IEEE P802.3ck Ad Hoc meeting –
February 13, 2019

Prepared by Kent Lusted

Proposed Agenda:

- Approval of the Agenda
- Approve 2 January 2019 ad hoc minutes
- IEEE Patent Policy reminder:
    - http://www.ieee802.org/3/patent.html
- IEEE Participation Requirements reminder
- Status from a chair's perspective
- Logistics for March Plenary meeting
- .3ck Ad Hoc –
    - Phil Sun - Discussion on Error Statistics
    - Mau-Lin Wu - COM Sensitivity Analysis of Key Parameters
    - Ali Ghiasi - Updated C2M COM Simulations
    - Karthik Gopalakrishnan - Is a Lumped Cd Model Accurate?
    - Alex Haser - QSFP-DD 2m Cable Channels
    - Sam Kocsis - 100GEL Cable Assembly Characteristics
    - Rich Mellitz - Cable Assembly (CR) COM

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

Meeting began at ~7:00 a.m. Pacific by Beth Kochuparambil.

Meeting began with the agenda presentation:
http://www.ieee802.org/3/ck/public/adhoc/feb13_19/agenda_021319_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.

Showed the links to the IEEE P802.3ck Task Force ad hoc page and the email reflector.

Presented the proposed agenda and asked if there was objection as written. There was no objection.   The agenda was approved by the ad hoc.

Reminded participants of the IEEE patent policy. She asked if anyone was unfamiliar with the IEEE patent policy. No one responded.

Reminded participants of the IEEE Participation Requirements and showed the slide with the Participation requirements. She asked if anyone was unfamiliar with the IEEE Participation Requirements.   No one responded.

Agenda Items

P802.3ck Update, Beth Kochuparambil
See: http://www.ieee802.org/3/ck/public/adhoc/feb13_19/agenda_021319_3ck_adhoc.pdf
- Chair noted that the schedule is on track. Anticipates first view of baseline proposals at the March meeting. Expect to adopt baselines in May.
- TF meets the week of March 11, 2019 in Vancouver, BC, Canada. 3ck meetings on Tuesday thru Thursday.
- Notable dates: Friday, March 1, 2019 (Fri) AOE - Presentation Requests due. March 6, 2019 (Wed) 5pm PST - Presentations due
- Chair reviewed the potential conflicts with other Task Force and Study Group meetings during the plenary week.

Presentation #1:
"Discussion on Error Statistics", Phil Sun
See: http://www.ieee802.org/3/ck/public/adhoc/feb13_19/sun_3ck_adhoc_01_021319.pdf
- On slide 5, the data is an optical link and it is unknown if there is a DFE or precoding. The original author of the data has not yet confirmed it.
- Reviewed the fitting assumptions made to the data on slide 5.

There were audio difficulties at the start of Mau-Lin Wu's presentation. Chair asked if there was objection to swapping the order with Ali Ghiasi presentation. No one objected.

Presentation #2:
"Updated C2M COM Simulations", Ali Ghiasi
See: http://www.ieee802.org/3/ck/public/adhoc/feb13_19/ghiasi_3ck_adhoc_01_021319.pdf
- On slide 3 , the Cd value was 90 fF, not the 110 or 130 shown in other analysis work.

Presentation #3:
"COM Sensitivity Analysis of Key Parameters", Mau-Lin Wu
See: http://www.ieee802.org/3/ck/public/adhoc/feb13_19/wu_3ck_adhoc_01_021319.pdf
- Discussed applying asymmetric tap weight limits in COM, based on the data on slide 12.

Presentation #3:
"Is a Lumped Cd Model Accurate?", Karthik Gopalakrishnan
See: http://www.ieee802.org/3/ck/public/adhoc/feb13_19/gopalakrishnan_3ck_adhoc_01_021319.pdf
- The origin of the Cdrx = 85fF proposed value was not included in the slides. The author agreed to provide it in a future update.
- There was a request to include the TX-end insertion loss.

Presentation #5:
"QSFP-DD 2m Cable Channels", Alex Haser
See: http://www.ieee802.org/3/ck/public/adhoc/feb13_19/haser_3ck_adhoc_01_021319.pdf
- The cable was a 26AWG conductor.
- The ILN for the cable was not available and will be added in the future.
- It was noted that 26AWG will fit inside of a QSFP-DD.

Presentation #6:
"100GEL Cable Assembly Characteristics", Sam Kocsis
See: http://www.ieee802.org/3/ck/public/adhoc/feb13_19/kocsis_3ck_adhoc_01_021319.pdf
- The COM 2.53 script and settings were used in the analysis. It assumes 7dB host loss.
- Discussed the cable assembly IL vs. COM measurement qualification of the cable.
- It was noted that the COM results on a cable assembly should be taken lightly until the COM parameters are finalized.

Presentation #7:
"Cable Assembly (CR) COM Configuration Spreadsheets: Starting Point", Rich Mellitz
See: http://www.ieee802.org/3/ck/public/adhoc/feb13_19/mellitz_3ck_adhoc_01_021319.pdf
- Discussed potential forthcoming changes to COM.

Chair thanked all presenters for sharing data and understanding time constraints of call. She also reminded the group that our next ad hoc is in 2 weeks, February 27th.

The ad hoc meeting ended at ~9 a.m. Pacific.

List of attendees (captured from Webex tool)

Name	Affiliation	Employed by
Adam Healey	Broadcom	Broadcom
Adrian Butter	Global Foundries	Global Foundries
Alex Haser	Molex	Molex
Ali Ghiasi	GhiasiQuantum LLC	GhiasiQuantum LLC
Andy Zambell	Amphenol	Amphenol
Athos Kasapi	Cadence	Cadence
Beth Kochuparambil	Cisco	Cisco
Biman Chattopadhyay	Synopsys	Synopsys
Brandon Gore	Samtec	Samtec
Brian Holden	Kandou	Kandou
Burrell Best	Samtec	Samtec
Cathy Huang	Huawei	Huawei
Champion Kao	Intel	Intel
Dave Lewis	Lumentum	Lumentum
David Malicoat	Senko	Malicoat Networking Solutions
David Ofelt	Juniper	Juniper
David Piehler	Dell EMC	Dell EMC
David Rennie	Synopsys	Synopsys
Ed sayre	Samtech	Teraspeed
Erdem Matoglu	Amphenol	Amphenol

Gary Nicholl	Cisco	Cisco
Geoff Zhang	Xilinx	Xilinx
Greg McSorley	Amphenol	Amphenol
Howard Heck	Intel	Intel
Hsinho Wu	Intel	Intel
Ilya Lyubumirshky	Inphi	Inphi
Inho Kim	Marvell	Marvell
Jacky Chang	HPE	HPE
Jane Lim	Cisco	Cisco
Jeff Slavick	Broadcom	Broadcom
Jeff Twombly	Credo	Credo
Jeremy Stephens	Intel	Intel
John Ewen	Globalfoundries	Globalfoundries
John Mitchell	Spectra7	Spectra7
Karthik Gopalakrishnan	Inphi	Inphi
Ken Jackson	Sumitomo	Sumitomo
Kent Lusted	Intel	Intel
Kumaran Krishnasamy	Broadcom	Broadcom
Leesa Noujeim	Google	Google
Liav Ben-Artsi	Marvell	Marvell
Mark Gustlin	Xilinx	Xilinx
Mark Kimber	Samtech	Samtech
Masashi Shimanouchi	Intel	Intel

Matt Brown	Macom	Macom
Mau-Lin Wu	Mediatek	Mediatek
Mike Dudek	Cavium	Cavium
Ming ran	Huawei	Huawei
Nathan Tracy	TE Connectivity	TE Connectivity
Pete Anslow	Ciena	Ciena
Phil Sun	Credo	Credo
Phong Pham	US Conec	US Conec
Piers Dawe	Mellanox	Mellanox
Pirooz Tooyserkani	Cisco	Cisco
Rajmohan Hegde	Broadcom	Broadcom
Raymond Nering	Cisco	Cisco
Rich Mellitz	Samtec	Samtec
Rick Rabinovich	Keysight	IXIA
Rita Horner	Synopsys	Synopsys
Rob Stone	Broadcom	Broadcom
Sam Kocsis	Amphenol	Amphenol
Sara Zebian	Google	Google
Scott Sommers	Molex	Molex
Shawn Nicholl	Xilinx	Xilinx
Shimon Muller	Axalume	Axalume
Stephen Didde	Keysight	Keysight
Steve Sekel	Keysight	Keysight

Steve Trowbridge	Nokia	Nokia
Tao Hu	Marvell	Marvell
Tim Pak	Luxshare	Luxshare
Tom Palkert	Molex/Macom	Molex/Macom
Upen Kareti	Cisco	Cisco
Wendy Wu	Cadence	Cadence
Xiang He	Huawei	Huawei
Xinyuan Wang	Huawei	Huawei
Yan Zhuang	Huawei	Huawei
Yasuo Hidaka	Credo	Credo
Yuchun(Louis) Lu	Huawei	Huawei