

Minutes P802.3by 25 Gb/s Ethernet Task Force ad-hoc meeting – June 10, 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 May 13, 2015
- P802.3by Task Force Update, Mark Nowell
- P802.3by D1.1 editorial update, Matt Brown
- “Considerations for 3m no FEC cable assembly ”, Adee Ran and Chris Diminico
- “Cable Assembly TP1-TP4 Loss Budget Proposals, 3 Meter - no FEC Consensus Building”, Megha Shanbhag
- “Proposal for DFE constraints”, Phil Sun
- Discussion

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

Meeting began at 8:04 a.m. Pacific.

Meeting began with the agenda presentation:

http://www.ieee802.org/3/by/public/adhoc/architecture/agenda_061015_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 reminded participants to mute their lines when not speaking.

Matt presented the proposed agenda. Tom Palkert asked if there was room in the agenda to review cable related presentations from the interim meeting. Matt recommended Tom bring the presentations to the next ad hoc meeting. 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.

The May 6 meeting minutes were posted shortly after the meeting. Matt Brown asked if there were objections to approving the minutes as posted. No one responded. The May 13 meeting minutes were approved by the ad hoc.

25GE Task Force update – Mark Nowell

- Task Force meeting in July at the Plenary. Meeting duration is expected to be short.
- July will continue discussion on the “3m direct attach cable with no FEC” and address comments against Draft 1.1
- Expect to request to proceed to working group ballot at the July meeting.
- July 25G TF meeting is currently scheduled to be Monday afternoon and Tuesday.

P802.by editorial update – Matt Brown

- Reviewed tentative schedule
- Reviewed items requiring work and consensus

Matt requested that participants hold off discussion on the topic until all presentations are given.

Presentation #1:

“Considerations for 3m no FEC cable assembly”, Adee Ran and Chris Diminico

See http://www.ieee802.org/3/by/public/adhoc/architecture/ran_061015_25GE_adhoc.pdf

- Reviewed prior activities on the subject
- Reviewed options to achieve 3m no FEC
- Option 1 data does not currently account for worst case corners.
- Option 2 needs details the statistical model

Presentation #2:

“Cable Assembly TP1-TP4 Loss Budget Proposals, 3 Meter - no FEC Consensus Building”, Megha Shanbhag

See http://www.ieee802.org/3/by/public/adhoc/architecture/shanbhag_061015_25GE_adhoc.pdf

- Reviewed cable type and proposed TP1-TP4 budget.
- Megha intends to provide channel contributions in the near future to assist with the COM budget analysis.
- There were questions about the feasibility of 24AWG cable diameter mated to a QSFP+ connector. The 24AWG cable is quite large in diameter and difficult to flex. Nathan Tracy noted that cable customers prefer the higher gauge (i.e. smaller diameter) cables.
- There was a request to review the proposed solution of 3m 24AWG with the end customers to determine if that solution is viable for them.
- Megha noted that COM (unchanged) does not pass with the 3m 24AWG cable.

Presentation #3:

“Proposal for DFE constraints”, Phil Sun

See http://www.ieee802.org/3/by/public/adhoc/architecture/sun_061015_25GE_adhoc.pdf

- Reviewed the probability calculation details and results.
- The proposal does not require changes to the PCS.

Discussion:

Matt Brown facilitate the discussion on the 3m no FEC case. Adee Ran displayed “Considerations for consensus building” (see slide 4 of http://www.ieee802.org/3/by/public/adhoc/architecture/ran_061015_25GE_adhoc.pdf). Discussion included:

- Mid-mounted L2/L3 device that exits the rear of a hooded rack requires ~2.9m to a partner. 2m does not reach. No FEC is desired for lower latency and lower power.
- Mark Nowell noted that there was a contribution from Brad Booth and Mike Andrewartha that outlined the need for the no FEC case.
- There is a need for 3m cables and there is a need for no-FEC. Need to figure out how to decouple them.
- There was a request for a table with latency, power, and reach to enable a data driven decision. Adee agreed to bring some data.
- The statistical option penalizes customers with tight control of components and link elements. The 100G spec already exists and products are fielded.
- Mark Nowell noted that there is an opportunity to explore the assumptions to identify areas for improvement.
- Mark Nowell noted that option 3 potentially impacts accepted schedule.
- Joel Goergen volunteered to work with Mike Dudek to bring data on option 3.
- Mike Dudek agreed to explore option 2 and bring a contribution.

Next ad hoc meeting will be June 17.

The ad hoc meeting ended at 9:36a.m. Pacific.

List of attendees (captured from Webex tool)

| Name | company |
|-------------------------|----------------|
| Adam Healey | avagotech |
| Adee Ran | intel |
| Adrian Butter | us.ibm |
| Ali Ghiasi | not available |
| Andre | inphi |
| Arthur Marris (Cadence) | cadence |
| Chris Roth (Molex) | molex |
| dan dillow (FCI) | fci |
| Daniel Koehler | morethanip |
| Dave Estes - Spirent | spirent |
| David Chalupsky (Intel) | intel |
| David Malicoat | hp |
| Derek Cassidy | bt |

| Name | company |
|-----------------------------------|------------------|
| Don Cober (CoMira) | comira-inc |
| Duane Remein | huawei |
| Erdem Matoglu | amphenol-tcs |
| Geoffrey Chacon (HP) | hp |
| Ghani Abbas | ericsson |
| Ingvar Froroth | marvell |
| Jacky Chang | hp |
| Jay Diepenbrock | loromamerica |
| Jeffery Maki | juniper |
| Jing Fang | marvell |
| Joel Goergen | cisco |
| Juan-Carlos Calderon | inphi |
| kenghua(hp) | hp |
| Kenneth Jackson | sei-device |
| Kent Lusted (Intel) | intel |
| Madhavi Rajan (Barefoot Networks) | barefootnetworks |
| Marco | cisco |
| Mark Gravel | hp |
| Mark Gustlin | xilinx |
| Mark Nowell | cisco |
| martin white | caviumnetworks |
| Matt Brown | apm |
| Megha Shanbhag | te |
| Mike Andrewartha (Microsoft) | microsoft |
| Mike Dudek | qlogic |
| Nathan Tracy | te |
| Oded Wertheim | mellanox |
| Peter Anslow | ciena |
| Phil Sun | marvell |
| Phong Pham | usconec |
| Piers | mellanox |
| Pirooz Tooyserkani | cisco |
| Randy k Rannow | not available |
| Ray | cisco |
| Rich Mellitz (Intel) | intel |
| Rick Rabinovich | alcatel-lucent |
| Rita Horner | synopsys |
| Rob Stone | broadcom |
| Ron | jae |
| Scott Irwin | mosys |

| Name | company |
|------------------------|----------------|
| Scott Kipp | brocade |
| Scott Sommers | molex |
| Tom Palkert | visi |
| upen | cisco |
| Vittal Balasubramanian | dell |
| Yasuo Hidaka | us.fujitsu |
| Yong Kim (Broadcom) | broadcom |
| Zvi Rechtman | mellanox |