IEEE 802.3 100G Electrical Lane Study Group Ad Hoc meeting – January 8, 2018

Prepared by Kent Lusted and Beth Kochuparambil

Proposed Agenda:

- Approval of the Agenda
- IEEE Patent Policy reminder:
  - https://development.standards.ieee.org/myproject/Public/mytools/mob/preparslides.pdf
- IEEE Participation Requirements reminder
- 100GEL Ad Hoc –
  - Verbal recap of Jan 3rd Ad Hoc open discussion items, Beth Kochuparambil (5 mins)
  - "AUI Objectives Form," Gary Nicholl (30 mins)
  - "Proposed CSD Responses," Kent Lusted (45 mins)

Presentations posted at: http://www.ieee802.org/3/100GEL/public/adhoc/index.html

Meeting began at ~8 a.m. Pacific by Beth Kochuparambil, Acting Chair.

Meeting began with the agenda presentation:
http://www.ieee802.org/3/100GEL/public/adhoc/jan08_18/agenda_180108_100GEL_adhoc.pdf

The ad hoc chair reminded participants to indicate full names and employer/affiliation correctly for the meeting minutes. Beth reminded participants to mute lines when not speaking and reviewed the steps to unmute.

Showed the links to the IEEE 802.3 100G/s per lane electrical Study Group ad hoc page and the email reflector.

Presented the proposed agenda and asked if there was objection as written. The agenda was approved by the ad hoc.

Chair noted that the minutes from the previous meeting were recently posted to the ad hoc web page.

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

Agenda Items

Study Group Update – Beth Kochuparambil

- Meeting Thursday afternoon and Friday all day during the Geneva interim meeting, week of Jan 21, 2018
- Presentations should be focused on completing and supporting the PAR and CSD responses.
- Presentation requests due Friday, 12 January, AOE. Presentations due Wednesday 17 January 5pm Pacific.
- Discussed the dependency between the PAR & CSD responses and the objectives. The Study Group will need support for the assumptions in the PAR and CSD.
- It was noted that the purpose of the Study Group is to determine if a standard is necessary, as well as prepare the PAR and CSD.
- David Law noted that the rules only require that a Study Group submit a PAR and CSD to IEEE 802 EC and that the objectives help to substantiate the PAR and CSD responses. The objectives may need finalizing at the March plenary meeting. The PAR and CSD must be pre-submitted 30 days in advance for IEEE 802 EC review.
- Beth noted that straw polls are planned for the January interim to measure consensus to proceed towards approval of a Task Force: objectives, PAR and CSD.

Recap of Jan 3rd open issues – Beth Kochuparambil

- AUI objective language was a hot topic and Beth asked Gary Nicholl to prepare a short presentation. Beth will table the backplane discussion until the interim meeting.
- Formally setting an AUI objective outside the context of a PHY is new and needs discussion.

Presentation #1:

"Thoughts on 100Gb/s per lane AUI Objectives", Gary Nicholl

See: http://www.ieee802.org/3/100GEL/public/adhoc/jan08_18/nicholl_100GEL_adhoc_01_010818.pdf

- On slide 5, the intent of "100 Gb/s optical signaling" would be the 100G-DR and 400G-DR4 PMD types. Not trying to include all of the legacy optical PMD types such as 100G-LR4, 100G-FR8, etc.
- Compatible with existing PMDs means to reuse the PCS, FEC and BER target for the 100G-DR and 400G-DR4 PMD types.
- It was noted that the 100Gb/s optical signaling is 100Gb/s per lane optical signaling.
- Discussed the removal of the loss budget from the objective text. Previous AUI objectives did not list a loss target.
- It was suggested that there should be another set of objectives to cover the four-lane case for 400G-DR4. The form is similar to AUI objectives used in the 3bm.
- There was a recommendation to avoid the term "lane". An explanation of the concern was provided. Adam Healey noted that a discussion on the term "lane" will occur as a result of the IEEE 802.3 revision project.
- It was noted that the proposed AUI C2M and C2C objectives do not prevent a copper cable or backplane objective.

Presentation #2:

Proposed CSD Responses," Kent Lusted

See: http://www.ieee802.org/3/100GEL/public/adhoc/jan08_18/lusted_100GEL_adhoc_01_010818.pdf

- On slide 3, there was a request to change “will reuse…” to “can reuse…” or “may reuse…”
- On slide 7, there was a request to remove “representing” and replace it something else such as “representatives”. Several locations in the text need fixing.
- On slide 8, David Law provided suggested text for the compatibility response for managed objects. A similar change was suggested for the managed objects slide (#5). It was also noted that additional text for the compatibility response was needed to address the why question.
- On slide 9, align term “lane” to be consistent in the CSD responses.
- On slide 10, presenter pointed out that "presentations made..." statement refers to NEA presentations. Chair is finding out if presentations need to be re-presented into our study group.
- On slide 11, suggestions were made to include references to improved density and improved cost.
- There was general agreement that the CSD responses were in good shape.

Chair asked participants to review the proposed CSD responses and provide feedback as well as supporting material for the January 2018 interim meeting.

Chair noted that ad hoc meeting on January 15, 2018 is cancelled.

The ad hoc meeting ended at ~9:50 a.m. Pacific.

List of attendees (captured from Webex tool)

Adam Healey	Broadcom
Adee Ran	Intel
Adrian Butter	Global Foundries
Alexander Rysin	Mellanox
Ali Ghiasi	GhiasiQuantum LLC
Andy Zambell	Amphenol
Arthur Marris	Cadence
Beth Kochuparambil	Cisco
Bilal Ahmad	Huawei
Dave Lewis	Lumentum
David Chalupsky	Intel
David Law	HPE
David Malicoat	Senko
David Ofelt	Juniper
David Piehler	Dell EMC
Derek Cassidy	BT
Ed Frlan	Semtech
Ed sayre	Samtech
Flavio Marques	Furukawa Electric
Gary Nicholl	Cisco
Geoff Thompson	Independent
George Zimmerman	Aquantia
Hormoz Djahanshahi	Microsemi
Jeff Slavick	Broadcom
Jeremy Stephens	Intel
John Ewen	Globalfoundries
John Yurtin	Aptiv
Kent Lusted	Intel
Kumaran Krishnasamy	Broadcom
Mark Gustlin	Xilinx
Martin White	Cavium
Matt Brown	Macom
Mau-Lin Wu	Mediatek
Megha Shanbhag	TE Connectivity
Mike Dudek	Cavium
Mike Li	Intel
Nathan Tracy	TE Connectivity
Phil Sun	Credo
Ramin Farjadrad	Aquantia
Rich Mellitz	Samtec
Rick Rabinovich	IXIA
Rob Stone	Broadcom
Robert Lingle	OFS Optics

Scott Sommers	Molex
Takeshi Nishimura	Yamaichi Electronics, USA
Tom Palkert	Molex/Macom
Toshiaki Sakai	Socionext
Vittal Balasubramanian	Innovium
Yasuo Hidaka	Independent
Zvi Rechtman	Mellanox