Minutes P802.3by 25 Gb/s Ethernet Task Force ad-hoc meeting – April 29, 2015

Prepared by Kent Lusted

Proposed Agenda:
- Approval of the Agenda
- IEEE patent policy reminder (see http://www.ieee802.org/3/patent.html)
- Approval of draft minutes for April 15 2015
- P802.3by Task Force Update (tentative), Mark Nowell
- P802.3by D1.0 editorial update (tentative), Matt Brown
- "Draft Informal Communication to SFF", Dan Dove
- "RS-FEC LPI signaling", Adee Ran
- "MTTFPA considerations for 25GbE no FEC mode", Phil Sun
- "CTLE Enhancements for 25G_AUI", Gary Nicholl

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

Meeting began at 8:03 a.m. Pacific.

Meeting began with the agenda presentation:
http://www.ieee802.org/3/by/public/adhoc/architecture/agenda_042915_25GE_adhoc-v2.pdf

Matt Brown showed the links to the ad hoc page and the email reflector.

Matt Brown reviewed the Attendance information related to the ad hoc. He reminded participants to indicate full names and employer/affiliation correctly for the meeting minutes.

Matt presented the proposed agenda. Matt noted that this meeting will be 2 hours in duration to address the proposed topics. No one responded. The agenda was approved by the ad hoc.

Matt reminded participants of the IEEE patent policy. (see http://www.ieee802.org/3/patent.html) No one responded. When asked, Matt noted that the new IEEE patent policy had been mentioned at the last several ad hoc meetings. It is now the IEEE patent policy.

The April 15 meeting minutes were posted shortly after the meeting. No comments were received. Matt Brown asked if there were objections to approving the minutes as posted. No one responded. The April 15 meeting minutes were approved by the ad hoc.

25GE Task Force update – Mark Nowell
- Task Force review closes on May 1.
- Task Force will meet in May at the interim meeting in Pittsburgh, PA, USA. This Task Force will meet at the end of the week. Meeting will start on Wednesday afternoon and run through Friday afternoon. Plan travel accordingly.

- Presentation requests are due May 8. Presentations are due on May 12. Mark will prioritize contributions focusing on comments against D1.0 and BTI.

P802.by D0.1 editorial update – Matt Brown
See http://www.ieee802.org/3/by/public/adhoc/architecture/agenda_041515_25GE_adhoc-v2.pdf
- Draft 1.0 Ballot is currently open. Closes on May 1, end of day, AOE.
- Please send comments prior to the closure, if possible. This enables the editorial team to review and prepare responses in a timely manner.
- Reviewed items requiring work and consensus building. One new item on module automatic CTLE operation.

Presentation #1:
"Draft Informal Communication to SFF", Dan Dove
See http://www.ieee802.org/3/by/public/adhoc/architecture/dove_042915_25GE_adhoc.pdf
- Original goal of the Informal Communication (IC) was to provide a specific recommendation to the SFF committee. However, there was an assumption that there was an obvious implementation choice. This was not the case after the peer review. The IC is now a generic invitation to work with the SFF committee to find a solution.
- The IC will be reviewed again at the interim meeting.
- Discussed reference to copper cable types and the allowance of AOC. Mark Nowell noted that AOC was considered outside the scope of the Ethernet Standard.

Presentation #2:
"RS-FEC LPI signaling", Adee Ran
See http://www.ieee802.org/3/by/public/adhoc/architecture/ran_042915_25GE_adhoc.pdf
- Reviewed the proposed change to the invert groups of 7 bits in the 56 bits that hold the payload
- Scrambling is not currently used to enable quickly lock during fast wake. Intended to be a better alternative to the Rapid Alignment Markers. Reviewed the editorial details necessary to facilitate the change.
- The 802.3bj mechanism is different and not subject to this change.
- Discussed the use of systematic scrambling with a known sequence providing a sufficiently predictable signal for locking. Received related comment that transcoding made this difficult. The transition density problem is only partially addressed with this proposal.
- It was not stated earlier but the duration of the pattern is ~1 us.

Presentation #3:
"MTTFPA considerations for 25GbE no FEC mode", Phil Sun
See http://www.ieee802.org/3/by/public/adhoc/architecture/sun_042915_25GE_adhoc.pdf
- Reviewed the background and assumptions for the MTTFPA calculation
- Received comment that the estimation on slide 14 also applies to Cl 72 10GBASE-KR. Discussed the aspect that may or may not make that comment valid.
- There was a request to clarify bits vs. bytes in the presentation.

- Reviewed the potential option to improve MTTFPA by adding a length check in the PCS.
- Discussed the DFE coefficient constraints and the COM observations made in mellitz_040815_25GE_adhoc.pdf.

Presentation #4:
"CTLE Enhancements for 25G_AUI", Gary Nicholl
See http://www.ieee802.org/3/by/public/adhoc/architecture/nicholl_042915_25GE_adhoc.pdf
- Gary noted that the intent of the presentation is to raise awareness of the adaptive CTLE concept.
- Reviewed current CAUI-4 C2M CTLE equalization procedure.
    o CTLE eq assumed to be fixed over time
    o Required to be written into module by host
    o Requires each CAUI-4 lane on a line card be characterized w/ test eq.
- Reviewed potential sources of error in the characterization and implementation elements that could impact performance when using the fixed CTLE setting.
- Gary noted that OIF is specifying adaptive CTLE for 56G.

Next ad hoc meeting will be May 6.

The ad hoc meeting ended at 10:00 a.m. Pacific.

List of attendees (captured from Webex tool)

Name	company
Adam Healey	avagotech
Adee Ran	intel
Adrian Butter	us.ibm
Ali Ghiasi	independent
Andre Szczepanek	inphi
anil	brocade
Brian Schuette (Arista Networks)	arista
Carlo Tosetti (Cisco)	cisco
Cedrik Begin	cisco
Chris DiMinico	MC Communications
Chris Roth (Molex)	molex
Dale Murray	lightcounting
Dan Cunningham (Arista)	arista
Dan Dove	Qlogic
Dave Warren	hp
David Malicoat	hp
Don Cober (CoMira)	comira-inc
Doug Coleman	corning
Duane Remein	huawei

Eric Baden (Broadcom)	broadcom
Gary Nicholl	cisco
George Zimmerman	Commscope & Aquantia
Gianpiero	cisco
Gordon Wiegand	mmm
Greg D Le Cheminant	keysight
hfrazier	broadcom
Ingvar Froroth	marvell
Jacky Chang	hp
Jeff	avagotech
Jeff H	ranovus
Jeffery Maki	juniper
Jing Fang	marvell
John	vitesse
John D	Dell
jonathan king	finisar
Juan-Carlos Calderon	inphi
Kenneth Jackson	sei-device
Kent Lusted (Intel)	intel
Madhavi	barefootnetworks
Marc Dupuis	molex
Marco	cisco
Mark Gravel	hp
Mark Nowell	cisco
Mark Pilip	ezchip
Matt Brown	apm
Megha Shanbhag	te
Mike Andrewartha (Microsoft)	microsoft
Mike Dudek	qlogic
Nathan Tracy	te
Omer Sella	mellanox
Paul Kolesar	commscope
Phil Sun	marvell
Piers	mellanox
Pirooz Tooyserkani	cisco
Randy k Rannow	independent
Remy Chang	barefootnetworks
Rich Mellitz (Intel)	intel
Rick Rabinovich	alcatel-lucent
Rita Horner	synopsys
rob stone	broadcom

Ryan Latchman	macom
salvatore rotolo	st
sambasivan	labs.att
Scott Kipp	brocade
Susan Bueti	us.ibm
Tom Palkert	Molex
Venu B (Marvell)	marvell
Vittal Balasubramanian	dell
Wei Jiang	us.ibm
Yasuo Hidaka	us.fujitsu
Yuri Vandyshev	cisco
Zvi Rechtman	mellanox