

Unapproved Minutes

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

Telephonic interim March 10, 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 – March 10, 2021](#)

[Proposed Agenda:](#)

[Task Force Status - Beth Kochuparambil](#)

[Motion #1:](#)

[Presentation #1:](#)

[Presentation #2:](#)

[Presentation #3:](#)

[Attendees](#)

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

Prepared by Kent Lusted and Beth Kochuparambil

Proposed Agenda:

- Approval of the Agenda
- Approval of the January Comment Resolution Minutes
- IEEE Participation Requirements reminder
- IEEE Copyright reminder
- IEEE Patent Policy reminder
- Ground Rules and Operations
- Task Force Status
- Technical Presentations
 - “Cp Value Ratification”, Karl Bois
 - “Measured vs. Simulated Correlation of Package Model”, Mau-Lin Wu
 - “Package to Board Linkage capacitance, Cp: Extraction/Simulation Follow up”, Liav Ben-Artzi

Presentations posted at: https://www.ieee802.org/3/ck/public/21_03/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/21_03/agenda_3ck_01a_0321.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 reviewed the proposed agenda and asked if there were modifications to the agenda. Asked if there was objection to agenda as shown. No one responded. Chair considered the agenda approved.

Chair noted that the minutes for the January comment resolution series had been posted to the website (see:

https://www.ieee802.org/3/ck/public/21_01/minutes_3ck_0121_final_unapproved.pdf) . Chair asked if there was opposition to approving the posted minutes. No one responded. Chair considered the minutes approved.

Chair reviewed the slide with the Participation requirements.

Chair asked if anyone participating had not read the copyright slide set – no one responded. Chair showed the IEEE-SA copyright slides.

Chair asked if anyone participating had not read 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 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.

Task Force Status - Beth Kochuparambil

See: https://www.ieee802.org/3/ck/public/21_03/agenda_3ck_01a_0321.pdf

- Reviewed comment statistics from D1.4.
- Draft 1.5 was posted on 3 March 2021 in the Task Force private area
- Reviewed the plan to request the Working Group ballot on 18 March in the Working Group closing plenary.

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

Motion #1:

Move to:

- Generate Draft 2.0 from Draft 1.5
- Request that IEEE 802.3 WG progress the draft to Working Group ballot.

M: Rich Mellitz

S: Ali Ghiasi

Technical (>=75%)

There was an objection during the vote. Chair indicated that she would proceed with a roll call vote. The objection was clarified to be an abstention. There was discussion on how to proceed. Chair declared that she would retake the vote and ask if there were abstentions.

Chair asked if there was anyone opposed to the motion. No one responded. Chair asked if anyone wanted to be recorded as abstain. Piers Dawe indicated that he wanted to be recorded as abstain.

Chair announced motion passed by unanimous consent. Piers Dawe abstained from the vote.

Presentation #1:

“Cp Value Ratification”, Karl Bois

See: https://www.ieee802.org/3/ck/public/21_01/bois_3ck_01_0121.pdf

- Discussed various aspects of the 3D simulation on slide 7.
- Discussed the parameters used in analysis.

Presentation #2:

“Measured vs. Simulated Correlation of Package Model”, Mau-Lin Wu

See: https://www.ieee802.org/3/ck/public/21_01/wu_3ck_02_0121.pdf

- Discussed the process to determine the rise time of the TDR
- On slide 7, the Cd_60 and Cd_87 use the same package model; only the Cd value changes.
- On slide 5, it was noted that the measurement was from bump pad to TP0v.

Presentation #3:

“Package to Board Linkage capacitance, Cp: Extraction/Simulation Follow up”, Liav Ben-Artzi

See: https://www.ieee802.org/3/ck/public/21_03/benartzi_3ck_01b_0321.pdf

- Discussed the plots on slide 5.
- Reviewed the topology details on slide 12.

Chair encouraged offline consensus building and discussion on the Cp topic as it would be a key topic in Working Group ballot.

Chairn reminded participants of the-mid session meeting on 11 March. The Task Force will request a Working Group ballot at the closing plenary on 18 March. Watch the email reflector for more details.

Meeting ended at ~9:00 a.m.

Attendees

| Name | Affiliation | Employed by |
|---------------------------|-------------------------|-------------------------|
| Adam Healey | Broadcom | Broadcom |
| Adee Ran | Cisco | Cisco |
| Alan Kinningham | I-PEX | I-PEX |
| Alex Haser | Molex | Molex |
| Ali Ghiasi | Ghiasi Quantum/Inphi | Ghiasi Quantum/Inphi |
| Arthur Marris | Cadence | Cadence |
| Ayal Shoval | Synopsys | Synopsys |
| Bernd Horrmeyer | Phoenix Contact | Phoenix Contact |
| Beth Kochuparambil | Cisco | Cisco |
| Bo Zhang | Inphi | Inphi |
| Brandon Gore | Samtec | Samtec |
| Bruce Champion | TE Connectivity | TE Connectivity |
| Burrell Best | Samtec | Samtec |
| Champion (Chien Ping) Kao | Cornelis Networks | Cornelis Networks |
| Chan Chih (David) Chen | Applied Optoelectronics | Applied Optoelectronics |
| Clint Walker | Alphawave IP | Alphawave IP |
| Dave Estes | Spirent | Spirent |
| David Malicoat | Senko | Independent |
| David Piehler | Dell EMC | Dell EMC |
| David Rennie | Synopsys | Synopsys |
| Ed Frlan | Semtech | Semtech |

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|-------------------|---------------------|---------------------|
| Ed sayre | Samtech | NESA |
| Ed Ulrichs | Intel | Intel |
| Edward Nakamoto | Spirent | Spirent |
| Fernando Barbero | KDPOF | KDPOF |
| Frank Chang | Source Photonics | Source Photonics |
| Geoff Zhang | Xilinx | Xilinx |
| Guangcan Mi | Huawei | Huawei |
| Haifei Wang | Huawei | Huawei |
| Hansel Dsilva | Achronix | Achronix |
| Hao Ren | Huawei | Huawei |
| Haysam Kadry | Ford Motor Company | Ford Motor Company |
| Hessam Mohajeri | Cadence | Cadence |
| Howard Heck | Intel | Intel |
| Inho Kim | Max Linear | Max Linear |
| Jacky Chang | HPE | HPE |
| James Weaver | Arista | Arista |
| James Young | Commscope | Commscope |
| Jane Lim | Cisco | Cisco |
| Jeff Slavick | Broadcom | Broadcom |
| Jeffery Maki | Juniper | Juniper |
| Jennifer Santulli | IEEE SA | IEEE SA |
| Jinhua Chen | Luxshare ICT | Luxshare ICT |
| Joel Goergen | Cisco Systems, Inc. | Cisco Systems, Inc. |
| John Calvin | Keysight | Keysight |

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|---------------------|-----------------|-----------------|
| John Deandrea | II-VI/Finisar | II-VI/Finisar |
| John Ewen | Marvell | Marvell |
| John Kamino | OFS Optics | OFS Optics |
| Jose Castro | Panduit | Panduit |
| Joshua Kim | Hirose | Hirose |
| Karen Liu | Lightwave Logic | Lightwave Logic |
| Karl Bois | TE Connectivity | TE Connectivity |
| KengHua Chuang | HPE | HPE |
| Kent Lusted | Intel | Intel |
| Kishore Kota | Inphi | Inphi |
| Kukita Hiroaki | Yamaichi | Yamaichi |
| Kumaran Krishnasamy | Broadcom | Broadcom |
| Liav Ben-Artzi | Marvell | Marvell |
| Mabud Choudhury | OFS | OFS |
| Mario Milicevic | Maxlinear | Maxlinear |
| Mark Gustlin | Cisco | Cisco |
| Mark Kimber | Semtech | Semtech |
| Mark Nowell | Cisco | Cisco |
| Matt Brown | Huawei | Huawei |
| Mau-Lin Wu | Mediatek | Mediatek |
| Mike Dudek | Marvell | Marvell |
| Mike Klempa | Amphenol | Amphenol |
| Mike Li | Intel | Intel |
| Mike Sluyski | Acacia | Acacia |

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|--------------------|----------------------|----------------------|
| Nathan Tracy | TE Connectivity | TE Connectivity |
| Patrick Casher | Foxconn Interconnect | Foxconn Interconnect |
| Paul Brooks | Viavi | Viavi |
| Phil Sun | Credo | Credo |
| Piers Dawe | NVIDIA | NVIDIA |
| Pirooz Tooyserkani | Cisco | Cisco |
| Pranav Devalla | Arista | Arista |
| Rajmohan Hegde | Broadcom | Broadcom |
| Rich Mellitz | Samtec | Samtec |
| Rick Pimpinella | Panduit | Panduit |
| Rick Rabinovich | Keysight | Keysight |
| Rita Horner | Synopsys | Synopsys |
| Roberto Rodes | Finisar | Finisar |
| Sam Kocsis | Amphenol | Amphenol |
| Scott Sommers | Molex | Molex |
| Scott Walley | Max Linear | Max Linear |
| Shimon Muller | Axalume | Axalume |
| Sina Shahi | Huawei | Huawei |
| SJ Yu | Foxconn Interconnect | Foxconn Interconnect |
| Sridhar Ramesh | Independent | Independent |
| Stephen Didde | Keysight | Keysight |
| Takeshi Nishimura | Yamaichi, USA | Yamaichi, USA |
| Terry Little | Foxconn Interconnect | Foxconn Interconnect |
| Tom Issenhuth | Huawei | Issenhuth Consulting |

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|----------------|--------------|--------------|
| Tom Palkert | Macom/Samtec | Macom/Samtec |
| Toshiaki Sakai | Socionext | Socionext |
| Upen Kareti | Cisco | Cisco |
| Viet Tran | Keysight | Keysight |
| Yang Zhiwei | ZTE | ZTE |
| Yasuo Hidaka | Credo | Credo |
| Yi Sun | OFS Optics | OFS Optics |
| Yong Kim | Axonne | Axonne |
| Yu (Helen) Xu | Huawei | Huawei |
| Zhiwei Yang | ZTE | ZTE |