

IEEE P802.3ck Ad Hoc meeting – June 17, 2020

Prepared by Kent Lusted and Beth Kochuparambil

Proposed Agenda:

- Approval of the Agenda
- Participant reminder
 - <http://www.ieee802.org/devdocs.shtml>
- IEEE Copyright reminder
 - <https://standards.ieee.org/ipr/index.html>
- IEEE Patent Policy reminder:
 - <http://www.ieee802.org/3/patent.html>
- Task Force Status
- Overview of D1.2 Telephonic Interim Series
- 3ck Technical Presentations* –
 - “TX Equalization for C2C Links” – Adee Ran
 - “b1/b2 Minimum Tap Weight Analysis for Low Loss CR/KR Channels” – Howard Heck
 - “Eta_0 Impact on Copper Cable” – Bruce Champion
 - “Common Mode: Fact or Fiction” - Rich Mellitz
- Late Presentations
 - “QSFP-DD SMT MCB /HCB Performance vs. 802.3ck D1.2” - Alex Haser
 - “802.3ck Frequency Domain Limits for Mated Cables” - Alex Haser

Presentations posted at: <http://www.ieee802.org/3/ck/public/adhoc/index.html>

Meeting began at ~07:00 a.m. Pacific by Beth Kochuparambil.

Meeting began with the agenda presentation:

http://www.ieee802.org/3/ck/public/adhoc/jun17_20/agenda_061720_3ck_adhoc.pdf

The ad hoc 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. Chair asked if there was opposition to the proposed agenda. No one responded. The agenda was approved by the ad hoc.

Chair reminded participants of the IEEE Participation Requirements and showed the slide with the Participation requirements, the IEEE copyright policy (see: <https://standards.ieee.org/ipr/index.html>), and the IEEE patent policy (see: <http://www.ieee802.org/3/patent.html>). Chair asked if anyone was unfamiliar with any of these IEEE policies. No one responded. There was no response to a “Call for Patents” on the Ad Hoc.

Agenda Items

P802.3ck Update, Beth Kochuparambil

See: http://www.ieee802.org/3/ck/public/adhoc/jun10_20/agenda_061020_3ck_adhoc.pdf

- Draft 1.2 review closed on June 13, 2020 AOE. Received 265 new comments, in addition to the 35 resubmitted comments. Consensus building in advance of the meetings will be necessary.
- Telephonic interims were announced on the reflector. See: <http://www.ieee802.org/3/100GEL/email/msg00473.html>
- The presentation submission deadline is June 17, 2020 AOE.
- Chair noted the IEEE 802.3 Working Group plenary series meeting dates.
- Chief Editor provided a high level overview of the comments received.
- Discussed various ways to progress forward on the draft.

Presentation #1:

“TX Equalization for C2C Links”, Adee Ran

See: http://www.ieee802.org/3/ck/public/adhoc/jun17_20/ran_3ck_adhoc_01a_061720.pdf

- Updated version ‘01a’. No objection.
- Discussed the use case of a copper cable port connected by a C2C AUI to a retimer device.
- Discussed the register access mechanism details.

Presentation #2:

“b1/b2 Minimum Tap Weight Analysis for Low Loss CR/KR Channels”, Howard Heck

See: http://www.ieee802.org/3/ck/public/adhoc/jun17_20/heck_3ck_adhoc_01_061720.pdf

- On slide 4, author noted a typo that the host PCB material was Meg6 not Meg6N.
- Only comments of gratitude for the work were shared.

Presentation #3:

“Eta_0 Impact on Copper Cable”, Bruce Champion

See: http://www.ieee802.org/3/ck/public/adhoc/jun17_20/champion_3ck_adhoc_01_061720.pdf

- Discussed the eta_0 value changes and impact to the COM results.
- Discussed SNR_TX value.
- The data on slides 5-6 was from a smaller distribution of cables that does not represent large manufacturing volumes.

Presentation #4:

“Common Mode: Fact or Fiction”, Rich Mellitz

See: http://www.ieee802.org/3/ck/public/adhoc/jun17_20/mellitz_3ck_adhoc_01_061720.pdf

- On slide 4, there was a typo in the equation. It should be $h(0)(ts)^2$, instead of $h(0)(ts)^2$
- There was another typo on slide 6.
- Discussed the process for building the channel prior to the analysis.
- Discussed the differential to common mode conversion method.

- There was a request for the plots of the Sdc21 of the channels used in the analysis.

Chair reminded participants of the ad hoc next week before the start of the telephonic interim series. Comments expected to be posted today or tomorrow.

The ad hoc meeting ended at ~9:00 am Pacific.

List of attendees (captured from Webex tool)

Name	Affiliation	Employed by
Adam Healey	Broadcom	Broadcom
Adee Ran	Intel	Intel
AJ Yang	Foxconn Interconnect Technology	Foxconn Interconnect Technology
Alex Haser	Molex	Molex
Ali Ghiasi	Ghiasi Quantum/Inphi	Ghiasi Quantum/Inphi
Arthur Marris	Cadence	Cadence
Ayal Shoval	Synopsys	Synopsys
Beth Kochuparambil	Cisco	Cisco
Bill Kirkland	Semtech	Semtech
Brandon Gore	Samtec	Samtec
Bruce Champion	TE Connectivity	TE Connectivity
Burrell Best	Samtec	Samtec
Champion (Chien Ping) Kao	Intel	Intel
Chan Chih (David) Chen	Applied Optoelectronics	Applied Optoelectronics
Chris DiMinico	PHY-SI	PHY-SI
Clint Walker	Alphawave IP	Alphawave IP
David Malicoat	Senko	Independent
David Ofelt	Juniper	Juniper
David Rennie	Synopsys	Synopsys
Enis Akbaba	Maxim Integrated	Maxim Integrated

Frank Chang	Source Photonics	Source Photonics
Frank Lambrecht	Gigamon	Gigamon
Gary Nicholl	Cisco	Cisco
Geoff Zhang	Xilinx	Xilinx
George Luk	Credo	Credo
Greg LeCheminant	Keysight	Keysight Technologies
Greg McSorley	Amphenol	Amphenol
Hansel Dsilva	Achronix	Achronix
Hormoz Djahanshahi	Microchip	Microchip
Howard Heck	Intel	Intel
Inho Kim	Marvell	Marvell
James Weaver	Arista	Arista
Jane Lim	Cisco	Cisco
Jason Chou	Foxconn Interconnect Technology	Foxconn Interconnect Technology
John Calvin	Keysight	Keysight
John Ewen	Marvell	Marvell
Joshua Kim	Hirose	Hirose
Kent Lusted	Intel	Intel
Leesa Noujeim	Google	Google
Liav Ben-Artzi	Marvell	Marvell
Mark Kimber	Semtech	Semtech
Matt Brown	Huawei	Huawei

Mau-Lin Wu	Mediatek	Mediatek
Mike Dudek	Marvell	Marvell
Mike Klempa	UNH-IOL	UNH-IOL
Mike Li	Intel	Intel
Nathan Tracy	TE Connectivity	TE Connectivity
Patrick Casher	Foxconn Interconnect Technology	Foxconn Interconnect Technology
Phil Sun	Credo	Credo
Piers Dawe	Mellanox	Mellanox
Rajmohan Hegde	Broadcom	Broadcom
Rich Mellitz	Samtec	Samtec
Rick Rabinovich	Keysight	Keysight
Rob Stone	Facebook	Facebook
Sam Kocsis	Amphenol	Amphenol
Scott Sommers	Molex	Molex
Scott Walley	Max Linear	Max Linear
Shawn Nicholl	Xilinx	Xilinx
SJ Yu	Foxconn Interconnect Technology	Foxconn Interconnect Technology
Stephen Didde	Keysight	Keysight
Steve Sekel	Keysight	Keysight
Steve Trowbridge	Nokia	Nokia
Tao Hu	Marvell	Marvell

Terry Little	Foxconn Interconnect Technology	Foxconn Interconnect Technology
Thananya Baldwin	Keysight	Keysight
Timothy De Keulenaer	nvidia	nvidia
Tom Palkert	Macom/Samtec	Macom/Samtec
Toshiaki Sakai	Socionext	Socionext
Upen Kareti	Cisco	Cisco
Xiang He	Huawei	Huawei
Yasuo Hidaka	Credo	Credo
Zhiwei Yang	ZTE	ZTE