

Presentations posted at: https://www.ieee802.org/3/ck/public/21_05/index.html

Meeting began at ~7:00 a.m. Pacific by Beth Kochuparambil, IEEE 802.3ck Task Force Chair.
(Note: all times are Pacific time zone unless otherwise indicated)

Meeting began with the agenda presentation

https://www.ieee802.org/3/ck/public/21_05/agenda_3ck_03_0521.pdf

Chair reminded participants that Task Force attendance would be taken from the webex logs. Chair noted that participants would need to register their attendance in the IEEE Meeting Attendance Tool for the IEEE 802.3 Working Group credit.

The chair reminded participants to indicate full names and employer/affiliation correctly for the meeting minutes. Reminded participants to mute lines when not speaking and reviewed the steps to unmute.

Presented the proposed agenda and noted that the agenda would cover the meetings on 18 and 19 May. Chair noted that the bucket link was updated with a version 'bucket1b' and the comment agenda was updated to version "03a'. Chair asked if there was objection to the shown agenda with the modifications as noted. No one responded.

Chair reviewed the slide with the Participation requirements.

Chair asked if anyone participating was unfamiliar with the copyright slide set – no one responded. Chair showed the IEEE-SA copyright slides.

Chair asked if anyone participating was unfamiliar with the patent slide set – no one responded. Chair showed the patent policy slides and did the call for Potentially Essential Patents – no one responded.

Chair reviewed the ground rules.

Chair called for members of the press. No one responded.

Chair noted that comments currently collected in the “bucket1” were reviewed by Participants. An updated “bucket1b” was posted to the website with the following changes:

- corrected response to 18 & 67 (page 21)
- removed: 14, 20, 23, 61, 62, 63, 65, 66, 67, 70, 73, 85, 196, 210, 212
- minor reordering of comments remaining in the report

See:

https://www.ieee802.org/3/ck/comments/draft2p0/8023ck_D2p0_comments_proposed_bucket1b.pdf

Chair and Vice-Chair reviewed the proposed liaison responses to OIF, T11.2, COBO and Gen-Z. (See: https://www.ieee802.org/3/ck/public/21_05/IEEE_802d3_to_OIF_CEI_0521_draft1.pdf, https://www.ieee802.org/3/ck/public/21_05/IEEE_802d3_to_COBO_0521_draft1.pdf, https://www.ieee802.org/3/ck/public/21_05/IEEE_802d3_to_T11-2_0521_draft1.pdf, https://www.ieee802.org/3/ck/public/21_05/IEEE_802d3_to_Gen-Z_0521_draft1.pdf)

Reviewed OIF response. No changes were made. Reviewed T11.2 response; changes were made and saved as draft2. Reviewed COBO response. No changes were made. Reviewed Gen-Z and Vice-Chair asked if the liaison should be continued. There was agreement to discontinue sending liaisons to Gen-Z at this time.

Motion #1:

Move that the IEEE P802.3ck Task Force approve the following liaisons with editorial license granted to the WG Chair (or his appointed agent) as liaison communications from the IEEE 802.3 WG to OIF, T11-2, and COBO.

- IEEE_802d3_to_OIF_CEI_0521_draft1.pdf
- IEEE_802d3_to_T11-2_0521_draft2.pdf
- IEEE_802d3_to_COBO_0521_draft1.pdf

M: Adee Ran

S: Tom Palkert

Technical (>=75%)

Motion passed by unanimous consent.

Chair asked if participants wanted to further review the changes to “bucket1b”. (See: https://www.ieee802.org/3/ck/comments/draft2p0/8023ck_D2p0_comments_proposed_bucket1b.pdf) No one responded.

Motion #2:

Move to adopt the proposed responses in 8023ck_D2p0_comments_proposed_bucket1b.pdf

M: Mike Dudek

S: Rich Mellitz

Technical (>75%)

Motion passed by unanimous consent.

Comment Resolution Agenda - Matt Brown

See: https://www.ieee802.org/3/ck/public/21_05/comagenda_3ck_03a_0521.pdf

- It was noted that the comment resolution agenda was subject to change.

Comment resolution resumed.

Consensus Discussion Slides - Matt Brown

See: https://www.ieee802.org/3/ck/public/21_05/brown_3ck_01_0521.pdf

See slides 2-5

Presentation #7:

“Conversion of measured J_{3u} and J_{RMS} to A_{DD} and Σ_{RJ} ”, Yasuo Hidaka

See: https://www.ieee802.org/3/ck/public/adhoc/apr14_21/hidaka_3ck_adhoc_01_041421.pdf

- Discussed the measurement results.

Presentation #8:

“A New Method to Accurately Estimate (ADD, Σ_{RJ}) of Dual Dirac Jitter Model from J_{3u} , J_{RMS} ”, Mike Li and Masashi Shimanouchi

See: https://www.ieee802.org/3/ck/public/21_05/li_3ck_02c_0521.pdf

- There was no time for questions

Straw Poll #4:

For calculation COM parameters A_DD and sigma_rms I would support adopting the method as follows (chicago rules):

A: per suggested remedy in comment #209 (Adam Healey)

B: per suggested remedy in #134 and #135 and hidaka_3ck_adhoc_01_041421 (Yasuo Hidaka)

C: hybrid approach proposed in li_3ck_02c_0521.pdf (Mike Li et al)

D: Need more information

E: No changes.

Results: A: 25, B: 19, C: 15, D: 11, E: 3

(see comment #209)

Straw Poll #5

For calculation COM parameters A_DD and sigma_rms I would support adopting the method as follows (choose one):

A: per suggested remedy in comment #209 (Adam Healey)

B: per suggested remedy in #134 and #135 and hidaka_3ck_adhoc_01_041421 (Yasuo Hidaka)

C: hybrid approach proposed in li_3ck_02c_0521.pdf (Mike Li et al)

D: Need more information

E: No changes.

Results: A: 15, B: 12, C: 3, D: 7, E: 1

(see comment #209)

Break at ~8:55 a.m. Resumed at ~9:00 a.m.

There was agreement to defer the “dual port types” topic on the comment agenda to 19 May.

Consensus Discussion Slides - Howard Heck

See: https://www.ieee802.org/3/ck/public/21_05/heck_3ck_01_0521.pdf

See slide 7

Chair reminded participants to sign into the IEEE Meeting Attendance Tool.

Chair reminded participants of the meeting continuing at 7am Pacific on 19 May. The agenda would resume with the “dual port types” topic then continued on to Clause 162.

Meeting ended at ~9:55 a.m.

IEEE P802.3ck 100 Gb/s Electrical Lane Task Force – May 19, 2021

Prepared by Kent Lusted and Beth Kochuparambil

Continued approved agenda from 18 May 2021.

Presentations posted at: https://www.ieee802.org/3/ck/public/21_05/index.html

Meeting began at ~7:00 a.m. Pacific by Beth Kochuparambil, IEEE 802.3ck Task Force Chair.
(Note: all times are Pacific time zone unless otherwise indicated)

Meeting began with the agenda presentation
https://www.ieee802.org/3/ck/public/21_05/agenda_3ck_03_0521.pdf

Chair reminded participants that Task Force attendance would be taken from the webex logs.

The chair reminded participants to indicate full names and employer/affiliation correctly for the meeting minutes. Reminded participants to mute lines when not speaking and reviewed the steps to unmute.

Chair asked if there was objection to the shown agenda. No one responded.

Chair reviewed the slide with the Participation requirements.

Chair asked if anyone participating was unfamiliar with the copyright slide set – no one responded. Chair showed the IEEE-SA copyright slides.

Chair asked if anyone participating was unfamiliar with the patent slide set – no one responded. Chair showed the patent policy slides and did the call for Potentially Essential Patents – no one responded.

Chair reviewed the ground rules.

Chair called for members of the press. No one responded.

Comment Resolution Agenda - Matt Brown

See: https://www.ieee802.org/3/ck/public/21_05/comagenda_3ck_03a_0521.pdf

- It was noted that the comment resolution agenda was subject to change.

Comment resolution resumed.

Consensus Discussion Slides - Howard Heck

See: https://www.ieee802.org/3/ck/public/21_05/heck_3ck_01_0521.pdf

See slide 4

Presentation #9:

“Improving the CR loss budget”, Piers Dawe

See: https://www.ieee802.org/3/ck/public/adhoc/apr28_21/dawe_3ck_adhoc_01_042821.pdf

Straw Poll #6:

I would support a new pair of CR port types with reduced host insertion loss limits on one end (e.g., NIC) and increased host loss limit on the other end (e.g., switch) similar to slide 7 of dawe_3ck_adhoc_01_042821.pdf. (chicago rules)

A: Yes

B: No

C: Need more information

D: Abstain

Results: A: 27, B: 13, C: 29, D: 7

(see comment #166)

Straw poll #7

I would support a new pair of CR port types with reduced host insertion loss limits on one end (e.g., NIC) and increased host loss limit on the other end (e.g., switch) similar to slide 7 of dawe_3ck_adhoc_01_042821.pdf. (Choose one)

A: Yes

B: No

C: Need more information

D: Abstain

Results: A: 22, B: 11, C: 11, D: 6
(see comment #166)

Break at ~8:30 a.m. Resumed at ~8:35 a.m.

Consensus Discussion Slides - Howard Heck

See: https://www.ieee802.org/3/ck/public/21_05/heck_3ck_01_0521.pdf
See slides 11-12

Presentation #10:

“Proposed Np Change for SNDR Measurement in CR”, Mau-Lin Wu

See: https://www.ieee802.org/3/ck/public/21_05/wu_3ck_01a_0521.pdf

Consensus Discussion Slides - Howard Heck

See: https://www.ieee802.org/3/ck/public/21_05/heck_3ck_01_0521.pdf
See slides 13-14

- It was noted that hidaka_3ck_01e_0521 is not associated with comment #139, but comment #138.

Consensus Discussion Slides - Chris Diminico

See: https://www.ieee802.org/3/ck/public/21_05/diminico_3ck_01_0521.pdf
See slides 1-5

Consensus Discussion Slides - Chris Diminico

See: https://www.ieee802.org/3/ck/public/21_05/diminico_3ck_03_0521.pdf
See slide 2

Consensus Discussion Slides - Howard Heck

See: https://www.ieee802.org/3/ck/public/21_05/heck_3ck_02_0521.pdf

Chair reminded participants to sign into the IEEE Meeting Attendance Tool.

Chair asked participants for their feedback on the editorial consensus discussion slides.

Chair noted that the comment resolution pace was progressing, however, there was risk of needing the Task Force meeting on 31 May. Offline consensus building would be key on the CA FOMILD and Annex 120G topics. The decision to meet on 31 May would be made after the next week's meetings.

Chair reminded participants of the IEEE 802.3 Working Group interim meeting on 20 May. (see: <https://www.ieee802.org/3/calendar.html>) The only IEEE 802.3ck Task Force business on the agenda are liaison letters.

Chair reminded participants to record IMAT attendance for at least 4 out of 8 days during the IEEE 802.3 Interim to gain attendance credit for this interim.

Straw Poll #8:

How helpful are the discussion slides put together by the editors for comment resolution?

- A. extremely helpful
- B. very helpful
- C. somewhat helpful
- D. could take them or leave them
- E. not helpful at all
- F. more of a distraction

Results: A: 12, B: 12, C: 2, D: 1, E: 0, F: 1

Meeting adjourned at ~10:02 a.m.

IEEE P802.3ck 100 Gb/s Electrical Lane Task Force – May 25, 2021

Prepared by Kent Lusted and Beth Kochuparambil

Proposed Agenda:

- Approval of the Agenda
- IEEE Patent Policy reminder
- IEEE Copyright reminder
- IEEE Participation Requirements reminder
- Reminder of Ground Rules and Operations
- Task Force Status
- Comment Resolution
 - “bucket2” comments – deadline to request a pull is 5/23, AoE
 - Annex 120G
 - Including review of ran_01_042121 & ghiasi_01_042121
 - Including review of mellitz_01_042821 & ghiasi_01_042121
 - See https://www.ieee802.org/3/ck/public/21_05/comagenda_3ck_05_0521.pdf for specific comment numbers (slides 6 & 7)

Presentations posted at: https://www.ieee802.org/3/ck/public/21_05/index.html

Meeting began at ~7:05 a.m. Pacific by Beth Kochuparambil, IEEE 802.3ck Task Force Chair.
(Note: all times are Pacific time zone unless otherwise indicated)

Meeting began with the agenda presentation

https://www.ieee802.org/3/ck/public/21_05/agenda_3ck_05a_0521.pdf

Chair reminded participants that Task Force attendance would be taken from the webex logs.

The chair reminded participants to indicate full names and employer/affiliation correctly for the meeting minutes. Reminded participants to mute lines when not speaking and reviewed the steps to unmute.

Presented the proposed agenda and noted that the agenda would cover the meetings on 25 and 26 May. Chair updated the posted agenda to version ‘05b’ to align with the agenda announced over email with comment resolution focused on ‘bucket2’ and “Clause 120G”. (see: <https://www.ieee802.org/3/100GEL/email/msg00723.html>) Chair asked if there was objection to the updated agenda. No one responded.

Agenda saved as version “05b”. See:

https://www.ieee802.org/3/ck/public/21_05/agenda_3ck_05b_0521.pdf

Chair reviewed the slide with the Participation requirements.

Chair asked if anyone participating was unfamiliar with the copyright slide set – no one responded. Chair showed the IEEE-SA copyright slides.

Chair asked if anyone participating was unfamiliar with the patent slide set – no one responded. Chair showed the patent policy slides and did the call for Potentially Essential Patents – no one responded.

Chair reviewed the ground rules.

Chair called for members of the press. No one responded.

Chair noted the Task Force was trending behind schedule and would likely need to meet on 31 May. The decision would be made after the 26 May meeting and announced over the email reflector.

Chair noted that comments currently collected in the “bucket2” were posted to the website last week. (see: <https://www.ieee802.org/3/100GEL/email/msg00722.html>) The deadline to pull comments was 23 May AOE. (see: https://www.ieee802.org/3/ck/comments/draft2p0/8023ck_D2p0_comments_proposed_bucket2.pdf) There were no requests to pull comments from the bucket.

Motion #3:

Move to adopt the proposed responses in 8023ck_D2p0_comments_proposed_bucket2.pdf

M: Mike Dudek

S: Howard Heck

Technical (>75%)

Motion passed by unanimous consent.

Comment Resolution Agenda - Matt Brown

See: https://www.ieee802.org/3/ck/public/21_05/comagenda_3ck_05_0521.pdf

- It was noted that the comment resolution agenda was subject to change.

Chair noted that there was a late presentation from Adee Ran related to comment #122 (see: https://www.ieee802.org/3/ck/public/21_05/ran_3ck_01_0521.pdf) Chair asked if there was objection to hearing the presentation. No one responded.

Chair also noted that there was a contribution from Mau-Lin Wu shared at a January ad hoc meeting that would be referenced for comment #188.

Comment resolution resumed.

Consensus Discussion Slides - Matt Brown

See: https://www.ieee802.org/3/ck/public/21_05/brown_3ck_02_0521.pdf

Break at ~8:30 a.m. Resumed at ~8:35 a.m.

Straw Poll #9:

For module output and host output, I support changing the AC CM voltage (max) from 17.5 to 30 mV. (pick one)

A: Yes

B: No

C: Need more information

D: Abstain

Results: A: 11, B: 10, C: 7, D: A

(see comment #118)

Straw Poll #10:

To close comment 118, for module output and host output, I support changing the AC CM voltage (max) value from 17.5 to 30 mV. (pick one)

A: Yes

B: No

Results: A: 12, B: 16

(see comment #118)

Changes were made to the Annex 120G consensus discussion document on slide 9 and saved as version '02a' (see: https://www.ieee802.org/3/ck/public/21_05/brown_3ck_02a_0521.pdf)

Presentation #11:

“Discussion on TBDs in Annex 120G”, Mau-Lin Wu

See: https://www.ieee802.org/3/ck/public/adhoc/jan06_21/wu_3ck_adhoc_02_010621.pdf

- Briefly reviewed slide 6

Chair reminded participants that the call would resume on 26 May.

Meeting ended at ~10:05 a.m.

IEEE P802.3ck 100 Gb/s Electrical Lane Task Force – May 26, 2021

Prepared by Kent Lusted and Beth Kochuparambil

Continued approved agenda from 25 May 2021.

Presentations posted at: https://www.ieee802.org/3/ck/public/21_05/index.html

Meeting began at ~7:00 a.m. Pacific by Beth Kochuparambil, IEEE 802.3ck Task Force Chair.
(Note: all times are Pacific time zone unless otherwise indicated)

Meeting began with the agenda presentation
https://www.ieee802.org/3/ck/public/21_05/agenda_3ck_05b_0521.pdf

Chair reminded participants that Task Force attendance would be taken from the webex logs.

The chair reminded participants to indicate full names and employer/affiliation correctly for the meeting minutes. Reminded participants to mute lines when not speaking and reviewed the steps to unmute.

Chair reviewed the slide with the Participation requirements.

Chair asked if anyone participating was unfamiliar with the copyright slide set – no one responded. Chair showed the IEEE-SA copyright slides.

Chair asked if anyone participating was unfamiliar with the patent slide set – no one responded. Chair showed the patent policy slides and did the call for Potentially Essential Patents – no one responded.

Chair reviewed the ground rules.

Chair called for members of the press. No one responded.

Chair noted that there was a late presentation from Adee Ran related to comment #122 (see: https://www.ieee802.org/3/ck/public/21_05/ran_3ck_01_0521.pdf) Chair asked if there was objection to hearing the presentation. No one responded.

Comment Resolution Agenda - Matt Brown

See: https://www.ieee802.org/3/ck/public/21_05/comagenda_3ck_05_0521.pdf

- It was noted that the comment resolution agenda was subject to change.

Matt Brown asked to move the late presentation from Adee Ran associated with comment #122 to the end of the day's agenda. No one responded.

Comment resolution resumed.

Consensus Discussion Slides - Matt Brown

See: https://www.ieee802.org/3/ck/public/21_05/brown_3ck_02a_0521.pdf

Adee Ran withdrew comment #126.

Break at ~8:55 a.m. Resumed at ~9:00 a.m.

Chair reminded participants to sign into the IEEE Meeting Attendance Tool.

Chair asked if there was objection to the meeting running 5 minutes past the announced finished time. No one responded.

Presentation #12:

“Proposed new text for 120G.3.4.1 module stressed input test”, Adee Ran

See: https://www.ieee802.org/3/ck/public/21_05/ran_3ck_01a_0521.pdf

- Updated version '01a'
- Discussed the proposed restructured text.

Chair reminded participants to continue to build consensus offline on Tau.

Chair noted that a new bucket would be announced over the email reflector with requests to pull out due on Sunday, 31 May AOE. The bucket may have comments that are not typically in a bucket in order to save discussion time. Please review carefully.

Chair thanked the participants for the progress to date. The details for the Monday meeting would be announced over the email reflector.

Meeting adjourned at ~10:10 a.m.

IEEE P802.3ck 100 Gb/s Electrical Lane Task Force – May 31, 2021

Prepared by Kent Lusted and Beth Kochuparambil

Proposed Agenda:

- Approval of the Agenda
- IEEE Patent Policy reminder
- IEEE Copyright reminder
- IEEE Participation Requirements reminder
- Reminder of Ground Rules and Operations
- Task Force Status
- Comment Resolution
 - Close comments in “bucket3” (Monday’s meeting)
 - Highlighted in yellow in:
https://www.ieee802.org/3/ck/public/21_05/comagenda_3ck_07_0521.pdf
 - Pull requests from “bucket3” (Monday’s meeting)
 - Remaining annex 120F, clause 163, & annex 163B comments
 - Remaining cable assembly and 162 annex comments
 - Remaining cross-clause comments
 - Remaining 120G comments
- Closing Business

Presentations posted at: https://www.ieee802.org/3/ck/public/21_05/index.html

Meeting began at ~7:03 a.m. Pacific by Beth Kochuparambil, IEEE 802.3ck Task Force Chair.
(Note: all times are Pacific time zone unless otherwise indicated)

Meeting began with the agenda presentation

https://www.ieee802.org/3/ck/public/21_05/agenda_3ck_07a_0521.pdf

Chair reminded participants that Task Force attendance would be taken from the webex logs.

The chair reminded participants to indicate full names and employer/affiliation correctly for the meeting minutes. Reminded participants to mute lines when not speaking and reviewed the steps to unmute.

Presented the proposed agenda and noted that the agenda would cover the meetings on 31 May, and 1-2 June.

Chair asked if there was objection to the shown agenda. No one responded.

Chair reviewed the slide with the Participation requirements.

Chair asked if anyone participating was unfamiliar with the copyright slide set – no one responded. Chair showed the IEEE-SA copyright slides.

Chair asked if anyone participating was unfamiliar with the patent slide set – no one responded. Chair showed the patent policy slides and did the call for Potentially Essential Patents – no one responded.

Chair reviewed the ground rules.

Chair called for members of the press. No one responded.

Chair noted that bucket3 was announced over the email reflector with requests to pull out due on Sunday, 31 May AOE. (see: https://www.ieee802.org/3/ck/comments/draft2p0/8023ck_D2p0_comments_proposed_bucket3.pdf) The bucket had comments that are not typically in a bucket in order to save discussion time. Chair noted that the following comments were requested to come out of bucket3: 40, 56, 16, 17, 190, 53, 14, 54.

Chair noted that the Task Force would need to be efficient in order to complete comment resolution by Wednesday.

Motion #4:

Move to adopt the proposed responses in 8023ck_D2p0_comments_proposed_bucket3.pdf except comments #40, 56, 16, 17, 190, 53, 14, 54

M: Mike Dudek

S: Adee Ran

Technical (>= 75%)

Motion passed by unanimous consent.

Comment Resolution Agenda - Matt Brown

See: https://www.ieee802.org/3/ck/public/21_05/comagenda_3ck_07a_0521.pdf

- It was noted that the comment resolution agenda was subject to change.

Comment resolution resumed.

Chair noted that the Wednesday, 2 June Task Force meeting may run past the announced end time in order to complete comment resolution.

Consensus Discussion Slides - Phil Sun and Matt Brown

See: https://www.ieee802.org/3/ck/public/21_05/sun_3ck_01b_0521.pdf

Changes were made and saved as version '01b'

Break at ~8:30 a.m. Resumed at ~8:35 a.m.

Reviewed the comment topics remaining to resolve.

Chair noted that there was an updated '01b' version to Adee Ran's presentation on "Proposed new text for 120G.3.4.1 module stressed input test"

Chair noted that 19 comments remain and that the Task Force must remain diligent to finish in the remaining meeting time. The Wednesday meeting will be allowed to go long to finish comment resolution and closing business.

Chair reminded participants of the next meeting on 1 June.

Meeting ended at ~9:10 a.m.

IEEE P802.3ck 100 Gb/s Electrical Lane Task Force – June 1, 2021

Prepared by Kent Lusted and Beth Kochuparambil

Continued approved agenda from 31 May 2021.

Presentations posted at: https://www.ieee802.org/3/ck/public/21_05/index.html

Meeting began at ~7:05 a.m. Pacific by Beth Kochuparambil, IEEE 802.3ck Task Force Chair.
(Note: all times are Pacific time zone unless otherwise indicated)

Meeting began with the agenda presentation
https://www.ieee802.org/3/ck/public/21_05/agenda_3ck_07a_0521.pdf

Chair reminded participants that Task Force attendance would be taken from the webex logs.

The chair reminded participants to indicate full names and employer/affiliation correctly for the meeting minutes. Reminded participants to mute lines when not speaking and reviewed the steps to unmute.

Chair reviewed the slide with the Participation requirements.

Chair asked if anyone participating was unfamiliar with the copyright slide set – no one responded. Chair showed the IEEE-SA copyright slides.

Chair asked if anyone participating was unfamiliar with the patent slide set – no one responded. Chair showed the patent policy slides and did the call for Potentially Essential Patents – no one responded.

Chair reviewed the ground rules.

Chair called for members of the press. No one responded.

Chair noted that the Wednesday, 2 June Task Force meeting may run past the announced end time in order to complete comment resolution.

Comment Resolution Agenda - Matt Brown

See: https://www.ieee802.org/3/ck/public/21_05/comagenda_3ck_08_0521.pdf

- It was noted that the comment resolution agenda was subject to change.

Comment resolution resumed.

Consensus Discussion Slides - Phil Sun and Matt Brown

See: https://www.ieee802.org/3/ck/public/21_05/sun_3ck_01b_0521.pdf

Presentation #13:

“Adjustment of Transition Time for RX Interference Tolerance Test in KR and C2C”, Yasuo Hidaka

See: https://www.ieee802.org/3/ck/public/21_05/hidaka_3ck_01c_0521.pdf

- Discussed the recommended flow shown on slide 5.

Consensus Discussion Slides - Chris Diminico

See: https://www.ieee802.org/3/ck/public/21_05/diminico_3ck_04b_0521.pdf

Presentation #14:

“Improving the CR loss budget”, Piers Dawe

See: https://www.ieee802.org/3/ck/public/adhoc/apr28_21/dawe_3ck_adhoc_01_042821.pdf

Straw Poll #11:

I support changing transition time for SFP+ and multi-lane MTF crosstalk for ICN calculations from 7.5 ps to 8.5 ps. (choose one)

- A. Yes
- B. No

Results: Yes: 26, No: 8
(see comment #211)

Break at ~8:30 a.m. Resumed at ~8:40 a.m.

Presentation #15:

“Comment #142 - MTF FOMILD”, Bruce Champion

See: https://www.ieee802.org/3/ck/public/21_05/champion_3ck_01_0521.pdf

- Discussed the impact of manufacturing variation on the proposed limit.
- A model of the RF test point of 100G/lane quality was included, not a real RF test point.

Presentation #16:

“Validating C2M VEC and VEO Limits”, Ali Ghiasi

See:

https://www.ieee802.org/3/ck/public/adhoc/apr21_21/ghiasi_3ck_adhoc_01a_042121.pdf

- Reviewed slides 7 and 10.

Presentation #17:

“TBDs Associated with MTF”, Sam Kocsis

See: https://www.ieee802.org/3/ck/public/adhoc/jan13_21/kocsis_3ck_adhoc_01_011321.pdf

- Discussed the impact of the windowing function on the data shown on slide 11.

Straw Poll #12:

I would support changing MTF FOMILD (max) as follows: (chicago rules)

- A. Leave as 0.13 dB
- B. Change to 0.14 dB
- C. Change to 0.15 dB
- D. Change to 0.18 dB

Results: A: 18 , B: 12 , C: 20 , D: 13

(see comment #142)

Straw Poll #13:

I would support changing MTF FOMILD (max) as follows: (choose one)

- A. Leave as 0.13 dB

- B. Change to 0.14 dB
- C. Change to 0.15 dB
- D. Change to 0.18 dB

Results: A: 10, B: 5, C: 11, D: 10
(see comment #142)

Straw Poll #14:

I support increasing MTF FOMILD (max) from 0.13 dB (choose one)

Results: Y: 16, N: 14
(see comment #142)

Chair noted that straw poll #14 would be a decision straw poll. A 'yes' vote would result in more straw polls to determine the value. A 'no' vote would result in closing the comment as a rejection.

Straw Poll #15:

I support changing MTF FOMILD (max) to:

- A. 0.15 dB
- B. 0.18 dB

Results: A: 25, B: 10
(see comment #142)

Chief Editor reviewed the remaining topics for comment resolution.

Chair reminded participants to review the late contribution from Adee Ran on the topic "Proposed new text for 120G.3.4.1 module stressed input test". Adee Ran noted that participants interested in the subject should review his email to the reflector. (see: <https://www.ieee802.org/3/100GEL/email/msg00733.html>)

Chair reviewed the agenda for the Wednesday meeting; complete comment resolution and closing business.

Meeting ended at ~10:00 a.m.

IEEE P802.3ck 100 Gb/s Electrical Lane Task Force – June 2, 2021

Prepared by Kent Lusted and Beth Kochuparambil

Continued approved agenda from 31 May 2021.

Presentations posted at: https://www.ieee802.org/3/ck/public/21_05/index.html

Meeting began at ~7:05 a.m. Pacific by Beth Kochuparambil, IEEE 802.3ck Task Force Chair.
(Note: all times are Pacific time zone unless otherwise indicated)

Meeting began with the agenda presentation
https://www.ieee802.org/3/ck/public/21_05/agenda_3ck_09_0521.pdf

Chair reminded participants that Task Force attendance would be taken from the webex logs.

The chair reminded participants to indicate full names and employer/affiliation correctly for the meeting minutes. Reminded participants to mute lines when not speaking and reviewed the steps to unmute.

Chair reviewed the slide with the Participation requirements.

Chair asked if anyone participating was unfamiliar with the copyright slide set – no one responded. Chair showed the IEEE-SA copyright slides.

Chair asked if anyone participating was unfamiliar with the patent slide set – no one responded. Chair showed the patent policy slides and did the call for Potentially Essential Patents – no one responded.

Chair reviewed the ground rules.

Chair called for members of the press. No one responded.

Chair reviewed a high-level schedule for the upcoming months. There was a request to add another set of ad hoc meetings on 16 June or 23 June.

Comment Resolution Agenda - Matt Brown

See: https://www.ieee802.org/3/ck/public/21_05/comagenda_3ck_08_0521.pdf

- It was noted that the comment resolution agenda was subject to change.

Comment resolution resumed.

Consensus Discussion Slides - Matt Brown

See: https://www.ieee802.org/3/ck/public/21_05/brown_3ck_01a_0521.pdf

Straw Poll #16:

For all return loss variable names I support (chicago rules):

- Option 1 per slide 9 of brown_3ck_01a_0521 (return_loss)
- option 2 per slide 9 of brown_3ck_01a_0521 (e.g., RLdd)
- option 3 per slide 9 of brown_3ck_01a_0521 (e.g., RLDD)
- RLxx where xx is DD, DC, CD, CC as subscript
- no changes to return loss variable names

Results: A: 3, B: 26, C: 14, D: 12, E: 2

(see comment #61)

Straw Poll #17

For all return loss variable names I support (choose one):

- Option 1 per slide 9 of brown_3ck_01a_0521 (return_loss)
- option 2 per slide 9 of brown_3ck_01a_0521 (e.g., RLdd)
- option 3 per slide 9 of brown_3ck_01a_0521 (e.g., RLDD)
- RLxx where xx is DD, DC, CD, CC as subscript
- no changes to return loss variable names

Results: A: 1, B: 22, C: 3, D: 4, E: 1

(see comment #61)

Adee Ran noted that there was an updated '01c' version to the late presentation "Proposed new text for 120G.3.4.1 module stressed input test" based on peer feedback. Chair asked if there was any opposition to seeing the updated version. No one responded.

Presentation #18:

“Proposed new text for 120G.3.4.1 module stressed input test”, Adee Ran

See: https://www.ieee802.org/3/ck/public/21_05/ran_3ck_01c_0521.pdf

- Related to comment #122
- Reviewed and discussed the document.

Chair and Chief-Editor thanked the participants for their efforts in comment resolution.

Chair thanked the editorial team for their work during comment resolution.

Motion #5:

Move that the IEEE P802.3ck Task Force generate Draft 2.1 for WG Recirculation from D2.0 and closed comments.

M: Ali Ghasi

S: Mike Dudek

Technical (>= 75%)

Motion passed by unanimous consent.

Chair noted that the next ad hoc series and draft 2.1 availability would be announced over the Task Force email reflector.

Meeting adjourned at ~8:45 a.m.

Attendees

Name	Affiliation	Employed by	5/4	5/5	5/18	5/19	5/25	5/26	5/31	6/1	6/2
Adam Healey	Broadcom	Broadcom	x	x	x	x	x	x		x	x
Adee Ran	Cisco	Cisco	x	x	x	x	x	x	x	x	x
Alan Kinningham	I-PEX	I-PEX	x	x	x	x	x		x	x	x
Alex Haser	Molex	Molex	x	x	x	x	x	x		x	x
Ali Ghiasi	Ghiasi Quantum/Inphi	Ghiasi Quantum/Inphi	x	x	x	x	x	x	x	x	x
Arthur Marris	Cadence	Cadence	x		x	x	x	x	x		x
Ashley Moran-IEEE SA	IEEE SA	IEEE SA		x	x			x			x
Asroc Chen	TE	TE							x		
Ayal Shoval	Synopsys	Synopsys	x	x	x	x	x	x			
Beth Kochuparambil	Cisco	Cisco	x	x	x	x	x	x	x	x	x
Bill Powell	Independent	Independent						x			
Bo Zhang	Marvell	Marvell						x			
Bob Grow	RMG Consulting	RMG Consulting				x					
Brandon Gore	Samtec	Samtec	x	x	x	x				x	x
Bruce Champion	TE Connectivity	TE Connectivity	x	x	x	x	x	x		x	x
Burrell Best	Samtec	Samtec								x	x
Champion (Chien Ping)	Cornelis Networks	Cornelis Networks	x	x	x	x	x	x		x	x

Kao												
Chan Chih (David) Chen	Applied Optoelectronics	Applied Optoelectronics	x	x	x	x	x	x	x	x	x	x
Charles Park	Juniper	Juniper					x	x				
Chris DiMinico	PHY-SI	PHY-SI	x	x	x	x	x	x	x	x	x	x
Clint Walker	Alphawave IP	Alphawave IP	x	x	x	x	x					
Darshan Shah	Palo Alto Networks	Palo Alto Networks	x	x		x						
Dave Hess	Cord Data	Cord Data										x
David Malicoat	Senko	Independent	x	x	x	x	x	x			x	
David Ofelt	Juniper	Juniper				x						
David Piehler	Dell EMC	Dell EMC				x	x					
David Rennie	Synopsys	Synopsys		x								x
Ed Ulrichs	Intel	Intel			x	x	x	x				
Enis Akbaba	Maxim Integrated	Maxim Integrated			x		x					x
Eugene Opsasnick	Broadcom	Broadcom	x	x	x	x	x	x				
Frank Chang	Source Photonics	Source Photonics	x	x	x	x	x	x			x	
Gary Nicholl	Cisco	Cisco	x	x		x	x	x			x	x
Geoff Zhang	Xilinx	Xilinx	x	x	x	x	x	x	x	x	x	x
German Feyh	Broadcom	Broadcom						x				
Greg LeCheminant	Keysight	Keysight	x	x		x	x	x			x	x
Guangcan Mi	Huawei	Huawei				x						
Hansel Dsilva	Achronix	Achronix	x		x			x				

Hao Ren	Huawei	Huawei				x		x			
Haysam Kadry	Ford Motor Company	Ford Motor Company				x					
Hessam Mohajeri	Cadence	Cadence	x	x	x	x	x	x			x
Hormoz Djahanshahi	Microchip	Microchip	x	x						x	
Hossein Sedarat	Ethernovia	Ethernovia				x					
Howard Heck	Intel	Intel	x	x	x	x	x	x	x	x	x
Hsinho Wu	Intel	Intel		x	x						
Inho Kim	Max Linear	Max Linear	x	x							
Istvan BakroNagy	EFFECT Photonics	EFFECT Photonics	x	x	x	x	x	x	x	x	x
Jacky Chang	HPE	HPE			x	x					
James Weaver	Arista	Arista	x	x	x	x	x	x	x	x	x
James Young	Commscope	Commscope	x		x	x	x				x
Jane Lim	Cisco	Cisco	x	x	x	x	x	x	x	x	x
Jeff Hutchins	Ranovus	Ranovus			x						
Jeff Slavick	Broadcom	Broadcom	x	x		x	x	x	x	x	x
Jeffery Maki	Juniper	Juniper	x	x		x	x	x		x	x
Jennifer Santulli	IEEE SA	IEEE SA		x							
Jerry Pepper	Keysight	Keysight			x			x			
Jinhua Chen	Luxshare ICT	Luxshare ICT			x	x	x	x			x
Jodi Haasz	IEEE SA	IEEE SA				x	x			x	
John Abbott	Corning	Corning				x					
John Calvin	Keysight	Keysight	x	x	x	x	x	x		x	x

John Ewen	Marvell	Marvell	x	x	x	x	x	x		x	x
John Yurtin	Aptiv	Aptiv		x				x		x	x
Joshua Kim	Hirose	Hirose	x	x	x	x	x	x		x	x
Juan Martinez	IBM	IBM		x	x						
Kae Dube	UNH-IOL	UNH-IOL			x	x		x			
Kapil Shrikhande	Innovium	Innovium	x	x	x	x	x	x		x	x
Karen Liu	Lightwave Logic	Lightwave Logic			x		x	x			
Karl Bois	TE Connectivity	TE Connectivity	x	x	x	x		x			
KengHua Chuang	HPE	HPE					x				
Kent Lusted	Intel	Intel	x	x	x	x	x	x	x	x	x
Kishore Kota	Marvell	Marvell					x				
Kumaran Krishnasamy	Broadcom	Broadcom	x	x	x	x	x	x	x	x	x
Larry McMillan	Western Digital	Western Digital			x						
Leesa Noujeim	Google	Google			x	x					
Leon Bruckman	Huawei	Huawei				x					
Liav Ben-Artzi	Marvell	Marvell	x	x	x	x	x	x	x	x	x
Lokesh Kabra	Synopsys	Synopsys			x	x					
Luis Boluna	Keysight	Keysight				x					
Luisma Torres	KDPOF	KDPOF				x					
Mabud Choudhury	OFS	OFS					x				
Mark Bordogna	Intel	Intel			x	x					

Mark Gustlin	Cisco	Cisco			x	x	x	x			
Mark Kimber	Semtech	Semtech			x	x	x	x		x	x
Mark Nowell	Cisco	Cisco				x	x	x			
Masashi Shimanouchi	Intel	Intel	x	x	x						
Matt Brown	Huawei	Huawei	x	x	x	x	x	x	x	x	x
Mau-Lin Wu	Mediatek	Mediatek	x	x	x	x	x	x	x	x	x
Michael Paul	Analog Devices Inc.	Analog Devices Inc.			x						
Mike Dudek	Marvell	Marvell	x	x	x	x	x	x	x	x	x
Mike Klempa	Amphenol	Amphenol	x	x	x	x	x	x		x	x
Mike Li	Intel	Intel	x	x	x	x	x	x			x
Nathan Tracy	TE Connectivity	TE Connectivity	x	x	x	x	x	x		x	x
Patrick Casher	Foxconn Interconnect	Foxconn Interconnect	x		x	x		x		x	
Paul Brooks	Viavi	Viavi		x	x	x	x	x	x		x
Pavel Zivny	Tektronix	Tektronix	x	x	x	x	x	x			
Phil Sun	Credo	Credo	x	x	x	x	x	x	x	x	x
Piers Dawe	NVIDIA	NVIDIA	x	x	x	x	x	x	x	x	x
Pirooz Tooyserkani	Cisco	Cisco	x	x	x	x	x	x		x	
Priyank Shukla	Synopsys	Synopsys				x	x	x	x		
Qingya She	Fujitsu	Fujitsu					x				
Qiwon Zhong	Huawei	Huawei						x			
Rajmohan Hegde	Broadcom	Broadcom	x	x	x	x	x	x	x	x	x

Ramesh Sivakolundu	Cisco	Cisco	x				x	x			x
Raymond Nering	Cisco	Cisco				x	x	x			
Rich Mellitz	Samtec	Samtec	x	x	x	x	x	x		x	x
Rick Pimpinella	Panduit	Panduit				x					
Rick Rabinovich	Keysight	Keysight	x	x	x	x	x	x	x	x	x
Rita Horner	Synopsys	Synopsys					x	x			
Roger King	TRUMPF Photonic	TRUMPF Photonic					x				
Sam Kocsis	Amphenol	Amphenol	x	x	x	x	x	x		x	x
Sam Sambasivan	AT&T	AT&T				x					
Scott Sommers	Molex	Molex	x	x	x	x	x	x		x	x
Scott Walley	Max Linear	Max Linear				x		x			x
Shawn Nicholl	Xilinx	Xilinx			x						
Shimon Muller	Axalume	Axalume			x	x	x	x			
SJ Yu	Foxconn Interconnect	Foxconn Interconnect	x	x							x
SJ Yu	Foxconn Interconnect	Foxconn Interconnect	x	x		x		x			
Stephen Didde	Keysight	Keysight			x	x	x			x	
Steve Sekel	Wilder Tech	Wilder Tech		x		x	x	x		x	x
Steve Trowbridge	Nokia	Nokia	x	x		x		x			
Takeo Masuda	OITDA	OITDA				x					
Tanner Fortier	UNH-IOL	UNH-IOL						x			

Tao Hu	Marvell	Marvell		x	x		x					x
Terry Little	Foxconn Interconnect	Foxconn Interconnect	x	x		x		x			x	x
Thananya Baldwin	Keysight	Keysight						x				
Tom Huber	Nokia	Nokia	x			x						
Tom Issenhuth	Huawei	Issenhuth Consulting						x				
Tom Palkert	Macom/Samtec	Macom/Samtec	x	x	x	x	x	x	x	x	x	x
Toshiaki Sakai	Socionext	Socionext	x	x	x	x	x	x	x	x	x	x
Upen Kareti	Cisco	Cisco	x	x	x	x	x	x			x	x
Varun Garg	Keysight	Keysight		x							x	x
Victor Chen	Amazon	Amazon	x	x	x					x		x
Viet Tran	Keysight	Keysight			x	x		x				
Xiang He	Huawei	Huawei	x			x		x				
Xinyuan Wang	Huawei	Huawei				x	x	x				
Yan Zhuang	Huawei	Huawei			x		x	x				
Yang Zhiwei	ZTE	ZTE					x	x				
Yasuo Hidaka	Credo	Credo	x	x	x	x	x	x	x	x	x	x
Yi Sun	OFS Optics	OFS Optics				x						
Yong Kim	Tenstorrent	Tenstorrent		x							x	
Yoshiaki Sone	NTT	NTT				x						
Yu (Helen) Xu	Huawei	Huawei						x				
Zhiwei Yang	ZTE	ZTE					x	x				
Zvi Rechtman	Mellanox	Mellanox			x							

