

P802.3by 25 Gb/s Ethernet Task Force and 50G/100G/200G Study Groups Joint Ad Hoc meeting – February 17, 2016

Prepared by Kent Lusted

Proposed Agenda:

- Approval of the Agenda
- IEEE patent policy reminder:
 - 25G TF: <http://www.ieee802.org/3/patent.html>
 - 50G & NGOATH: <https://development.standards.ieee.org/myproject/Public/mytools/mob/preparslides.pdf>
- Approval of draft minutes for February 10, 2016
- P802.3by 25G Ad Hoc – Matt Brown
 - Task for force update
 - “Closing the Pmax to Vf Ratio budget hole”, Mike Dudek
 - “measurement of Tx specs and alignment with COM”, Adee Ran
- 50GE & NGOATH Study Groups Ad Hoc – Kent Lusted
 - Study Group Update, Mark Nowell
 - “Backplane Channels: BGA ball to BGA ball with manufacturing considerations.”, Rich Mellitz
 - “PCS consideration for 50 GbE and NG 100 GbE”, Ali Ghiasi
 - “Compatibility Considerations for 50 and 100G - revisited”, Rob Stone

Presentations posted at: <http://www.ieee802.org/3/by/public/adhoc/architecture/index.html> or <http://www.ieee802.org/3/50G/public/adhoc/archive/index.html>

Meeting began at 8:02 a.m. Pacific by Kent Lusted.

Meeting began with the agenda presentation:

http://www.ieee802.org/3/50G/public/adhoc/archive/agenda_021716_25GE_50GE_NGOATH_adhoc.pdf

Kent Lusted reviewed the Attendance information related to the ad hoc. He reminded participants to indicate full names and employer/affiliation correctly for the meeting minutes. He reminded participants to mute their lines when not speaking and reviewed the steps to unmute.

Kent Lusted showed the links to the 25G ad hoc page and the email reflector.

Kent Lusted showed the links to the 50G and NGOATH ad hoc page and the email reflector.

Kent presented the proposed agenda and asked if there was objection as written. No one responded. The agenda was approved by the ad hoc.

Kent reminded participants of the IEEE patent policy.

Ad hoc minutes

The February 10 meeting minutes for joint ad hoc were posted on the website. Kent asked if there were any objections to approving the posted minutes. No one responded. Minutes approved.

Kent Lusted passed the ad hoc call chair to Matt Brown.

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>

Matt Brown reviewed the agenda for the TF portion.

Task Force Update – Mark Nowell:

- First recirculation is in progress. Closes 25 February.
- For people not participating in the Sponsor Ballot, comments may be sent by email. Details at <http://www.ieee802.org/3/25GSG/email/msg00517.html>.
- Next meeting during plenary week. Schedule sent via email reflector. Start 8am on Monday morning.

Matt Brown stated that 20 minutes were allocated to each presentation and 5 to 10 minutes discussion would follow.

P802.3by Presentation #1:

“Closing the Pmax to Vf Ratio budget hole”, Mike Dudek

See: http://www.ieee802.org/3/by/public/adhoc/architecture/dudek_021716_25GE_adhoc.pdf

- Mike noted that there was substantial new material from last week.
- There were questions about the value of Vf used on slide 16.

P802.3by Presentation #2:

“Measurement of Tx specs and alignment with COM”, Adee Ran

See: http://www.ieee802.org/3/by/public/adhoc/architecture/ran_021716_25GE_adhoc.pdf

- It was noted that page 5 data uses the PRBS9 pattern per the specification.
- Discussed transition time assumptions. Author noted that it is possible to make a TX faster than the pattern generator used.
- Discussed potential impacts of changing SNRtx to a larger value.

Matt noted that due to teleconferencing problems during Presentation #2 that there was insufficient time for a general discussion. Matt will allocate time at the next ad hoc meeting.

Matt Brown passed Chair to Kent Lusted

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

Note: The 50G/100G/200G Study Group update started while trying to resolve teleconferencing issues with the second 25G presentation. Upon resolving the presenter's audio issues, the second 25G presentation resumed and then 50G/100G/200G Study Group update finished. However, the agenda item is listed here in a single location for reading ease.

Study Group Update, Mark Nowell:

- Study Groups are meeting in March in Macao. Meet Wednesday and Thursday. May use Tuesday, depending on the number of presentations.
- Presentations should focus on supporting project documentation, including the P802.3bs PAR modification.
- Mark discussed the tentative meeting map and schedule overlaps.
- The Thursday session for P802.3bs would be to facilitate changes to P802.3bs based on the Study Groups actions for 200G SMF related objectives.

Kent Lusted stated that 15 minutes were allocated to each presentation.

50G & NGOATH SG Presentation #1:

"Backplane Channels: BGA ball to BGA ball with manufacturing considerations.", Rich Mellitz

See: http://www.ieee802.org/3/50G/public/adhoc/archive/mellitz_021716_50GE_NGOATH_adhoc.pdf

- It was noted that the material loss assumptions are listed on slide 2.
- Discussed connector length assumptions. Rich offered to collaborate with connector vendors on a proposal.
- Kent Lusted noted that the channels will be posted to the website.
- Mark Nowell asked participants to work on building consensus on the reach objective. The adopted copper backplane objective is not sufficient for Working Group consideration.

50G & NGOATH SG Presentation #2:

"PCS consideration for 50 GbE and NG 100 GbE", Ali Ghiasi

See: http://www.ieee802.org/3/50G/public/adhoc/archive/ghiasi_021716_50GE_NGOATH_adhoc-v2.pdf

- Noted error on slide 4. Author to send Updated ppt 'v2'

Kent Lusted asked participants to hold questions to the end of the next presentation related to backwards compatibility.

Next ad hoc meeting is 24 February 2016.

50G & NGOATH SG Presentation #3:

"Compatibility Considerations for 50 and 100G - revisited", Rob Stone

See: http://www.ieee802.org/3/50G/public/adhoc/archive/stone_021716_50GE_NGOATH_adhoc-v2.pdf

- Noted error of "50GAUI-2" on slide 4. Author to send updated presentation 'v2'

- There were questions regarding the use and impact of the bit mux implied on slide 5.
- There was concern expressed that the existing 2x25G PCS specification is not in the public domain.

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

List of attendees (captured from Webex tool)

Name	company
Adee Ran	intel
Adrian Butter	globalfoundries
Ali Ghiasi	n/a
Andre Szczepanek	inphi
Andy Moorwood	ericsson
Andy Zambell (AFCI)	AFCI
Arthur Marris (Cadence)	cadence
Bharat Tailor	semtech
Bipin D. Dama	cisco
Chris Cole	finisar
chris diminico	n/a
Chris Roth (Molex)	molex
Dale Murray - LightCounting	lightcounting
Daniel Koehler	morethanip
David Law	hpe
David Malicoat	hpe
David Ofelt	juniper
Ed Ulrichs	sourcephotronics
Eric Baden (Broadcom)	broadcom
Fernando De Bernardinis (Marvell)	marvell
Flavio Marques	furukawa.co
Gary Nicholl	cisco
Geoffrey Chacon	hpe
George Zimmerman	cmephyconsulting
Greg LeCheminant	keysight
Greg McSorley(Amphenol)	amphenol-highspeed
Hyun Choi	nvidia
Jack Dawson	netronome
Jason Ellison	n/a
Jeff H	n/a
Jeff Slavick	broadcom
Jeffery Maki	juniper
Jing Fang	marvell
John DAmbrosia	FutureWei
John Dillard	microsemi
John Ewen	globalfoundries
John Nelson (Arista)	arista

Juan-Carlos Calderon	inphi
Kapil Shrikhande	n/a
kent lusted (intel)	intel
Marco	cisco
Mark Gravel	hp
Mark Gustlin	xilinx
Mark Nowell	cisco
Matt Brown (APM)	apm
Megha Shanbhag	te
Mike Dudek	qlogic
Mike Li	altera
Nathan Tracy	te
ofelt@juniper.net	juniper
Oran Gafni	intel
Paul Mooney	spirent
Peter Anslow	ciena
Peter Stassar	huawei
Phil Sun	credosemi
Piers	mellanox
Qing Xu	belden
Raj Hegde	broadcom
ramin farjad	aquantia
Randy k Rannow (APIC)	APIC
Rich Mellitz	intel
Rick Pimpinella	panduit
Rick Rabinovich	ixiacom
Rita Horner	synopsys
Rob Stone	broadcom
Ryan Latchman	macom
Scott Irwin	mosys
Scott Kipp	brocade
scott sommers	molex
stefano valle	st
steve sekel (keysight)	keysight
Steve Swanson	corning
Tao Hu	qlogic
Thananya	ixiacom
Tom Issenhuth	microsoft
Tom Palkert	visi
Tongtong Wang	huawei

Upen	cisco
Vasu	broadcom
Vipul Bhatt	inphi
Vittal	dell
Wheling Cheng	ericsson
will bliss	broadcom
Yasuo Hidaka	us.fujitsu
yizhaoping	h3c
Yong Kim (Broadcom Ltd)	broadcom
Zhenyu Liu	credosemi
Zvi Rechtman	mellanox