PRELIMINARY Unapproved Minutes

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

Telephonic series for January-March 2021 Meeting:

January 26, January 27~~, February 2, February 3, February 9, February 10, February 16, February 17, March 3 and March 10, 2021~~

Online Meeting

Prepared by Kent Lusted and Beth Kochuparambil

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IEEE P802.3ck 100 Gb/s Electrical Lane Task Force – March 10, 2021

Proposed Agenda:

Attendees

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

Prepared by Kent Lusted and Beth Kochuparambil

Proposed Agenda:

- Approval of the Agenda
- Approval of collective October/November Series minutes
- IEEE Patent Policy reminder
- IEEE Copyright reminder
- IEEE Participation Requirements reminder
- Ground Rules and Operations
- Chief Editor's Report
- Comment Resolution
    - Common Mode
    - Annex 120G
    - See: https://www.ieee802.org/3/ck/public/21_01/agenda_3ck_01_0121_brown.pdf

Presentations posted at: https://www.ieee802.org/3/ck/public/21_01/index.html

Meeting began at ~7:15 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 and apologized for the delayed start due to technical difficulty.

Meeting began with the agenda presentation
https://www.ieee802.org/3/ck/public/21_01/agenda_3ck_01_0121.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 26 and 27 January. Chair asked if there was objection to the shown agenda. No one responded.

Chair thanked Kent Lusted for the minutes of the last meeting (October-November 2020). Chair asked if there were any other corrections or modifications to be noted for the posted October-November series minutes. No one responded.

Motion #2:

Move to approve the October-November 2020 telephonic interim meeting minutes.
Moved by: Mike Dudek
Second by: Rich Mellitz
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 1.4 Telephonic interim meeting series details. Meetings 1-8 are for resolving all 154 comments. Meetings 9-10 were reserved to address any open technical issues identified by the editors gating the transition to working group balloting.

Chair reminded participants to focus on technical completeness of the draft. The initial Working Group ballot is 30 days with full scope of the document.

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.

Chair reminded participants to sign into the IEEE Meeting Attendance Tool to record attendance for the IEEE 802.3 Working Group. Task Force attendance would be taken from the webex logs.

Chair reviewed the ground rules.

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

Chair noted that the intention was to create Draft 1.5 as the document for consideration in the Working Group vote.

Vice Chair reminded participants to declare their affiliation either in their webex id or via the webex chat window.

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 31 January, 2021. The proposed "bucket1a" responses with updates to comment #53 and #10 were posted at https://www.ieee802.org/3/ck/comments/draft1p4/8023ck_D1p4_comments_proposed_bucket1a.pdf

Chief Editor's Report:

Matt Brown
See: https://www.ieee802.org/3/ck/public/21_01/editorsrep_3ck_01_0121.pdf

- Reviewed the big ticket items on slide 8 to resolve in the draft.

Common Resolution Agenda:

Matt Brown
See: https://www.ieee802.org/3/ck/public/21_01/comagenda_3ck_01_0121.pdf

- It was noted that the comment resolution agenda was subject to change.
- Noted that there are 14 comments that the editorial team recommends deferring to the Working Group ballot.
- The proposed "bucket1a" responses with updates to comment #53 and #10 were posted at https://www.ieee802.org/3/ck/comments/draft1p4/8023ck_D1p4_comments_proposed_bucket1a.pdf
- Discussed the recommendation to defer some comments to the working group ballot. It was noted that it was a Task Force decision on how to handle those comments.

Comment resolution began.

Consensus Discussion Slides - Matt Brown

See: https://www.ieee802.org/3/ck/public/21_01/brown_3ck_03_0121.pdf
Reviewed slides 3 and 4.

Presentation #1:

"Comment #101 - Limit for Cable Assembly Diff to Common RL ", Bruce Champion
See: https://www.ieee802.org/3/ck/public/21_01/champion_3ck_02a_0121.pdf

- Updated version '02a' with title corrected
- Discussed the data in the plot on slide 4.

Presentation #2:

"Comment #102 - CA Common Mode to Common Mode Return Loss Limit ", Bruce Champion
See: https://www.ieee802.org/3/ck/public/21_01/champion_3ck_01a_0121.pdf

- Updated version '01a' with title corrected
- Discussed the data in the plot on slide 5.
- Discussed the aspects of the cable assembly test setup that could change the results shown on slide 5.
- Discussed if there was an impact to system performance with the changed specification.

Break at ~9:10 a.m. Resumed at ~9:15 a.m.

Consensus Discussion Slides - Matt Brown

See: https://www.ieee802.org/3/ck/public/21_01/brown_3ck_03_0121.pdf
Reviewed slides 5-11.

Chair noted that the 27 January meeting would resume with the common-mode topic per the comment resolution agenda. Also noted that most of the presentations for 27 January were shown in a prior ad hoc.

Meeting ended at ~10:00 a.m.

IEEE P802.3ck 100 Gb/s Electrical Lane Task Force – January 27, 2021

Prepared by Kent Lusted

Continue approved agenda from 26 January following the comment agenda at https://www.ieee802.org/3/ck/public/21_01/agenda_3ck_02_0121_brown.pdf

Presentations posted at: https://www.ieee802.org/3/ck/public/21_01/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_01/agenda_3ck_01_0121.pdf

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.

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.

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

Reviewed the Draft 1.4 Telephonic interim meeting series details. Meetings 1-8 are for resolving all 154 comments. Meetings 9-10 were reserved to address any open technical issues identified by the editors gating the transition to working group balloting.

Chair reminded participants to focus on technical completeness of the draft. The initial Working Group ballot is 30 days with full scope of the document.

Chair noted that the intention was to create Draft 1.5 as the document for consideration in the Working Group vote.

Vice Chair reminded participants to declare their affiliation either in their webex id or via the webex chat window.

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 31 January, 2021. The proposed "bucket1a" responses with updates to comment #53 and #10 were posted at https://www.ieee802.org/3/ck/comments/draft1p4/8023ck_D1p4_comments_proposed_bucket1a.pdf

Comment resolution began.

Consensus Discussion Slides - Matt Brown

See: https://www.ieee802.org/3/ck/public/21_01/brown_3ck_03_0121.pdf
Reviewed slides 11-12.

Consensus Discussion Slides - Matt Brown

See: https://www.ieee802.org/3/ck/public/adhoc/jan20_21/brown_3ck_adhoc_01_012021.pdf

Presentation #3:

"Revisit TP1a EH and VEC based on New Test Method in IEEE 802.3ck D1p4 ", Mau-Lin Wu
See: https://www.ieee802.org/3/ck/public/21_01/wu_3ck_01a_0121.pdf

- Updated version '01a' from the ad hoc presentation.

- Reviewed the channels used in the analysis (see slide 15)
- Discussed the proposed values for EH and VEC.

Presentation #4:

"Update COM Analysis with Rectangular Window", Ali Ghiasi
See: https://www.ieee802.org/3/ck/public/adhoc/jan13_21/ghiasi_3ck_adhoc_01_011321.pdf

- Discussed the rectangular window analysis results.

Presentation #5:

"C2M VEC and EH (comment 5)", Rich Mellitz
See: https://www.ieee802.org/3/ck/public/21_01/mellitz_3ck_01b_0121.pdf

- Updated version '01b' with new data and typo fix
- Reviewed the data on slide 6. The vertical axis is VEC dB when T_O = 50.

Reviewed the Annex 120G HE/VEC values presentation brown_3ck_adhoc_01_012021.pdf. Changes and corrections were made. Saved as version 01a. (see: https://www.ieee802.org/3/ck/public/adhoc/jan20_21/brown_3ck_adhoc_01a_012021.pdf)

Straw Poll #1:

For TP1a EH, I support the following value: (Chicago Rules)
A: 9 mV
B: 9.5 mV
C: 10 mV
Results A: 7, B: 4, C: 29
(see comment #40)

Straw Poll #2:

For TP1a VEC, I support the following value: (Chicago Rules)
A: 12 dB
B: 12.6 dB
C: 14 dB
Results A: 28, B: 14, C: 6
(See comment #40)

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

Chair asked if there was objection to seeing a few slides from Mike Dudek's presentation (see: https://www.ieee802.org/3/ck/public/21_01/dudek_3ck_01_0121.pdf) related to the VEC/VEO topic. Reviewed slides 5 and 6.

Straw Poll #3:

For TP4 NE/FE, EH, I support the following value:
A: 17/17 mV
B: 22/11 mV
C: 25/15 mV
Results A: 7, B: 4, C: 17
(see comment #40)

Chair noted that when the brown_01a presentation is reviewed next week, the values of TP1a/TP1 on slide 9 would not be subject to modification based on the straw polls 1 and 2.

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 31 January, 2021. The proposed "bucket1a" responses with updates to comment #53 and #10 were posted at https://www.ieee802.org/3/ck/comments/draft1p4/8023ck_D1p4_comments_proposed_bucket1a.pdf

Chair noted that the agenda for next would be announced of the email reflector. Presentations for the copper cable and backplane topics were due on 29 January 2021 AoE.

Meeting ended at ~10:00 a.m.

Attendees

Name	Affiliation	Employed by	1/26 TI	1/27 TI
Adam Healey	Broadcom	Broadcom	x	x
Adee Ran	Intel	Intel	x	x
Alan Kinningham	I-PEX	I-PEX	x	x
Alex Haser	Molex	Molex	x	x
Ali Ghiasi	Ghiasi Quantum/Inphi	Ghiasi Quantum/Inphi	x	x
Arthur Marris	Cadence	Cadence	x	x
Ayal Shoval	Synopsys	Synopsys	x	x
Ayla Chang	Huawei	Huawei	x	x
Beth Kochuparambil	Cisco	Cisco	x	x
Bill Kirkland	Semtech	Semtech	x	x
Bo Zhang	Inphi	Inphi	x	x
Brandon Gore	Samtec	Samtec	x	x
Bruce Champion	TE Connectivity	TE Connectivity	x	x
Champion (Chien Ping) Kao	Cornelis Networks	Cornelis Networks	x	x
Chan Chih (David) Chen	Applied Optoelectronics	Applied Optoelectronics	x	x

Charlie Staley	I-PEX	I-PEX	x	x
Chris DiMinico	PHY-SI	PHY-SI	x	x
Clint Walker	Alphawave IP	Alphawave IP	x	x
Dave Estes	Spirent	Spirent	x	x
Dave Hess	Cord Data	Cord Data	x	x
Dave Lewis	Lumentum	Lumentum	x	x
David Malicoat	Senko	Independent	x	x
David Ofelt	Juniper	Juniper	x	
David Piehler	Dell EMC	Dell EMC	x	x
Dawei Fan	Huawei	Huawei	x	
Ed Frlan	Semtech	Semtech	x	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	
Frank Chang	Source Photonics	Source Photonics	x	x
Gary Nicholl	Cisco	Cisco	x	x
Geoff Zhang	Xilinx	Xilinx	x	

German Feyh	Broadcom	Broadcom		x
Greg LeCheminant	Keysight	Keysight	x	x
Guangcan Mi	Huawei	Huawei	x	x
Hadrien Louchet	Keysight	Keysight		x
Haifei Wang	Huawei	Huawei		x
Hansel Dsilva	Achronix	Achronix	x	x
Hao Ren	Huawei	Huawei	x	x
Hiroshi Sawano	OITDA	OITDA		x
Hock Yam	Volex	Volex	x	
Hormoz Djahanshahi	Microchip	Microchip	x	x
Howard Heck	Intel	Intel	x	x
Ichiro Ogura	Petra JP	Petra JP		x
Istvan BakroNagy	EFFECT Photonics	EFFECT Photonics	x	
James Weaver	Arista	Arista	x	x
James Young	Commscope	Commscope	x	x
Jane Lim	Cisco	Cisco	x	x
Jeff Hutchins	Ranovus	Ranovus	x	
Jeff Slavick	Broadcom	Broadcom	x	x

Jeffery Maki	Juniper	Juniper	x	x
Jim Theodoras	HG Genuine	HG Genuine		x
Jinhua Chen	Luxshare ICT	Luxshare ICT	x	
Jodi Haasz	IEEE SA	IEEE SA	x	x
John Abbott	Corning	Corning		x
John Calvin	Keysight	Keysight	x	x
John D'Ambrosia	Futurewei (US Subsidiary of Huawei)	Futurewei	x	x
John Ewen	Marvell	Marvell	x	x
John Kamino	OFS Optics	OFS Optics		x
John Yurtin	Aptiv	Aptiv	x	x
Joshua Kim	Hirose	Hirose	x	x
Kae Dube	UNH-IOL	UNH-IOL		x
Karl Bois	TE Connectivity	TE Connectivity	x	x
Kenneth Schneider	Telebyte	Telebyte		x
Kent Lusted	Intel	Intel	x	x
Kumaran Krishnasamy	Broadcom	Broadcom	x	x
Larry McMillan	Western Digital	Western Digital		x
Lemon Geng	Huawei	Huawei		x

Liav Ben-Artsi	Marvell	Marvell	x	x
Mabud Choudhury	OFS	OFS		x
Mark Kimber	Semtech	Semtech	x	x
Mark Laubach	Independent	Independent		x
Mark Nowell	Cisco	Cisco	x	x
Masato Shiino	Furukawa Electric	Furukawa Electric		x
Massimo Sorbara	Globalfoundries	Globalfoundries	x	
Matt Brown	Huawei	Huawei	x	x
Matthias Wendt	Signify	Signify (Philips Lighting)	x	
Mau-Lin Wu	Mediatek	Mediatek	x	x
Mike Dudek	Marvell	Marvell	x	x
Mike Klempa	Amphenol	Amphenol	x	x
Mike Li	Intel	Intel	x	x
Nathan Tracy	TE Connectivity	TE Connectivity	x	x
Patrick Casher	Foxconn Interconnect	Foxconn Interconnect		x
Paul Brooks	Viavi	Viavi	x	x
Pavel Zivny	Tektronix	Tektronix	x	
Peter Jones	Cisco	Cisco		x

Peter Wu	Marvell	Marvell		x
Phil Sun	Credo	Credo	x	x
Piers Dawe	NVIDIA	NVIDIA	x	x
Pirooz Tooyserkani	Cisco	Cisco	x	x
Pranav Devalla	Arista	Arista	x	
Qing Xu	Ranovus	Ranovus	x	
Rajmohan Hegde	Broadcom	Broadcom	x	x
Ramana Murty	Broadcom	Broadcom		x
Ramesh Sivakolundu	Cisco	Cisco	x	x
Ray Schmelzer	Wilder Tech	Wilder Tech		x
Rich Mellitz	Samtec	Samtec	x	x
Rick Pimpinella	Panduit	Panduit		x
Rick Rabinovich	Keysight	Keysight	x	x
Robert Lingle	OFS	OFS	x	x
Ruoxu Wang	Huawei	Huawei	x	
Sam Kocsis	Amphenol	Amphenol	x	x
Scott Sommers	Molex	Molex	x	x
Scott Walley	Max Linear	Max Linear	x	x

Sebastian Konewko	Rockwell	Rockwell		x
Shawn Nicholl	Xilinx	Xilinx		x
Shimon Muller	Axalume	Axalume	x	x
SJ Yu	Foxconn Interconnect	Foxconn Interconnect		x
Sridhar Ramesh	Maxlinear	Maxlinear	x	x
Stephen Didde	Keysight	Keysight	x	x
Steve Gorshe	Microchip	Microchip	x	
Steve Trowbridge	Nokia	Nokia	x	x
Ted Sprague	Infinera	Infinera	x	
Terry Little	Foxconn Interconnect	Foxconn Interconnect		x
Tom Huber	Nokia	Nokia	x	x
Tom Issenhuth	Huawei	Issenhuth Consulting	x	x
Tom Palkert	Macom/Samtec	Macom/Samtec	x	x
Tomoo Takahara	Fujitsu	Fujitsu	x	
Tong Jiang	Huawei	Huawei	x	x
Toshiaki Sakai	Socionext	Socionext	x	x
Upen Kareti	Cisco	Cisco	x	
Viet Tran	Keysight	Keysight	x	x

Xiang He	Huawei	Huawei	x	x
Yang Zhiwei	ZTE	ZTE	x	x
Yasuo Hidaka	Credo	Credo	x	x
Zhiwei Yang	ZTE	ZTE	x	x
Zvi Rechtman	Mellanox	Mellanox	x	x