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

Telephonic series for October-November 2020 Meeting:
October 13, October 14, October 20, October 21, October 27, October 28,
November 10, November 11, November 18, November 23 and November 24,
2020
Online Meeting

Prepared by Beth Kochuparambil and Kent Lusted

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Motion #16:

Attendees

IEEE P802.3ck 100 Gb/s Electrical Lane Task Force – October 13, 2020

Prepared by Kent Lusted

Proposed Agenda:

- Approval of the Agenda
- Approve collective July-Aug Series Minutes (June 30-August 12)
- IEEE Participation Requirements reminder (https://standards.ieee.org/ipr/index.html)
- IEEE Copyright reminder (http://www.ieee802.org/devdocs.shtml)
- IEEE Patent Policy reminder (http://www.ieee802.org/3/patent.html)
- Ground Rules and Operations
- Chief Editor's Report
- Big Ticket Comment Resolution: 120F/163/163A: RX/TX Test Fixture
  - Keep TP0a or not
    - Benartsi_3ck_01_1020
    - Ghiasi_3ck_01_1020
    - brown_3ck_adhoc_01a_091620 (slide 6-9)
  - TP0a IL and informative/normative nature
    - Wu_3ck_04_1020
  - Match RX Test Fixture to TX Test Fixture
    - brown_3ck_adhoc_01a_091620 (slide 12)
  - AC Common Mode at TP0v
    - Wu_3ck_01_1020
- Big Ticket Comment Resolution: Eye Width (EW) and Eye Symmetric Mask Width (ESMW)
  - Dawe_3ck_01_1020
  - Healey_3ck_01_1020
- Big Ticket Comment Resolution: 162/163/120F/120G: Even-Odd Jitter
  - Calvin_3ck_01_1020
  - Ran_3ck_01_1020
- Big Ticket Comment Resolution: ERL
  - Adding ERL of Test Fixture and MTF
    - Kocsis_3ck_02_1020
  - dERL & ERL Values
    - dERL proposals are in comments
    - Wu_3ck_02_1020
    - Wu_3ck_03_1020
  - N and Tfx parameters
    - Kocsis_3ck_01_1020
- Big Ticket Comment Resolution: Common Mode Noise, RLCC, RLCD
  - Proposals in comments

Presentations posted at: https://www.ieee802.org/3/ck/public/20_10/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/20_10/agenda_3ck_01_1020.pdf

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 13 and 14 October.

Motion #1:

Move to approve the agenda.
Moved by: Steve Sekel
Second by: Mike Dudek
Procedural (>50%)
Passed by unanimous consent

Chair thanked Kent Lusted for the minutes of the last meeting (July-August 2020). Chair noted that one participant's attendance (Joshua Kim) was not captured correctly in the posted minutes. Chair asked if there were any other corrections or modifications to be noted for the posted July-August series minutes. No one responded.

Motion #2:

Move to approve the July-August telephonic interim meeting minutes with the corrections noted.
Moved by: Jim Weaver
Second by: Joshua Kim
Procedural (>50%)
Passed by unanimous consent

Chair reminded participants of the IEEE Participation Requirements and showed the slide with the Participation requirements. (see: http://www.ieee802.org/devdocs.shtml)   Reminded participants of the IEEE copyright policy. (See: https://standards.ieee.org/ipr/index.html) Chair reminded participants of the IEEE patent policy. (See: http://www.ieee802.org/3/patent.html)   She asked if anyone was unfamiliar with the IEEE patent policy. No one responded. Chair made the call for patents. No one responded.

Chair provided an overview of the Task Force status. Chair noted that editors are using a "bucket" for comments deemed non-controversial. The bucket proposed responses would be adopted with motions later in the meeting series. The Task Force was working toward technical completeness and removing TBDs.

Reviewed the Draft 1.3 Telephonic interim meeting series.   Chair noted the IEEE 802.3 Working Group November plenary series runs 9-19 November. The Task Force leadership would be looking for a path to pull in the start of the Working Group ballot.

Chair reviewed the ground rules.

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

Chair noted that offline consensus building and discussion was necessary to progress the draft forward.

Chair reviewed various operations aspects of the online meeting series. Late comments would be held until 26 October or later.

It was noted that comments currently collected in the "bucket" are to be reviewed by participants and if any of them are to be taken out of the bucket, participants are to notify leadership by 25 October, 2020. The proposed "bucket1" responses are posted at https://www.ieee802.org/3/ck/comments/draft1p3/8023ck_D1p3_comments_proposed_bucket1.pdf

Reviewed the common (among several task forces) comment resolution process.

Chief Editor's Report:
Matt Brown
See: https://www.ieee802.org/3/ck/public/20_10/editorsrep_3ck_01_1020.pdf

- Matt thanked the editorial team and advisors for their work on the draft. Matt also thanked Piers Dawe for his review of the draft prior to publication.
- Received 280 comments from 19 reviewers.
- Matt noted that some comment proposed responses have an editor's note to draw attention to comments that need to close in order to resolve an incomplete part of the specification.

Chair noted that the first big ticket item was TX/RX test fixtures. There was a request to move the AC common mode at TP0v topic to be part of the Common Mode Big ticket agenda item. There was consensus to make the change.

Presentation #1:

"TP0v Recap and Objectives ", Liav Ben-Artsi

See: https://www.ieee802.org/3/ck/public/20_10/benartsi_3ck_01_1020.pdf
- No questions were asked

Presentation #2:

"The Logic to Keep TP0a ", Ali Ghiasi

See: https://www.ieee802.org/3/ck/public/20_10/ghiasi_3ck_01a_1020.pdf
- Updated version '01a' with a typo fix on slide 5.
- Discussed the picture on slide 8. TP0a was the pad of the fixture.
- Discussed possible calibration methods for the fixtures on slide 6.

Presentation #3:

"What to do with TP0a and TP5a ", Matt Brown

See:
https://www.ieee802.org/3/ck/public/adhoc/sept16_20/brown_3ck_adhoc_01a_091620.pdf
- There were no questions

Big Ticket Items Consensus Discussion Slides - Beth Kochuparambil

See: https://www.ieee802.org/3/ck/public/20_10/kochuparambil_3ck_02_1020.pdf
Showed slides 2-5 focused on test fixtures.
Discussed and compared TP0a vs. TP0v.

Chair noted that Straw Poll #1 was trying to determine if the TF was keeping TP0a or not.

Straw Poll #1:

I support keeping TP0v methodology as the normative specification (choose one)
Y: 27, N: 4, No Opinion: 11

Straw Poll #2:

Assuming we keep TP0v methodology, I support removing the example test fixture in 163.9.2.2
Y: 10, N: 17 , No Opinion: 13

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

Presentation #4:

"IL and ERL Specs at TP0a ", Mau-Lin Wu
See: https://www.ieee802.org/3/ck/public/20_10/wu_3ck_04_1020.pdf
  ● Related to comment #204
  ● There was a request to share the test fixture S-parameter file.

Big Ticket Items Consensus Discussion Slides - Beth Kochuparambil

See: https://www.ieee802.org/3/ck/public/20_10/kochuparambil_3ck_02_1020.pdf
Showed slides 6-7 focused on TP0 to TP0a IL.

Straw poll #3:

I support the test fixture TP0 to TP0a insertion loss being
        A: a single value
        B: a range
        C: no opinion
Results: A: 18, B: 6, C: 8

Straw poll #4:

For the example test fixture, I support TP0 to TP0a insertion loss of: (Chicago rules)
        A: 0 dB
        B: between 0 and 2 dB

C: 2 dB

D: 2.5 dB

E: 3 dB

F: 3.5 dB

G: 4 dB

H: greater than 4 dB

I: no opinion

Results: A: 6, B: 4, C: 7, D: 13, E: 16, F: 10, G: 9, H: 1, I: 9

Big Ticket Items Consensus Discussion Slides - Beth Kochuparambil

See: https://www.ieee802.org/3/ck/public/20_10/kochuparambil_3ck_02_1020.pdf
Showed slides 8-9 focused on matching TX and RX.

Straw Poll #5:

I support aligning RX to TP0v test fixture characteristics and methodology:
Y: 22, N: 1, No Opinon: 6

Meeting ended at ~10:05 a.m.

IEEE P802.3ck 100 Gb/s Electrical Lane Task Force – October 14, 2020

Prepared by Kent Lusted

Continue approved agenda from 13 October

Presentations posted at: https://www.ieee802.org/3/ck/public/20_10/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/20_10/agenda_3ck_02_1020.pdf

Chair noted that the order of the big ticket items would change: even-odd jitter then eye width.

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 reminded participants of the IEEE Participation Requirements and showed the slide with the Participation requirements. (see: http://www.ieee802.org/devdocs.shtml)   Reminded participants of the IEEE copyright policy. (See: https://standards.ieee.org/ipr/index.html) Chair reminded participants of the IEEE patent policy. (See: http://www.ieee802.org/3/patent.html)   She asked if anyone was unfamiliar with the IEEE patent policy. No one responded. Chair made the call for patents. No one responded.

Comment resolution began.

There was a request to swap the order of the two presentations on even-odd jitter to be Adee Ran first then John Calvin. There was no objection. The order was swapped.

Presentation #5:

"Even-Odd Jitter ", Adee Ran
See: https://www.ieee802.org/3/ck/public/20_10/ran_3ck_01_1020.pdf
- No questions were asked.

Presentation #6:

"Even-Odd Jitter (EOJ) Test Method ", John Calvin

See: https://www.ieee802.org/3/ck/public/20_10/calvin_3ck_01_1020.pdf

- Discussed the impact of the CR loop bandwidth on available instruments.
- A real-time scope was tried and the results are not comparable at this time due to limitations in the setup.

Big Ticket Items Consensus Discussion Slides - Beth Kochuparambil

See: https://www.ieee802.org/3/ck/public/20_10/kochuparambil_3ck_02a_1020.pdf

Showed slide 10-12 focused on EOJ susceptibility and jitter.

Discussed and compared the various solutions to even-odd jitter.

Straw Poll #6

To address EOJ measurement error susceptibility, I would support (Chicago rules):

      A: Changing the measurement method to use PRBS9Q instead of PRBS13Q

      B: Allowing a shorter odd-length pattern with all transitions (not a specific one)

      C: Specifying or allowing a lower CRU bandwidth

      D: Use the average of the 12 transition measurements rather than the worst case

      E: None of the above

      F: Don't care

      G: Need more information

Results: A: 6, B: 4, C: 13, D: 11, E: 1, F: 10, G: 7

Straw Poll #7

For the EOJ limit, I would support (Chicago rules):

      A: Changing the limit to 0.035 UI

      B: Changing the limit to 0.025 UI

      C: No change to the limit (0.019 UI)

      D: Don't care

      E: Need more information

Results: A: 4, B: 14, C: 6, D: 10, E: 9

It was noted during voting that the straw poll #7 displayed had a typo on the option "Changing the limit to 0.0325 UI" that should be "Changing the limit to 0.035 UI". Chair instructed participants to use the value 0.035 UI for this option.

Straw Poll #8:

For the EOJ limit, I would support (choose one):

       A: Changing the limit to 0.035 UI

       B: Changing the limit to 0.025 UI

       C: No change to the limit (0.019 UI)

       D: Don't care

       E: Need more information

A: 2, B: 8, C: 4, D: 9, E: 7

Presentation #7:

"Eye Specification in PAM4 C2M ", Piers Dawe

See: https://www.ieee802.org/3/ck/public/20_10/dawe_3ck_01a_1020.pdf

- On slide 2, it was noted that "120G" should be "120E". Author to send updated version '01a' with correction.
- Discussed the 10 sided mask on slide 7.

Presentation #8:

"Ensuring Horizontal Margin in Annex 120G ", Adam Healey

See: https://www.ieee802.org/3/ck/public/20_10/healey_3ck_01a_1020.pdf

- Updated version '01a' with VEC sensitivity to jitter. No objection
- On page 4, the x-axis is estimated ESMW taken from the COM tool.
- Reviewed the plots of VEC sensitivity to jitter.

Break at ~9:00 a.m. Resumed at ~9:05 a.m.

Big Ticket Items Consensus Discussion Slides - Beth Kochuparambil

See: https://www.ieee802.org/3/ck/public/20_10/kochuparambil_3ck_02a_1020.pdf

Showed slide 13-14 focused on EW and ESMW.

Discussed and compared the various directions for EW/ESMW solutions.

Straw Poll #9:

I support the EW/ESMW direction of (Chicago rules):

       A: Keep ESMW and eye width

       B: Replace EH, ESMW, and eye width with an eye mask as proposed in dawe_3ck_01_1020

C: Remove ESMW and eye width and redefine EH and VEC as proposed in healey_3ck_01a_1020

D: Remove ESMW and eye width and leave EH and VEC as is

Results: A: 9, B: 10, C: 24, D: 6

Presentation #9:

"MTF ERL ", Sam Kocsis

See: https://www.ieee802.org/3/ck/public/20_10/kocsis_3ck_02a_1020.pdf

- Updated version 02a with additional supporters.
- On slide 7, sample ID represents a variety of different fixture vendors, connectors, and lanes.
- Discussed the impact of the ERL value on the plots shown on slide 9.

Chair asked participants to build consensus offline to make progress forward on the draft.

Chair noted that comments currently collected in the "bucket" are to be reviewed by participants and if any of them are to be taken out of the bucket, participants are to notify leadership by 25 October, 2020. The proposed "bucket1" responses are posted at https://www.ieee802.org/3/ck/comments/draft1p3/8023ck_D1p3_comments_proposed_bucket1.pdf There would be a updated proposed response related to comment #38 in bucket1 due to editorial error.

The "closed as a result" bucket for the 13-14 October meeting would be posted to the website soon. Comments against this bucket would be due Sunday, date 10/18.

Next week would be focused on comment resolution.

Meeting ended at ~10:05 a.m.

IEEE P802.3ck 100 Gb/s Electrical Lane Task Force – October 20, 2020

Prepared by Kent Lusted

Proposed Agenda:

- Approval of the Agenda
- IEEE Participation Requirements reminder (https://standards.ieee.org/ipr/index.html)
- IEEE Copyright reminder (http://www.ieee802.org/devdocs.shtml)
- IEEE Patent Policy reminder (http://www.ieee802.org/3/patent.html)
- Reminder of Ground Rules and Operations
- Comment Resolution
    - Cross clause (CC) Misc
        - AC coupling: 129, 130, 138
        - Channel IL: 232, 255
        - Editorial: 49
        - RJT: 200, 201
        - CM DC Voltage: 148, 147, 146, 149
    - 93A: 233, 234, 27
    - 120F/163 TP0v/Test Fixture (NOT the example test fixture)
        - Test fixture: 64, 227, 65, 161
        - Vf/vpeak/erl: 5, 61, 13, 83, 84
        - TP0v method: 29, 62, 205, 30, 128, 35, 58, 139, 277, 278, 36, 39, 37, 59
        - Parameter name: 77, 78, 79
    - 120F/163
        - RITT: ran_3ck_03_1020 (late), 71, 166, 194, 2, 70, 168, 231
        - RITT Np: li_3ck_01_1020, 279, 86, 280
        - SNDR: 226
    - 120F/163 Example Test Fixture: 228, 6, 26, 73, 162, 204, 229, 136

Presentations posted at: https://www.ieee802.org/3/ck/public/20_10/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/20_10/agenda_3ck_03a_1020.pdf

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 20 and 21 October. The agenda was updated since announced via the email reflector.

Motion #3:

Move to approve the agenda.
Moved by: Pavel Zivny
Second by: Mark Kimber
Procedural (>50%)
Passed by unanimous consent

Chair reminded participants of the IEEE Participation Requirements and showed the slide with the Participation requirements. (see: http://www.ieee802.org/devdocs.shtml)   Reminded participants of the IEEE copyright policy. (See: https://standards.ieee.org/ipr/index.html) Chair reminded participants of the IEEE patent policy. (See: http://www.ieee802.org/3/patent.html)   She asked if anyone was unfamiliar with the IEEE patent policy. No one responded. Chair made the call for patents. No one responded.

Reviewed the Draft 1.3 Telephonic interim meeting series.   Chair noted that David Law requested the Task Force to adjust the meeting on 10 November due to a conflict with the maintenance meeting. Details will be announced in the future.

Chair reviewed the ground rules.

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

Chair noted that offline consensus building and discussion is necessary to progress the draft forward.

Chair reviewed various operations aspects of the online meeting series. Late comments would be held until 26 October or later.

It was noted that comments currently collected in the "bucket" are to be reviewed by participants and if any of them are to be taken out of the bucket, participants are to notify leadership by 25 October, 2020. The proposed "bucket1" responses are posted at https://www.ieee802.org/3/ck/comments/draft1p3/8023ck_D1p3_comments_proposed_bucket1.pdf

Comment resolution began.

Chair noted that there was a request to pull comments #137 and #140 from the "closed as a result bucket2". See:
https://www.ieee802.org/3/ck/comments/draft1p3/8023ck_D1p3_comments_proposedclosure_as_a_result_of_bucket2.pdf

Motion #4:

Move to adopt the proposed responses in
8023ck_D1p3_comments_proposedclosure_as_a_result_of_bucket2.pdf except #137, 140
M: Mike Dudek
S: Adee Ran
Technical (>=75%)
Passed by unanimous consent.

It was noted that comment #115 was withdrawn.

Matt Brown showed the comment agenda for the 20-21 October meeting. See:
https://www.ieee802.org/3/ck/public/20_10/agenda_3ck_03_1020_brown.pdf

AC Coupling Discussion Slides - Chris Diminico

See: https://www.ieee802.org/3/ck/public/20_10/diminico_3ck_02_1020.pdf

Cross Clause Channel IL Discussion Slides - Matt Brown

See: https://www.ieee802.org/3/ck/public/20_10/brown_3ck_01_1020.pdf
See slide 3.

Cross Clause Editorial Discussion Slides - Howard Heck

See: https://www.ieee802.org/3/ck/public/20_10/heck_3ck_01_1020.pdf
See slide 3.

Cross Clause RJT Discussion Slides - Matt Brown

See: https://www.ieee802.org/3/ck/public/20_10/brown_3ck_01_1020.pdf
See slides 4-5.

It was noted that the comment agenda from Matt Brown was missing the DC common mode topic that was provided in the emailed meeting announcement and was addressed.

Cross Clause DC CM Discussion Slides - Matt Brown

See: https://www.ieee802.org/3/ck/public/20_10/brown_3ck_01_1020.pdf
See slides 6-7.

Ali Ghasi withdrew comments #146, #147, and #149.

93A Discussion Slides - Howard Heck

See: https://www.ieee802.org/3/ck/public/20_10/heck_3ck_01_1020.pdf
See slide 5-7.

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

Test Fixture, TP0v Discussion Slides - Phil Sun

See: https://www.ieee802.org/3/ck/public/20_10/sun_3ck_01a_1020.pdf
See slide 3-8.
Update of clarity made during the session.

Presentation #10:
" ERL Proposals for KR and C2C", Mau-Lin Wu
See: https://www.ieee802.org/3/ck/public/20_10/wu_3ck_02_1020.pdf
- The ERL values of the channels in the analysis were not included in the presentation. There was a request to provide it.

Test Fixture Parameter Names Discussion Slides - Matt Brown

See: https://www.ieee802.org/3/ck/public/20_10/brown_3ck_01_1020.pdf
See slides 9.

Presentation #11:
"AC Common Mode Spec by TP0v ", Mau-Lin Wu
See: https://www.ieee802.org/3/ck/public/20_10/wu_3ck_01_1020.pdf

- Discussed the details on slide 5.

Chair noted that the next meeting on 21 October would resume the comment agenda.

Chair noted a late contribution from Adee Ran with editorial changes for the receiver interference tolerance test (see: https://www.ieee802.org/3/ck/public/20_10/ran_3ck_03_1020.pdf) is deemed as discussion slides, yet are available online for review.

Meeting ended at ~10:05 a.m.

IEEE P802.3ck 100 Gb/s Electrical Lane Task Force – October 21, 2020

Prepared by Kent Lusted

Continue approved agenda from 20 October

Presentations posted at: https://www.ieee802.org/3/ck/public/20_10/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/20_10/agenda_3ck_03a_1020.pdf

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 reminded participants of the IEEE Participation Requirements and showed the slide with the Participation requirements. (see: http://www.ieee802.org/devdocs.shtml)   Reminded participants of the IEEE copyright policy. (See: https://standards.ieee.org/ipr/index.html) Chair reminded participants of the IEEE patent policy. (See: http://www.ieee802.org/3/patent.html)   She asked if anyone was unfamiliar with the IEEE patent policy. No one responded. Chair made the call for patents. No one responded.

Reviewed the ground rules. There were no members of the press.

Comment resolution began.

TP0v Methodology Discussion Slides - Howard Heck

See: https://www.ieee802.org/3/ck/public/20_10/heck_3ck_01a_1020.pdf
See slide 9-20.
Changes were made to the document on slide 10 and slide 19. It was saved as version '01a'.

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

Presentation #12:

"Np Proposal for 802.3ck RX ITOL", Mike Li
See: https://www.ieee802.org/3/ck/public/20_10/li_3ck_01_1020.pdf
- Discussed the value of RX Np proposed on slide 3.

RITT Discussion Slides - Phil Sun

See: https://www.ieee802.org/3/ck/public/20_10/sun_3ck_02_1020.pdf
See slides 3-8.

RITT Discussion Slides - Adee Ran

See: https://www.ieee802.org/3/ck/public/20_10/ran_3ck_03_1020.pdf

Chair noted that there would be two buckets seeking approval at the next meeting. Chair noted that comments in these "buckets" are to be reviewed by participants and if any of them are to be taken out of the bucket, participants are to notify leadership by 25 October, 2020. The proposed "bucket1" responses are posted at https://www.ieee802.org/3/ck/comments/draft1p3/8023ck_D1p3_comments_proposed_bucket1a.pdf The "bucket3" was posted at https://www.ieee802.org/3/ck/comments/draft1p3/8023ck_D1p3_comments_proposed_bucket3.pdf .

Chair noted that the meetings on 27 and 28 October would focus on C2M and a few cross clause topics including the EOJ topic.

Meeting ended at ~10:05 a.m.

IEEE P802.3ck 100 Gb/s Electrical Lane Task Force – October 27, 2020

Prepared by Kent Lusted

Proposed Agenda:

- Approval of the Agenda
- IEEE Participation Requirements reminder (https://standards.ieee.org/ipr/index.html)
- IEEE Copyright reminder (http://www.ieee802.org/devdocs.shtml)
- IEEE Patent Policy reminder (http://www.ieee802.org/3/patent.html)
- Reminder of Ground Rules and Operations
- Comment Resolution
    - Approval of the remaining comments in buckets 1a and 3
    - 120F/163
        - RITT: 168
        - SNDR: 226
    - 120F/163 Example Test Fixture: 228, 6, 26, 73, 162, 204, 229, 136
    - 120G
        - Terminology: 239
        - TP4a precursor ISI ratio: 96, 246, 150, 258, 259
        - Transition time: 107, 91, 97
        - Crosstalk: 92, 98, 103, 108
        - EO method: [206], [256]
        - TP1: [250], [191]
        - TP4: [244], [144, 247, 252], [182, 183, 184, maki*]
        - TP4a: [109, 254], [192]
    - CC: Reference clock: 42
    - CC: Even-odd jitter: 48, 186, 52, 189, 187, 188, 127, 190
    - CC: AC CM noise: 151, 156, 218, 152, 153, 197, 154, 155, 141, 142

Presentations posted at: https://www.ieee802.org/3/ck/public/20_10/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/20_10/agenda_3ck_05_1020.pdf

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 27 and 28 October.

Motion #5:

Move to approve the agenda.
Moved by: Adee Ran
Second by: Mike Dudek
Procedural (>50%)
Passed by unanimous consent

Chair reminded participants of the IEEE Participation Requirements and showed the slide with the Participation requirements. (see: http://www.ieee802.org/devdocs.shtml)   Reminded participants of the IEEE copyright policy. (See: https://standards.ieee.org/ipr/index.html)
Chair reminded participants of the IEEE patent policy. (See: http://www.ieee802.org/3/patent.html)   She asked if anyone was unfamiliar with the IEEE patent policy. No one responded. Chair made the call for patents. No one responded.

Chair reviewed the ground rules.

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

Chair noted that the Task Force meeting scheduled for 10 November would be shortened to prevent overlap with the IEEE 802.3 maintenance meeting.

Chair noted that one late comment was received and would be incorporated into the end of comment resolution.

Vice Chair noted that there was a liaison letter from the OIF that needed a response. (see: https://www.ieee802.org/3/minutes/sep20/incoming/OIF_liaison_letter_IEEE_CEI-112G_Projects_21Sept2020.pdf and http://www.ieee802.org/3/private/liaison_docs/OIF/0920_OIF_liaison_IEEE_CEI-112G_with_cover_21Sept2020.pdf)

Chair noted that another liaison from Gen-Z was received and would be posted to the website shortly. Vice Chair offered to lead the development of responses to the liaison letters for consideration by the Task Force at the 17 November meeting.

Chair noted that the one late comment was received.

Chair noted that she received a request to pull comments #242, 159, 271, 272, 185 from the buckets.

Motion #6:

Move to adopt the proposed responses in 8023ck_D1p3_comments_proposed_bucket1a.pdf & 8023ck_D1p3_comments_proposed_bucket3.pdf except # 242, 159, 271, 272, 185
M: Piers Dawe
S: Jim Weaver
Technical (>=75%)
Passed by unanimous consent.

Matt Brown showed the comment agenda for the 27-28 October meeting. See: https://www.ieee802.org/3/ck/public/20_10/agenda_3ck_05_1020_comments.pdf

Comment resolution began.

Consensus Discussion Slides - Phil Sun

See: https://www.ieee802.org/3/ck/public/20_10/sun_3ck_02a_1020.pdf
See slides 9-14.
Changes were made and saved as sun_3ck_02a_1020

Consensus Discussion Slides - Matt Brown

See: https://www.ieee802.org/3/ck/public/20_10/brown_3ck_02a_1020.pdf
See slides 2-12.
Changes were made and saved as brown_3ck_02a_1020

Break at ~8:25 a.m. Resumed at ~8:30 a.m.

It was noted that an error was made when closing comment #97. The Chief Editor asked if there was objection to reopening the comment to fix the error. No one responded. The error was fixed and the comment was closed.

Presentation #13:
"Concerns with Stressed Input Tests in Annex 120G", John Calvin
See: https://www.ieee802.org/3/ck/public/20_10/calvin_3ck_02a_1020.pdf

- Updated version '02a'. No objection
- Reviewed the results on slide 5.
- Author noted that the graphic on slide 6 needs further investigation to understand the effects of SJ.

Consensus Discussion Slides - Matt Brown

See: https://www.ieee802.org/3/ck/public/20_10/brown_3ck_02a_1020.pdf
See slides 13-14.

Chair noted that the agenda would resume on 28 October with clock tolerance, then Even Odd Jitter, then back to C2M.

Chair noted a late presentation from Adam Healey on clock tolerance (see: https://www.ieee802.org/3/ck/public/20_10/healey_3ck_03_1020.pdf) . Chair noted a late presentation from Jeff Maki on the AUI nomenclature (see: https://www.ieee802.org/3/ck/public/20_10/maki_3ck_01_1020.pdf) . Chair asked if there was objection to hearing the late presentations. No one responded.

Chair noted that the Gen-Z liaison letter was posted to the website. (see: https://www.ieee802.org/3/minutes/nov20/incoming/1120_liaison_ieee_genz.pdf)

Meeting ended at ~10:05 a.m.

IEEE P802.3ck 100 Gb/s Electrical Lane Task Force – October 28, 2020

Prepared by Kent Lusted

Continued approved agenda from 27 October

Presentations posted at: https://www.ieee802.org/3/ck/public/20_10/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/20_10/agenda_3ck_05_1020.pdf

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 reminded participants of the IEEE Participation Requirements and showed the slide with the Participation requirements. (see: http://www.ieee802.org/devdocs.shtml)   Reminded participants of the IEEE copyright policy. (See: https://standards.ieee.org/ipr/index.html) Chair reminded participants of the IEEE patent policy. (See: http://www.ieee802.org/3/patent.html)   She asked if anyone was unfamiliar with the IEEE patent policy. No one responded. Chair made the call for patents. No one responded.

Reviewed the ground rules. There were no members of the press.

Matt Brown showed an updated comment agenda for the 28 October meeting. See: https://www.ieee802.org/3/ck/public/20_10/agenda_3ck_06_1020_comments.pdf

Comment resolution began.

Presentation #14:

"Signaling Rate Range", Adam Healey
See: https://www.ieee802.org/3/ck/public/20_10/healey_3ck_03_1020.pdf
- Discussed various implementation choices of the proposed solution.
- Discussed aspects of PMD compatibility

Straw Poll #10:

I would support implementing the proposal in the suggested remedy of comment #42 and healey_3ck_03_1020
Y: 30, N: 5
(see comment #42)

During the discussion of Straw Poll #10, Chair noted that Straw Poll #10 was a decision straw poll and would be used to close the comment.

There was a request to show a response to the Task Force email reflector as a proposal for even-odd jitter. Chair denied the request and the Vice Chair provided a link to the referenced email to participants.

Break at ~8:20 a.m. Resumed at ~8:25 a.m.

After much discussion, the chair noted that the subject of even-odd jitter seemed close to consensus, but needed a bit more conversation. Rather than crafting on the floor, the subject was tabled from the agenda. There was no objection.

At ~8:30 a.m., Beth Kochuparambil noted that she passed the meeting responsibilities to the Vice Chair, Kent Lusted.

Consensus Discussion Slides - Matt Brown

See: https://www.ieee802.org/3/ck/public/20_10/brown_3ck_02a_1020.pdf
See slides 15-18.

Vice Chair noted that the IEEE 802.3 Working Group opening plenary was scheduled for 9 November. He reviewed some of the plenary details from the Working Group meeting announcement. Vice Chair noted that the Task Force meeting scheduled for 10 November would be shortened to prevent overlap with the IEEE 802.3 maintenance meeting.

Vice Chair noted that the forthcoming weeks would focus on ERL, EW/ESMW, cable assembly as well as the liaison responses.

Vice Chair noted that another "closed as a result" bucket would be posted to the website. The deadline for removing comments from that bucket would be Sunday, 8 November AoE.

Meeting ended ~10:05 a.m.

IEEE P802.3ck 100 Gb/s Electrical Lane Task Force – November 10, 2020

Prepared by Kent Lusted

Proposed Agenda:

- Approval of the Agenda
- IEEE Participation Requirements reminder (https://standards.ieee.org/ipr/index.html)
- IEEE Copyright reminder (http://www.ieee802.org/devdocs.shtml)
- IEEE Patent Policy reminder (http://www.ieee802.org/3/patent.html)
- Reminder of Ground Rules and Operations
- Comment Resolution
    - Resolution of "bucket4" comments - https://www.ieee802.org/3/ck/comments/draft1p3/8023ck_D1p3_comments_proposed_bucket4.pdf
    - CC: 120F/162/163 even-odd jitter
        - 190, 186, 52, 189, 187, 188, 127, 48, calvin_01, ran_01, ran_02 (late)
    - 120G: EW/ESMW
        - 41, 88, 89, 208, 209, 240, 93, 94, 243, 245, 100, 101, 211, 105, 106, 102, 210, 257, healey_01, dawe_01, healey_02 (late)
    - IF time remains on Tuesday – or will push to end of the list.
        - 120G: TP4 - 182, 183, 184, maki_01
        - 120G: TP4a - 109, 254, 185
    - ERL
        - Justification Slide decks: champion_01, kocsis_01, wu_03
        - Parameters & Values: kochuparambil_03, 114
        - Possible to push to next bucket: 113, 175, 143, 145, 114, 110, 3, 4, , 10, 87, 90, 99, 95, 104
        - Believed to have already made decisions in previous comments: 202, 203, 8, 82, 85, 31, wu_02, 34, 237, 238
        - ERL Wording: 12, 176, 157, 217 (likely to push to next bucket)
    - Cable Assemblies - Clauses 162, 162 A/B
        - 162 CA IL: 17, 173, 174, 221, 133
        - 162 CA XTALK: 121
        - 162A Host IL: 18, 19
        - 162B TF wording: 268
        - 162B: MTF IL: 21, 177, 269, dominico_02 (late)
        - 162B: MTF RL: 22, 122, 123, 178, kocsis_02,
        - 162B: MTF XTALK: 20, 117, 118, 119, 180, 181
    - Clause 162 (non-cable assembly)

- Medium Delay: 120
- PMD Control: 1, 47
- RIT: 131
- TX coefficients: 50
- TX vf: 124

Presentations posted at: https://www.ieee802.org/3/ck/public/20_10/index.html

Meeting began at ~9:05 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/20_10/agenda_3ck_07_1020.pdf

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 10 and 11 November.   It was noted that the liaison response agenda item would be moved to 18 November.

Chair noted that the Task Force meeting may run over by 15 minutes and asked if there were objections. No one responded.

Motion #7:

Move to approve the agenda.
Moved by: Adee Ran
Second by: Mike Dudek
Procedural (>50%)
Passed by unanimous consent

Chair reminded participants of the IEEE Participation Requirements and showed the slide with the Participation requirements. (see: http://www.ieee802.org/devdocs.shtml)   Reminded participants of the IEEE copyright policy. (See: https://standards.ieee.org/ipr/index.html) Chair reminded participants of the IEEE patent policy. (See: http://www.ieee802.org/3/patent.html)   She asked if anyone was unfamiliar with the IEEE patent policy. No one responded. Chair made the call for patents. No one responded.

Chair reviewed the ground rules.

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

Vice Chair noted that there were liaison letters from the OIF and Gen-Z that needed a response. (see: https://www.ieee802.org/3/minutes/sep20/incoming/OIF_liaison_letter_IEEE_CEI-112G_Projects_21Sept2020.pdf and http://www.ieee802.org/3/private/liaison_docs/OIF/0920_OIF_liaison_IEEE_CEI-112G_with_cover_21Sept2020.pdf) He prepared responses for consideration by the Task Force that are posted to the website. (see: https://www.ieee802.org/3/ck/public/20_10/IEEE_802d3_to_OIF_CEI_1120_draft1.pdf and https://www.ieee802.org/3/ck/public/20_10/IEEE_802d3_to_Gen-Z_1120_draft1.pdf)

Vice Chair also noted there was a new liaison letter from COBO that needed a response and that he had prepared a response for consideration. (see: https://www.ieee802.org/3/minutes/nov20/incoming/COBO%20liaison%20to%20IEEE%20802.3%20-%20201030.pdf)   Chair noted that the proposed response to COBO had not yet been posted to the website.

Chair noted that the proposed "bucket4" (see: https://www.ieee802.org/3/ck/comments/draft1p3/8023ck_D1p3_comments_proposed_bucket4.pdf) contained comments closed as a result of the 27-28 October meetings as well as a few other comments. It was noted that there were no requests to pull from bucket4.

Motion #8:

Move to adopt the proposed responses in 8023ck_D1p3_comments_proposed_bucket4.pdf
M: Phil Sun
S: Adee Ran
Technical (>=75%)
Passed by unanimous consent.

Matt Brown showed the comment agenda for the 10-11 November meeting. See: https://www.ieee802.org/3/ck/public/20_10/agenda_3ck_07_1020_comments.pdf

Comment resolution began.

Chair reminded participants to sign into IMAT to record attendance for the IEEE 802.3 Working Group credit.

Presentation #15:

"Consensus proposal for resolving even-odd jitter", Adee Ran
See: https://www.ieee802.org/3/ck/public/20_10/ran_3ck_02a_1020.pdf
- Updated version '01a' with editorial change. No objection
- It was noted that Clause 163 points to Cl 162 and does not need to be included in the proposal.

Straw Poll #11:

I support resolving comments 48, 186, 189, 52, 187, 188, 127, 190 with the proposed changes in slides 3-5 of ran_3ck_04_1020
Y: 31 N: 7
(see comment #190)

Presentation #16:

"Proposed changes to Annex 120G ", Adam Healey
See: https://www.ieee802.org/3/ck/public/20_10/healey_3ck_02_1020.pdf
- The analysis was done in a waveform based simulation tool, not COM.

Straw Poll #12:

I would support replacing ESMW and EW with the following option from healey_3ck_02_1020
A. "Alt. 2" with TBD = 50 mUI
B. "Alt. 1" with TBD1 = 25 mUI and TBD2 = 25 mUI
C. "Alt. 1" with TBD1 = 50 mUI and TBD2 = 20 mUI
D. "Alt. 2" with TBD = 70 mUI
A: 18,   B: 8,   C: 4,   D: 9
(see comment #41)

Chair reviewed the plans for 11 November: ERL, cable assembly, CR topics.

Meeting ended at ~10:15 a.m.

IEEE P802.3ck 100 Gb/s Electrical Lane Task Force – November 11, 2020

Prepared by Kent Lusted

Continued approved agenda from 10 November

Presentations posted at: https://www.ieee802.org/3/ck/public/20_10/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)

Beth welcomed attendees.

Meeting began with the agenda presentation: https://www.ieee802.org/3/ck/public/20_10/agenda_3ck_05_1020.pdf

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 reminded participants of the IEEE Participation Requirements and showed the slide with the Participation requirements. (see: http://www.ieee802.org/devdocs.shtml)   Reminded participants of the IEEE copyright policy. (See: https://standards.ieee.org/ipr/index.html) Chair reminded participants of the IEEE patent policy. (See: http://www.ieee802.org/3/patent.html)   She asked if anyone was unfamiliar with the IEEE patent policy. No one responded. Chair made the call for patents. No one responded.

Reviewed the ground rules. There were no members of the press.

Matt Brown showed an updated comment agenda for the 11 November meeting. See: https://www.ieee802.org/3/ck/public/20_10/agenda_3ck_08_1020_comments.pdf It was noted that 78 comments remain to close.

Comment resolution began.

Presentation #17:

"Medium Delay and CR ERL", Sam Kocsis
See: https://www.ieee802.org/3/ck/public/20_10/kocsis_3ck_01a_1020.pdf
- Reviewed the proposed values on slide 9.
- On page 8, discussed the "3x" round trip details.

Consensus Discussion Slides - Beth Kochuparambil

See: https://www.ieee802.org/3/ck/public/20_10/kochuparambil_3ck_03a_1020.pdf
See slides 3
Changes were made to version '3a' during discussion and saved as '3b' (see:
https://www.ieee802.org/3/ck/public/20_10/kochuparambil_3ck_03b_1020.pdf)

Break at ~8:20 a.m. Resumed at ~8:25 a.m.

Cable Assembly min IL Consensus Discussion Slides - Chris Diminico

See: https://www.ieee802.org/3/ck/public/20_10/diminico_3ck_04_1020.pdf

Comment #121 was withdrawn by Sam Kocsis.

Presentation #18:

"162 cable assembly 162 A-D Annexes (TBDs)", Chris Diminico
See: https://www.ieee802.org/3/ck/public/20_10/diminico_3ck_01_1020.pdf

The presentation "QSFP-DD SMT MCB /HCB Performance vs. 802.3ck D1.2" (see:
https://www.ieee802.org/3/ck/public/adhoc/jun24_20/haser_3ck_adhoc_01c_062420.pdf)
slide 8 was reviewed during the discussion of comment #177. It was a contribution from an
earlier ad hoc meeting.

MTF IL and RL Comments Consensus Discussion Slides - Chris Diminico

See: https://www.ieee802.org/3/ck/public/20_10/diminico_3ck_03_1020.pdf
See slide 7

Straw Poll #13:

I support closing comment #122 with:
A: ERL specification with minimum of 9 dB
B: ERL specification with minimum of TBD dB
C: No ERL specification
A: 21,   B: 25, C: 1
(see comment #122)

During the discussion of Straw Poll #13, Chair noted that the option with the greatest support would be used to close the comment.

Chair reminded participants to sign into IMAT to record attendance for IEEE 802.3 Working Group credit.

MTF IL and RL Comments Consensus Discussion Slides - Chris Diminico
See: https://www.ieee802.org/3/ck/public/20_10/diminico_3ck_03_1020.pdf
See slide 3

Straw Poll #14:
I support:
A: Retain MTF return loss specification as normative
B: Retain MTF return loss specification as informative
C: remove MTF return loss specification
A: 11 , B: 18 , C: 10
(see comment #178)

Chair noted that another "closed as a result" bucket5 would be posted to the website. Additionally, there would be a separate bucket6 with comments deemed non-controversial by the editorial team. The deadline for removing comments from those buckets would be Sunday, 15 November AoE.

The next Task Force meeting was scheduled for 18 November.

Reminded participants to review the proposed liaison responses to OIF, COBO, and Gen-Z posted on the website.

Chair noted that the Task Force leadership was working on a plan to address the remaining comments and would communicate via the email reflector.

Chair thanked veterans of all countries for their service.

Meeting ended at ~10:10 a.m.

IEEE P802.3ck 100 Gb/s Electrical Lane Task Force – November 18, 2020

Prepared by Kent Lusted

Proposed Agenda:

- Approval of the Agenda
- IEEE Participation Requirements reminder (https://standards.ieee.org/ipr/index.html)
- IEEE Copyright reminder (http://www.ieee802.org/devdocs.shtml)
- IEEE Patent Policy reminder (http://www.ieee802.org/3/patent.html)
- Reminder of Ground Rules and Operations
- Liaison Responses: OIF, COBO, Gen-Z
- Comment Resolution
    - Resolution of "bucket5a" comments - https://www.ieee802.org/3/ck/comments/draft1p3/8023ck_D1p3_comments_proposed_bucket5a.pdf
    - 120G: TP4:   182, 183, 184, maki_01
    - 120G: TP4a: 185, [109, 254]
    - 162: TX EQ PRESET value: 47
    - 162: RIT: 131
    - 162: TX coefficients: 50
    - 162: TX vf: 124
    - 120F/163: RX dERL: [67, 8, 85], 31
    - 162B: MTF RL/ERL: 22, 123, (background info: #122-closed, #178-closed, kocsis_02, diminico_03)
    - 162B: MTF IL: 21, 269, diminico_03
    - 162B: MTF XTALK: 20, [180, 117, 119 181, diminico_3ck_02e_0720], 118
    - 162 TX RLCC description [156, 218]
    - 120F/163A TX CM AC noise method: 197 (background info: #205-closed, wu_3ck_01)

Presentations posted at: https://www.ieee802.org/3/ck/public/20_10/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/20_10/agenda_3ck_09_1020.pdf

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 for the 18 November meeting.

Motion #9:

Move to approve the agenda.

Moved by: Mike Dudek

Second by: Marek Hajduczenia

Procedural (>50%)

Passed by unanimous consent

Chair reminded participants of the IEEE Participation Requirements and showed the slide with the Participation requirements. (see: http://www.ieee802.org/devdocs.shtml) Reminded participants of the IEEE copyright policy. (See: https://standards.ieee.org/ipr/index.html) Chair reminded participants of the IEEE patent policy. (See: http://www.ieee802.org/3/patent.html) She asked if anyone was unfamiliar with the IEEE patent policy. No one responded. Chair made the call for patents. No one responded. Chair reviewed the ground rules.

Chair reviewed the series meeting schedule. She noted that the series was extended with two additional meetings on 24 November and 25 November as announced over the reflector (see: https://www.ieee802.org/3/100GEL/email/msg00596.html) .

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

Vice-Chair reviewed the proposed liaison responses to OIF, Gen-Z and COBO. Changes made. There was a request for an INCITS T11.2 liaison; Vice Chair agreed to prepare a response for consideration.

Motion #10:

Move that the IEEE P802.3ck Task Force approve IEEE_802d3_to_OIF_CEI_1120_draft2.pdf, IEEE_802d3_to_Gen-Z_1120_draft2.pdf, and IEEE_802d3_to_COBO_1120_draft3.pdf with editorial license granted to the WG Chair (or his appointed agent) as liaison communications from the IEEE 802.3 WG to OIF, Gen-Z, and COBO.
M: Kent Lusted
S: Mike Dudek
Technical (>=75%)
Motion passes by unanimous consent

"Closed as a result" bucket5 was posted to the website 12 November and updated to bucket5a on 16 November (see: https://www.ieee802.org/3/ck/comments/draft1p3/8023ck_D1p3_comments_proposed_bucket5a.pdf) as announced over the email reflector. Chair noted that version "5a" file had the following updates:
- #8, 85 removed from the bucket
- #48, #187, #221 changed from REJECT to AIP
- #217 typo fixed from "with sufficiently" to "which sufficiently"

Chair asked if there was any feedback on the posted bucket.

Motion #11:

Move to adopt the proposed responses in 8023ck_D1p3_comments_proposed_bucket5a.pdf
M: Matt Brown
S: Mark Kimber
Technical (>=75%)
Passed by unanimous consent.

Matt Brown showed the comment agenda for the meeting. See: https://www.ieee802.org/3/ck/public/20_10/agenda_3ck_09_1020_comments.pdf

Comment resolution began.

Presentation #19:

"Rx Output Eq Management", Jeff Maki
See: https://www.ieee802.org/3/ck/public/20_10/maki_3ck_01a_1020.pdf
- Updated version '01a'. No objection.
- It was noted that the nomenclature table on slide 9 was incorrect for the 200GAUI-2 and 400GAUI-4 entries. Changes were made and saved as version '01b'

Consensus Discussion Slides - Matt Brown

See: https://www.ieee802.org/3/ck/public/20_10/brown_3ck_02a_1020.pdf
See slides 20.

Consensus Discussion Slides - Beth Kochuparambil

See: https://www.ieee802.org/3/ck/public/20_10/kochuparambil_3ck_04_1020.pdf
- Chair notes if you catch this note, send the code word "macdonald" for a prize.

Consensus Discussion Slides - Howard Heck

See: https://www.ieee802.org/3/ck/public/20_10/heck_3ck_02_1020.pdf
See slides 4-6.

Comment #131 was withdrawn.

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

Consensus Discussion Slides - Chris Diminico

See: https://www.ieee802.org/3/ck/public/20_10/diminico_3ck_03a_1020.pdf
See slides 8-12.

Chair displayed the proposed liaison letter to INCITS T11.2 (see: https://www.ieee802.org/3/ck/public/20_10/IEEE_802d3_to_T11-2_1120_draft1.pdf).

Motion #12:

Move that the IEEE P802.3ck Task Force approve IEEE_802d3_to_T11-2_1120_draft1.pdf with editorial license granted to the WG Chair (or his appointed agent) as liaison communications from the IEEE 802.3 WG to INCITS T11.2.
M: Kent Lusted
S: Mike Dudek
Technical (>=75%)
Motion passes by unanimous consent

Chair noted to expect another bucket with a deadline for this coming Sunday. She also notes that the next Task Force meeting was scheduled for 24 November.

Meeting ended at ~10:00 a.m.

IEEE P802.3ck 100 Gb/s Electrical Lane Task Force – November 24, 2020

Prepared by Kent Lusted

Proposed Agenda:

- Approval of the Agenda
- IEEE Participation Requirements reminder (https://standards.ieee.org/ipr/index.html)
- IEEE Copyright reminder (http://www.ieee802.org/devdocs.shtml)
- IEEE Patent Policy reminder (http://www.ieee802.org/3/patent.html)
- Reminder of Ground Rules and Operations
- Comment Resolution
    - Resolution of "bucket6" comments - https://www.ieee802.org/3/ck/comments/draft1p3/8023ck_D1p3_comments_proposed_bucket6.pdf
    - 162: PMD Control - 1
    - 162 TX RLCC description - 156, 218
    - 162/163/120F TX CM AC noise value - 151, 153, 141
    - 162/163/120F RX CM AC noise tolerance - 142, 152, 154, 155
    - 162 CA ILDC - 111, 16, champion_01, diminico_01
    - 162 CA RLCC - 222
    - 162 CA RLDC - 15,112, diminico_01
    - Misc – 233
- Forward Looking Plans
- Late Comments
- Closing Business

Presentations posted at: https://www.ieee802.org/3/ck/public/20_10/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)

Beth welcomed attendees.

Meeting began with the agenda presentation: https://www.ieee802.org/3/ck/public/20_10/agenda_3ck_10_1020.pdf

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 for the 24-25 November meeting.

Motion #13:

Move to approve the agenda.
Moved by: Mike Dudek
Second by: Steve Sekel
Procedural (>50%)
Passed by unanimous consent

Chair reminded participants of the IEEE Participation Requirements and showed the slide with the Participation requirements. (see: http://www.ieee802.org/devdocs.shtml)   Reminded participants of the IEEE copyright policy. (See: https://standards.ieee.org/ipr/index.html) Chair reminded participants of the IEEE patent policy. (See: http://www.ieee802.org/3/patent.html)   She asked if anyone was unfamiliar with the IEEE patent policy. No one responded. Chair made the call for patents. No one responded. Chair reviewed the ground rules.

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

"Closed as a result" bucket6 was posted to the website 19 November (see: https://www.ieee802.org/3/ck/comments/draft1p3/8023ck_D1p3_comments_proposed_bucket6.pdf) as announced over the email reflector.

Chair asked if there was any feedback on the posted bucket.

Motion #14:

Move to adopt the proposed responses in 8023ck_D1p3_comments_proposed_bucket6.pdf
M: Arthur Marris
S: Phil Sun
Technical (>=75%)
Passed by unanimous consent.

Matt Brown showed the comment agenda for the meeting. See: https://www.ieee802.org/3/ck/public/20_10/agenda_3ck_10a_1020_comments.pdf

Chair noted there was a late presentation from Kent Lusted and Adee Ran. Asked if there was opposition to the late presentations. No one responded.

Kent Lusted noted that for presentation #20, he would be giving the presentation as an individual contributor by pausing his Vice-Chair responsibilities.

Presentation #20:

"CL 136.8.11 Link Training Issue Update", Kent Lusted
See: https://www.ieee802.org/3/ck/public/20_10/lusted_3ck_02_1020.pdf

Comment resolution began.

Kent Lusted resumed Vice-Chair responsibilities.

Straw Poll #15:

I support updating the 100G/lane PMD Control function as proposed in lusted_3ck_02_1020 using: (choose one)
   A.   Option B3 (per slides 6, 8-9)
   B.   Option B4 (per slides 6, 11-13)
A: 15 , B: 6
(see comment #1)

Consensus Discussion Slides - Matt Brown

See: https://www.ieee802.org/3/ck/public/20_10/brown_3ck_03_1020.pdf
See slides 3-5.

Presentation #21:

"Considerations for TX AC Common-Mode Specifications (comments #151, 153, 141)", Adee Ran
See: https://www.ieee802.org/3/ck/public/20_10/ran_3ck_04_1020.pdf
   ● Discussed the various aspects of common-mode on slide 5.

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

Presentation #22:

"Comment #111 - CA Diff to CM Conversion Loss", Bruce Champion
See: https://www.ieee802.org/3/ck/public/20_10/champion_3ck_01a_1020.pdf
   ● Discussed various aspects of the graph on slides 6-7.
   ● Discussed the sources of skew and possible limits for consideration.

Straw Poll #16:

I support closing comments 111 and 16 implementing the suggested remedy for comment 111 with editorial license.

Y: 18, N: 9

(see comment #111)

Consensus Discussion Slides - Chris Diminico

See: https://www.ieee802.org/3/ck/public/20_10/diminico_3ck_01_1020.pdf
See slides 4.

Chair asked if there was objection to moving the late comment agenda item up in the agenda. No one responded.

Chair noted that one late comment was received. The commenter had sent the details of it to the email reflector. Chair asked the commenter for justification to resolve it against Draft 1.3.

Adee Ran withdrew comment #281.

Chair reviewed the meeting agenda for 25 November: review future plans and closing business.

Meeting ended at ~10:00 a.m.

IEEE P802.3ck 100 Gb/s Electrical Lane Task Force – November 25, 2020

Prepared by Kent Lusted

Continued approved agenda from 24 November

Presentations posted at: https://www.ieee802.org/3/ck/public/20_10/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)

Beth welcomed attendees.

Meeting began with the agenda presentation: https://www.ieee802.org/3/ck/public/20_10/agenda_3ck_10_1020.pdf

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 reminded participants of the IEEE Participation Requirements and showed the slide with the Participation requirements. (see: http://www.ieee802.org/devdocs.shtml)   Reminded participants of the IEEE copyright policy. (See: https://standards.ieee.org/ipr/index.html) Chair reminded participants of the IEEE patent policy. (See: http://www.ieee802.org/3/patent.html)   She asked if anyone was unfamiliar with the IEEE patent policy. No one responded. Chair made the call for patents. No one responded.

Reviewed the ground rules. There were no members of the press.

Presentation #23:

"Forward Looking for P802.3ck", Beth Kochuparambil
See: https://www.ieee802.org/3/ck/public/20_10/kochuparambil_3ck_05b_1020.pdf
- ● Discussed the focus on Draft 1.4 and the tentative schedule for the next review cycles.
- ● Discussed the tradeoffs needed to progress towards Working Group review.

Straw Poll #17:

I support focusing review and comment resolution on technical completeness
with the goal of requesting Working Group ballot at the March 2021 Plenary.
Y: 29, N: 5, A: 3

Chair will be announcing the next series of ad hoc meetings over the email reflector.

Motion #15:

Move to:
- Generate Draft 1.4 from Draft 1.3 and closed comments
- Initiate fifth Task Force review

M: Matt Brown
S: Ali Ghiasi
Technical (>=75%)
There was opposition during the vote.

Roll call vote record for motion #15:

Pref Name	Vote	Affiliation	Employer
Healey, Adam	Y	Broadcom Inc.	Broadcom Inc.
Ran, Adee	Y	Intel Corporation	Intel Corporation
Ghiasi, Ali	Y	Ghiasi Quantum LLC, Inphi	Ghiasi Quantum LLC
Marris, Arthur	Y	Cadence Design Systems, Inc.	Cadence Design Systems, Inc.
Diminico, Chris	Y	Panduit Corp.	M C Communications, LLC
Malicoat, David	Y	Malicoat Networking Solutions; SENKO Advanced Components	Malicoat Networking Solutions
Ofelt, David	Y	Juniper Networks, Inc.	Juniper Networks, Inc.
Kochuparambil, Elizabeth	A	Cisco Systems, Inc.	Cisco Systems, Inc.

Nicholl, Gary	Y	Cisco Systems, Inc.	Cisco Systems, Inc.
Heck, Howard	Y	Intel Corporation	Intel Corporation
Weaver, James	Y	Arista Networks	Arista Networks
Slavick, Jeff	Y	Broadcom	Broadcom Inc
Maki, Jeffery	Y	Juniper Networks, Inc.	Juniper Networks, Inc.
Calvin, John	Y	Keysight Technologies	Keysight Technologies
Deandrea, John	Y	Finisar Corporation	Finisar Corporation
Ewen, John	Y	Marvell	Marvell
Sun, Junqing	Y	Credo Semiconductor	Credo Semiconductor
Lusted, Kent	A	Intel Corporation	Intel Corporation
Brown, Matthew	Y	Huawei Technologies Canada	Huawei Technologies Canada
Wu, Mau-Lin	Y	MediaTek Inc.	MediaTek Inc.
Dudek, Mike	Y	Marvell	Marvell
Tracy, Nathan	Y	TE Connectivity	TE Connectivity
Dawe, Piers	N	Nvidia	Mellanox Technologies
Tooyserkani, Pirooz	Y	Cisco Systems, Inc.	Cisco Systems, Inc.
Hegde, Rajmohan	Y	Broadcom Inc.	Broadcom Inc.
Mellitz, Richard	Y	Samtec, Inc.	Samtec, Inc.
Rabinovich, Rick	Y	Keysight Technologies	Keysight Technologies
Sommers, Scott	Y	Molex Incorporated	Molex Incorporated
Sekel, Steve	Y	Keysight Technologies	Keysight Technologies
Baldwin, Thananya	Y	Keysight Technologies	Keysight Technologies

Palkert, Tom	Y	Samtec-Macom	EIC
Sakai, Toshiaki	Y	socionext	Socionext
Hidaka, Yasuo	Y	INDEPENDENT	Credo Semiconductor
Chang, Frank	Y	Source Photonics	Inphi Corporation

Results: Y: 31 , N: 1, A: 2
Motion Passes.

Motion #16:

Move to Adjourn
M: Adee Ran
S: Mike Dudek
Procedural (>50%)
Passed by unanimous consent

Meeting ended at ~8:20 a.m.

Attendees

Name	Affiliation	Employed by	13-Oct	14-Oct	20-Oct	21-Oct	27-Oct	28-Oct	10-Nov	11-Nov	18-Nov	24-Nov	25-Nov
Adam Healey	Broadcom	Broadcom	x	x	x	x	x	x	x	x	x	x	x
Adee Ran	Intel	Intel	x	x	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	x		
Alex Lin	MediaTek Inc.	MediaTek								x			
Ali Ghiasi	Ghiasi Quantum/Inphi	Ghiasi Quantum/Inphi	x	x	x	x	x	x	x	x	x	x	x
Anand RK	Cadence	Cadence							x				
Arthur Marris	Cadence	Cadence		x	x	x	x	x	x	x	x	x	x
Ayal Shoval	Synopsys	Synopsys	x	x	x	x	x	x	x	x	x	x	x
Ayla Chang	Huawei	Huawei								x			
Bernd Horrmeyer	Phoenix Contact	Phoenix Contact						x					
Beth Kochuparambil	Cisco	Cisco	x	x	x	x	x	x	x	x	x	x	x
Bill Kirkland	Semtech	Semtech		x		x					x		
Bo Zhang	Inphi	Inphi							x	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	x	x	
Bupesh Pandita	Microsoft	Microsoft					x						
Champion (Chien Ping) Kao	Intel	Intel	x	x	x	x							

Name	Affiliation	Affiliation 2											
Champion (Chien Ping) Kao	Cornelis Networks	Cornelis Networks					x	x	x	x	x	x	x
Chan Chih (David) Chen	Applied Optoelectronics	Applied Optoelectronics	x		x	x	x	x		x	x	x	x
Chao Li	Huawei	Huawei						x					
Chris DiMinico	PHY-SI	PHY-SI	x	x	x	x	x	x	x	x		x	x
Christian Orlando	IEEE-SA	IEEE-SA									x	x	
Christy Bahn	IEEE-SA	IEEE-SA									x		
Clint Walker	Alphawave IP	Alphawave IP		x		x					x		
Dave Estes	Spirent	Spirent							x	x	x		
Dave Hess	Cord Data	Cord Data							x	x			
David Law	HPE	HPE										x	
David Malicoat	Senko	Independent	x	x	x	x	x	x	x	x		x	x
David Ofelt	Juniper	Juniper	x		x	x	x	x		x		x	x
David Piehler	Dell EMC	Dell EMC							x	x			
Dawei Fan	Huawei	Huawei								x			
Denis Beaudoin	Texas Instruments	Texas Instruments								x			
Derek Cassidy	BT	BT					x						
Ed sayre	Samtech	NESA							x	x			
Ed Ulrichs	Intel	Intel	x							x			
Edward Nakamoto	Spirent	Spirent							x	x			
Enis Akbaba	Maxim Integrated	Maxim Integrated								x			
Eric Maniloff	Ciena Corporation	Ciena Corporation								x			
Erwin	Leoni Kabel GmbH	Leoni Kabel GmbH								x			

Name	Affiliation	Representing											
Koeppendoerfer													
Frank Chang	Source Photonics	Source Photonics	x	x	x		x		x	x		x	x
Frank Lambrecht	Xilinx	Xilinx							x	x			
Fred Dawson	Chemours Canada Company	Chemours Canada Company							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	x
George Zimmerman	ADI, APL Group, Aquantia, BMW, Cisco Systems, Commscope	CME phy consulting							x				
Gergely Huszak	KONE	KONE							x	x			
German Feyh	Broadcom	Broadcom							x				
Greg LeCheminant	Keysight	Keysight			x	x	x	x		x			
Greg McSorley	Amphenol	Amphenol						x					
Guangcan Mi	Huawei	Huawei							x				
Hadrien Louchet	Keysight	Keysight		x					x		x		
Hansel Dsilva	Achronix	Achronix			x		x						
Hao Ren	Huawei	Huawei							x	x			
Hideki Isono	Fujitsu Optical	Fujitsu Optical							x				
Hormoz Djahanshahi	Microchip	Microchip						x					
Howard Heck	Intel	Intel	x	x	x	x	x	x	x	x	x	x	x
Ichiro Ogura	Petra JP	Petra JP							x				
Imtinan Elahi	NVIDIA	NVIDIA			x								

Name													
Inho Kim	Marvell	Marvell	x	x	x	x							
Inho Kim	Max Linear	Max Linear					x		x	x			
Istvan BakroNagy	EFFECT Photonics	EFFECT Photonics								x	x		x
Jacky Chang	HPE	HPE								x	x		
James Weaver	Arista	Arista	x	x	x	x	x	x	x	x	x	x	x
James Withey	Fluke	Fluke								x			
James Young	Commscope	Commscope	x		x					x	x		
Jane Lim	Cisco	Cisco	x	x	x	x	x	x	x	x		x	
Jeff Hutchins	Ranovus	Ranovus					x		x	x			
Jeff Slavick	Broadcom	Broadcom		x	x	x	x	x	x	x	x	x	x
Jeffery Maki	Juniper	Juniper	x		x					x	x	x	x
Jennifer Santulli	IEEE SA	IEEE SA		x				x	x				
Jeremy Stephens	Microsoft	Microsoft	x					x	x	x			
Jerry Pepper	Keysight	Keysight								x	x	x	
Jim Theodoras	HG Genuine	HG Genuine								x			
Jodi Haasz	IEEE SA	IEEE SA	x		x								
John Calvin	Keysight	Keysight	x	x	x	x	x	x	x	x	x	x	x
John D'Ambrosia	Futurewei (US Subsidiary of Huawei)	Futurewei								x			
John Deandrea	Finisar	II-VI										x	x
John Ewen	Marvell	Marvell	x	x	x	x	x	x	x	x	x	x	x
John Yurtin	Aptiv	Aptiv			x					x			x
Jonathan	Broadcom	Broadcom								x			

Ingham													
Jose Castro	Panduit	Panduit								x			
Joshua Kim	Hirose	Hirose	x	x	x	x		x	x	x		x	x
Juan Martinez	IBM	IBM	x										
Kae Dube	UNH-IOL	UNH-IOL							x			
Kan Tan	Tektronix	Tektronix							x	x	x		
Kapil Shrikhande	Innovium	Innovium					x					x	
KengHua Chuang	HPE	HPE			x							x	
Kent Lusted	Intel	Intel	x	x	x	x	x	x	x	x	x	x	x
Kishore Kota	Inphi	Inphi							x	x			
Kumaran Krishnasamy	Broadcom	Broadcom			x		x		x	x	x	x	
Kumi Omori	NEC	NEC							x			
Larry McMillan	Western Digital	Western Digital							x	x			
Leon Bruckman	Huawei	Huawei							x			
Liav Ben-Artsi	Marvell	Marvell	x	x	x	x	x		x	x		x	x
Lokesh Kabra	Synopsys	Synopsys							x			
Luisma Torres	KDPOF	KDPOF							x			
Mabud Choudhury	OFS	OFS							x			
Malia Zaman IEEE SA	IEEE	IEEE					x		x		x		
Marek Hajouczenia	Charter Communications	Charter Communications								x			
Marika Immonen	TTM	TTM											x

Name	Affiliation	Affiliation											
Mario Milicevic	Maxlinear	Maxlinear								x			
Mark Gustlin	Cisco	Cisco							x				
Mark Kimber	Semtech	Semtech			x	x	x	x	x	x	x		x
Mark Nowell	Cisco	Cisco								x	x		
Masoud Koochakzadeh	Max Linear	Max Linear							x				
Matt Brown	Huawei	Huawei	x	x	x	x	x	x	x	x	x	x	x
Matthias Wendt	Signify	Signify (Philips Lighting)							x	x		
Mau-Lin Wu	Mediatek	Mediatek	x	x	x	x	x	x	x	x	x	x	x
Michael Takefman	Inphi	Inphi							x	x		
Michal Brychta	Analog Devices Inc.	Analog Devices Inc.							x			
Mike Dudek	Marvell	Marvell	x	x	x	x	x	x	x	x	x	x	x
Mike Klempa	Amphenol	Amphenol		x	x				x			
Mike Li	Intel	Intel	x	x	x	x		x	x	x		x	x
Nathan Tracy	TE Connectivity	TE Connectivity	x		x	x	x	x	x	x	x	x	x
Patrick Casher	Foxconn Interconnect	Foxconn Interconnect	x		x				x			
Paul Brooks	Viavi	Viavi							x	x	x	
Pavel Zivny	Tektronix	Tektronix	x		x	x	x	x	x	x		
Pete Anslow	Independent	Independent							x			
Peter Jones	Cisco	Cisco							x	x		
Peter Stassar	Huawei	Huawei							x			
Peter Wu	Marvell	Marvell							x	x		

Name	Affiliation	Affiliation	1	2	3	4	5	6	7	8	9	10	11
Phil Sun	Credo	Credo	x	x	x	x	x	x	x	x	x	x	x
Piers Dawe	NVIDIA	NVIDIA	x	x	x	x	x	x	x	x		x	x
Pirooz Tooyserkani	Cisco	Cisco	x	x	x	x	x	x	x			x	x
Pranav Devalla	Arista	Arista									x		
Priyank Shukla	Synopsys	Synopsys	x		x	x	x	x	x	x	x	x	x
Qing Xu	Ranovus	Ranovus	x										
Rajesh Radhamohan	Broadcom	Broadcom									x		
Rajmohan Hegde	Broadcom	Broadcom		x		x	x	x	x	x	x	x	x
Ray Schmelzer	Wilder Tech	Wilder Tech	x										
Raymond Nering	Cisco	Cisco									x	x	
Rich Boyer	Aptiv	Aptiv Signal and Power Solutions									x		
Rich Mellitz	Samtec	Samtec	x	x	x	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	x	x
Robert Aekins	Legrand	Legrand									x		
Robert Lingle	OFS	OFS										x	
Robert Sleigh	Keysight	Keysight		x									
Roy Wang	HPE	HPE									x		
Ruben Perez De Aranda Alonso	KDPOF	Knowledge Development for POF SL									x		
Ruibo Han	China Mobile	China Mobile							x		x		
Ruoxu Wang	Huawei	Huawei									x	x	x

Name	Affiliation	Affiliation											
Sam Kocsis	Amphenol	Amphenol	x	x	x	x	x	x	x	x	x	x	x
Sam Sambasivan	AT&T	AT&T								x			
Scott Irwin	Mosys	Mosys						x	x				
Scott Sommers	Molex	Molex	x	x	x	x	x	x	x	x	x	x	x
Scott Walley	Max Linear	Max Linear	x	x	x	x	x	x	x	x	x	x	x
Shawn Nicholl	Xilinx	Xilinx								x			
Shimon Muller	Axalume	Axalume							x	x	x		
SJ Yu	Foxconn Interconnect	Foxconn Interconnect		x		x	x	x	x	x	x	x	x
Sridhar Ramesh	Independent	Independent							x	x			
Stephen Didde	Keysight	Keysight	x	x	x	x	x	x	x	x		x	
Steve Carlson	Robert Bosch/Ethernovia	High-Speed Design								x			
Steve Gorshe	Microchip	Microchip								x			
Steve Sekel	Keysight	Keysight	x			x	x	x		x	x	x	x
Steve Trowbridge	Nokia	Nokia	x	x		x	x		x	x	x		
Talal Alhammami	Diconium	Diconium								x			
Tao Hu	Marvell	Marvell	x										
Ted Sprague	Infinera	Infinera									x		
Terry Little	Foxconn Interconnect	Foxconn Interconnect	x		x	x	x			x		x	x
Thananya Baldwin	Keysight	Keysight							x	x	x		x
Timothy De Keulenaer	NVIDIA	NVIDIA	x	x	x								x

Name	Affiliation	Affiliation											
Tom Huber	Nokia	Nokia							x	x			
Tom Issenhuth	Huawei	Issenhuth Consulting						x	x				
Tom Palkert	Macom/Samtec	Macom/Samtec	x	x	x	x	x	x	x	x	x	x	x
Tomoo Takahara	Fujitsu	Fujitsu							x	x			
Tony New	Prysmian Group	Prysmian Group							x				
Toshiaki Sakai	Socionext	Socionext	x	x	x	x	x	x	x	x	x	x	x
Upen Kareti	Cisco	Cisco	x	x	x	x	x	x	x			x	
Valerie Maguire	The Siemon Company	The Siemon Company							x				
Viet Tran	Keysight	Keysight						x	x				
Wendy Wu	Cadence	Cadence							x				
Xiang He	Huawei	Huawei	x			x	x		x	x			x
Yasuo Hidaka	Credo	Credo	x	x	x	x	x	x	x	x	x	x	x
Yong Kim	Axonne	NIO							x				
Yu (Helen) Xu	Huawei	Huawei								x			
Yuchun (Louis) Lu	Huawei	Huawei	x										
Yumeng Yang	Huawei	Huawei							x				
Zvi Rechtman	Mellanox	Mellanox	x	x	x	x	x	x				x	x