IEEE 802.3 100G Electrical Lane Study Group Ad Hoc meeting – December 20, 2017

Prepared by Kent Lusted

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 –
    - "Study Group: Status and Work", Beth Kochuparambil
    - "100Gb/s Electrical Links System View", Dave Ofelt, Rob Stone, Mark Gustlin, Gary Nicholl, Kent Lusted, Beth Kochuparambil

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

Meeting began at ~9:05 a.m. Pacific by Beth Kochuparambil.

Meeting began with the agenda presentation:
http://www.ieee802.org/3/100GEL/public/agenda_122017_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.

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

Presentation #1:
"Study Group: Status and Work", Beth Kochuparambil
See: http://www.ieee802.org/3/100GEL/public/kochuparambil_100GEL_adhoc_01_1217.pdf
- On slide 8, Mark Nowell noted that option 1 was the path used by 3cd.
- On slide 9, Beth noted that the 1E-13 BER should be for the two-lane 200G and four-lane 400G operation.
- On slide 10, discussed the frequency for the backplane and there was suggestion to make it a variable like the AUIs.
  - There was general agreement of the forms shown.
  - It was noted that the SG will need presentations that show what reach is possible on a backplane for the given loss in the objective.
- There was general agreement that Mondays were preferred over Wednesdays in January to reduce the chance of conflict with the P802.3cd ad hoc.
- Mark Nowell noted the reviewed the path in 3cd in more detail. The 3cd SG approved CSD and PAR responses with a few objectives.
- Beth performed a straw poll using Webex, based on slide 8.
  - I would support:
    - A: targeting TF in May
    - B: targeting TF in November
    - C: Targeting TF later than November
    - D: Need more information

Presentation #2:
"100Gb/s Electrical Links System View", Dave Ofelt, Rob Stone, Mark Gustlin, Gary Nicholl, Kent Lusted, Beth Kochuparambil
See: http://www.ieee802.org/3/100GEL/public/ofelt_100GEL_adhoc_01_1217.pdf
- It was noted that the data center architecture will drive the cable length as switch radix increases (which reduces # servers in rack).
- Discussed the possibility of asymmetric host loss in a channel. NICs are likely to have lower host loss than switches. It was briefly discussed in the 3cd Task Force.
- Discussed the addition of a retimer impacts the BER budget calculations for the overall channel.

Beth announced the results of the Webex straw poll:

Questions	Results	Bar Graph
1. I would support		
⦿ A. Targeting TF in May	16/47 (...	▬▬
◯ B. Targeting TF in Nove...	11/47 (...	▬
◯ C. Targeting TF later tha...	1/47 (2...	▏
◯ D. Need more information	8/47 (1...	●
No Answer	11/47 (...	▬

Beth announced that the next meeting will be 9am Pacific on January 3, 2018.

The ad hoc meeting ended at ~11 a.m. Pacific.

List of attendees (captured from Webex tool)

Name	Affiliation
Vittal Balasubramanian	Innovium
Adrian Butter	Global Foundries
Derek Cassidy	BT
Jacky Chang	HPE
David Chen	Applied Optoelectronics
Piers Dawe	Mellanox
Chris DiMinico	PHY-SI
Hormoz Djahanshahi	Microsemi
John Ewen	Globalfoundries
James Fife	Etopus
Ali Ghiasi	GhiasiQuantum LLC
Mark Gustlin	Xilinx
Adam Healey	Broadcom
Rajmohan Hegde	Broadcom
Yasuo Hidaka	Independent
Ken Jackson	Sumitomo
Beth Kochuparambil	Cisco
Kumaran Krishnasamy	Broadcom
Frank Lambrecht	Gigamon
David Law	HPE
Dave Lewis	Lumentum
Jane Lim	Cisco
Karen Liu	Kaiam
Kent Lusted	Intel
Flavio Marques	Furukawa Electric
Arthur Marris	Cadence
Rich Mellitz	Samtec
Dale Murray	Lightcounting
Gary Nicholl	Cisco
Takeshi Nishimura	Yamaichi Electronics, USA
Mark Nowell	Cisco
David Ofelt	Juniper
David Piehler	Dell EMC
Rick Rabinovich	IXIA
Adee Ran	Intel
Zvi Rechtman	Mellanox
Alexander Rysin	Mellanox
Toshiaki Sakai	Socionext
Ed Sayre	Samtech
Megha Shanbhag	TE Connectivity
Ted Sprague	Infinera
Jeremy	Intel

Rob Stone	Broadcom
Phil Sun	Credo
Andre Szczepanek	HSZ Consulting
Geoff Thompson	Independent
Pirooz Tooyserkani	Cisco
Nathan Tracy	TE Connectivity
Yang Zhiwei	ZTE
George Zimmerman	ADI, APL Group, Aquantia, BMW, Cisco Systems, Commscope