P802.3by 25 Gb/s Ethernet Task Force and 50G/100G/200G Study Groups Joint Ad Hoc meeting – December 2, 2015

Prepared by Kent Lusted

Proposed Agenda:

- · Approval of the Agenda
- IEEE patent policy reminder (see http://www.ieee802.org/3/patent.html)
- P802.3by Task Force Ad hoc
 - Approval of draft minutes for November 4, 2015
 - P802.3by Task Force Update, Mark Nowell
 - o D3.0 editorial update, Matt Brown
 - o "RITT consensus building report", Adee Ran
 - o "Revised rise-time filter for COM interference tolerance calibration", Mike Dudek
 - "Considerations for 802.3by Sponsor ballot open issues", Joel Goergen
- 50G/100G/200G Study Groups
 - "50 Gb/s Ethernet Over a Single Lane and Next Generation 100 Gb/s & 200 Gb/s Ethernet
 Study Group: status and work", Mark Nowell
 - o "802.3bs project documentation consideration", John D'Ambrosia

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

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

This is the first joint ad hoc meeting of the P802.3by 25G Task Force and the 50G Study Group and 100G/200G Study Group.

Meeting began with the agenda presentation:

http://www.ieee802.org/3/by/public/adhoc/architecture/agenda_120215_25GE_adhoc.pdf

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 and reviewed the steps to unmute.

Matt Brown showed the links to the P802.3by ad hoc page and the email reflector. The 50G/100G/200G SG ad hoc information is in progress; announcements will be made to the 802.3 dialog reflector.

Matt presented the proposed agenda. 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.

P802.3by 25G TF Agenda Items

Note: The link to the P802.3by 25G Task Force architecture ad hoc website is: http://www.ieee802.org/3/by/public/adhoc/architecture/index.html

P802.3by ad hoc minutes

The November 4 meeting minutes for P802.3by ad hoc were posted on the website. Matt asked if there were any objections to approving the posted minutes. No one responded. The November 4 meeting minutes were approved by the ad hoc.

P802.3by 25GE Task Force update – Mark Nowell

- At the November plenary, received approval to move to Sponsor Ballot.
- Sponsor Ballot is open. Closes December 24, 2015. See email sent to the reflector for more information.
- January meeting will focus on comment resolution on draft 3.0.
- There are a few big ticket topics for consideration at the January interim.
- Current preliminary schedule for the January interim is for the 25G TF to meet on Monday and Tuesday.
- There is a possibility of a joint Study Groups/P802.3bs meeting on Friday morning of the January interim.

P802.3by D3.0 editorial update - Matt Brown

- Reviewed the tentative editorial schedule.
- Reviewed the current hot topics

P802.3by Presentation #1:

"RITT consensus building report", Adee Ran

See http://www.ieee802.org/3/by/public/adhoc/architecture/ran_120215_25GE_adhoc.pdf

- Reviewed items in discussion
- Contact Adee Ran to join the ad hoc meeting.

The order of the Mike Dudek and the Joel Goergen presentations were swapped due to technical difficulties. No one objected.

P802.3by Presentation #2:

"Considerations for 802.3by Sponsor ballot open issues", Joel Goergen

See http://www.ieee802.org/3/by/public/adhoc/architecture/goergen_120215_25GE_adhoc.pdf

- Reviewed the options for the 3m cable
- Joel noted that he separated the cable and PHY designation into 2 topics; however, they are related.
- Yasuo Hidaka asked Joel to update slide 10 to note that the proposal was made by him, not Fujitsu.
 Mark Nowell noted that contributions are made by individuals.

- AR: Joel Goergen to update with goergen_120215_25GE_adhoc-v2
- Mark Nowell noted that he, as Chair, asked Joel and Vineet to provide a contribution to initiate the
 discussions on the open issues in order to facilitate consensus position happening before January
 interim meeting

Matt Brown cut off the Q&A on presentation #2 due to time constraints.

P802.3by Presentation #3:

"Revised rise-time filter for COM interference tolerance calibration", Mike Dudek
See http://www.ieee802.org/3/by/public/adhoc/architecture/dudek_120215_25GE_adhoc.pdf

- Mike Dudek noted that the rise time simulations on slide 12 and subsequent slides assumed PRBS9
- Discussed the impact of the fast rise time on the COM margin.
- Mike Dudek noted that much detail is included in the backup section of the presentation.

Matt Brown cut off the Q&A on presentation #3 due to time constraints.

Mark Nowell noted that the joint meeting will transition to the 50G/100G/200G Study Groups agenda.

50G/100G/200G Study Groups Agenda Items

Note: The links to the two Study Group ad hoc websites are:

http://www.ieee802.org/3/50G/index.html 50Gb/s Ethernet Study Group

http://www.ieee802.org/3/NGOATH/index.html Next Generation 100 Gb/s & 200Gb/s Ethernet Study Group

Mark Nowell, as acting Chair of the Study Groups, welcomed participants to the joint meeting.

50G/100G/200G SG Presentation #1:

"50 Gb/s Ethernet Over a Single Lane and Next Generation 100 Gb/s & 200 Gb/s Ethernet Study Group: status and work", Mark Nowell

See http://www.ieee802.org/3/50G/public/adhoc/archive/nowell_120215_50GE_NGOATH_adhoc.pdf

- Reviewed the CFI key points from the November Plenary meeting.
- Mark noted that he intends to run the 50G Study Group and 100G/200G Study Group meetings jointly, where possible.
- Reviewed a few potential scenarios to progress to Task Force. Discussed potential schedule implications on P802.3bs, if some work moves into that project.
- Mark Nowell announced the chair of the two Study Group ad hocs to be Kent Lusted.
- Discussed the 2km SMF proposed objective vs. 10km. Peter Stassar offered to bring a proposal for 10km SMF to the next ad hoc meeting. Need to coordinate SMF reach with the 25G SMF study group.
- Mark Nowell noted that the "multi-lane implementation" term is a placeholder for the breakout cable case or the 200G cable case – goal is to enable a single-lane project to analyze multi-lane technical considerations.
- Discussed the addition of backplane to the 100G/200G objectives.
- Mark noted that the study group needs contributions to support the case for any objectives.
- Reviewed some strawman responses for the CSD. Key takeaway is that there don't seem to be any big issues.
- Reviewed future work for the two study groups.

Kent Lusted asked participants to hold further questions until after the next presentation.

50G/100G/200G SG Presentation #2:

"802.3bs project documentation consideration", John D'Ambrosia

http://www.ieee802.org/3/50G/public/adhoc/archive/dambrosia 120215 50GE NGOATH adhoc.pdf

- AR: John D'Ambrosia to update presentation to "dambrosia_120215_50GE_NGOATH_adhoc-v2" to add SMF to slide 21
- Reviewed the proposed changes to the P802.3bs CSDs.
- John noted that the schedule impact of adding 100G and 200G would be at the consideration of the P802.3bs Task Force.
- Mark and John will continue to work on pathfinding. John D'Ambrosia noted that any potential impact to the P802.3bs project will be reviewed with David Law

Kent Lusted noted that the next joint ad hoc meeting will be on 9 December.

The ad hoc meeting ended at 10:01 a.m. Pacific.

List of attendees (captured from Webex tool)

| Name | company |
|--------------------------|------------------|
| Adam Healey | avagotech |
| Adee Ran | intel |
| Ali Ghiasi | gmail |
| Amrik | cisco |
| Andy Moorwood | ericsson |
| anil | brocade |
| Arvind Srinivasan | oracle |
| Aviran Kadosh | n/a |
| Brian Teipen | advaoptical |
| chris diminico | n/a |
| Chris Roth (Molex) | molex |
| Dale Murray | lightcounting |
| Dan Cunningham | arista |
| dan dillow (FCI) | fci |
| Dan Sparacin | aurrion |
| Dave Lewis | jdsu |
| david chalupsky (intel) | intel |
| David Malicoat | hpe |
| David Vieira | broadcom |
| Derek Cassidy | n/a |
| Dino Pozzebon | pmcs |
| Ed Ulrichs | sourcephotonics |
| Erdem Matoglu - Amphenol | amphenol-tcs |
| Eric Baden (Broadcom) | broadcom |
| Flavio Marques | furukawa.co |
| gary nicholl | cisco |
| Geoffrey Chacon | hpe |
| George Zimmerman | cmephyconsulting |
| | amphenol- |
| Greg McSorley | highspeed |
| Henry Chen | broadcom |
| Jacky Chang | hpe |
| James Fife | etopus |

| Jeff H | n/a |
|-----------------------|----------------|
| Jeffery Maki | juniper |
| jgoergen | cisco |
| JIM NADOLNY | samtec |
| Jing Fang | marvell |
| john | avagotech |
| John DAmbrosia | n/a |
| John Dillard | microsemi |
| John Nelson | arista |
| Juan-Carlos Calderon | inphi |
| Justin Abbott | lumentum |
| Ken Van Orman | spirent |
| Kenneth Jackson | sei-device |
| kent lusted (intel) | intel |
| Kohichi | oclaro |
| Marc Dupuis | molex |
| Mark Gravel | hp |
| Mark Jones | xtera |
| Mark Nowell | cisco |
| Mark Pilip | ezchip |
| martin white | caviumnetworks |
| mbrown | apm |
| Megha Shanbhag | te |
| Mike Andrewartha | |
| (Microsoft) | microsoft |
| Mike Dudek | qlogic |
| Mike Li | altera |
| Nathan Tracy | te |
| OdedW | mellanox |
| Patrick Casher | loromamerica |
| Paul Mooney | spirent |
| Peter Anslow | ciena |
| Peter Jones | cisco |
| Peter Stassar | huawei |
| Phil Sun | marvell |
| Piers | mellanox |
| Qing Xu | belden |
| Rajiv Pancholy | broadcom |
| Randy k Rannow (APIC) | n/a |
| Rich Mellitz (Intel) | intel |
| | |

| Rick Pimpinella | panduit |
|------------------------|----------------|
| Rick Rabinovich | alcatel-lucent |
| Rita Horner | synopsys |
| Rob Stone | broadcom |
| Ron Muir | jae |
| Rui Zhang | loromamerica |
| salvatore rotolo | st |
| sam sambasivan | labs.att |
| Scott Irwin | mosys |
| Scott Kipp | brocade |
| Scott Sommers | molex |
| steve sekel (keysight) | keysight |
| Steve Trowbridge | alcatel-lucent |
| Tom McDermott | us.fujitsu |
| Tom Palkert | visi |
| Upendranadh Kareti | cisco |
| Vasu | broadcom |
| Venu B | marvell |
| Vittal | dell |
| Xinyuan Wang | huawei |
| Yasuo Hidaka | us.fujitsu |
| Yuri Vandyshev | cisco |
| Zvi Rechtman | mellanox |