### Minutes

# IEEE P802.3cu 100 Gb/s and 400 Gb/s over SMF at 100 Gb/s per Wavelength Task Force Interim Meeting

September 22, 2020

Teleconference

Prepared by Kenneth Jackson and Mark Nowell

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## IEEE P802.3cu 100 Gb/s and 400 Gb/s over SMF at 100 Gb/s per Wavelength Task Force Ad Hoc Meeting – September 22, 2020

Prepared by Kenneth Jackson

Meeting convened at 2:02PM (GMT) 7:02AM (Pacific) Chaired by Mark Nowell.

Chair reviewed agenda in

http://grouper.ieee.org/groups/802/3/cu/public/Sept20/agenda\_3cu\_01\_092220.pdf Chair showed the agenda. Chair asked if there were any modifications to the agenda?

Approved by voice without opposition

Minutes from the previous interim meeting (September 15) were posted shortly after the meeting. A minor change was made immediately after posting. Chair asked if there were any changes needed to the minutes since the last change (and posted)?

Minutes approved by voice without opposition.

Chair reminded the Task Force of the IEEE policies.

- Attendance is captured through the Webex tool. Participants are requested to log-in with both their <u>name and affiliation</u> details in the Name Field. Missing affiliations will be filled in before posting minutes based on previous affiliations provided in earlier meetings. Participants are encouraged to review the minutes to ensure correct information is included.
- Patent Policy reviewed. Call for patents at 7:06AM (Pacfic). No patents noted.
- IEEE SA Copyright Policy
- IEEE SA Participation Policy

#### http://ieee802.org/3/policies.html

Goals for this series of meetings:

- Resolve comments received against D3.0
  - Review any technical contributions (including proposals aimed towards spec changes)

Chair showed timeline. Chair indicated Rev Comm submittal date (Dec 11, 2020). Chair noted intent to submit conditional approval in November.

Chair showed the remaining meetings schedule. Chair showed today's contributions.

Presentation #1: "P802.3cu D3.0 Comment Resolution Agenda" Gary Nicholl See http://grouper.ieee.org/groups/802/3/cu/public/Sept20/nicholl 3cu 01 092220.pdf

- Reminded participants of the comment review process
- Status for today's meeting
  - Reviewed 2 presentations on Sept 15 conf call:
    - lewis\_01a\_091520, chuang\_01a\_091520
  - 9 comments closed, 42 comments still to be closed (excluding bucket)
  - Bucket list:
    - 41 comments in the bucket
    - Deadline for requesting comments to be removed from the bucket has been extended to the Sept 29 interim conference call.
- Gary presented plan for comment resolution and indicated supporting presentations (slide 7)

## Presentation #2: "Update on 100GBASE-FR1 and 100GBASE-LR1 Wavelength Range Relaxation", Roman Chuang

**See** <a href="http://grouper.ieee.org/groups/802/3/cu/public/Sept20/chuang\_3cu\_01\_092220.pdf">http://grouper.ieee.org/groups/802/3/cu/public/Sept20/chuang\_3cu\_01\_092220.pdf</a> Continuation of Sept 15 presentation.

- Author addresses questions that arose from the last meeting
  - Assessment of the overall impact to the document
  - Can the same TDECQ and Tx OMA be used with the extended wavelength range? Review the impact on optical link budget.
  - Impact to implementations that use grating couplers.

## Presentation #3: "Concerns with Increasing the Wavelength Range for 100GBaseFR1/LR1", Brian Welch

See <a href="http://grouper.ieee.org/groups/802/3/cu/public/Sept20/welch\_3cu\_01a\_092220.pdf">http://grouper.ieee.org/groups/802/3/cu/public/Sept20/welch\_3cu\_01a\_092220.pdf</a>
Author considered the following:

- Interoperability with 100GBASE-DR, 400GBASE-DR4
- Wavelength Sensitivity of Optical Receivers
- Transmitter Performance
- Market Requirements/Trends

#### Straw poll:

Do you support changing the "Wavelength (range)" for 100GBASE-FR1 and 100GBASE-LR1 from "1304.5 to 1317.5" to "1300 to 1320?

Yes: 6 No: 27 Abstain: 11

Comment resolution began: Comment I-60, I-61, I-62, I-87

## Presentation #4: "In support of comment I-95 to change average launch power max ", Roberto Rhodes

See <a href="http://grouper.ieee.org/groups/802/3/cu/public/Sept20/rodes\_3cu\_01\_092220.pdf">http://grouper.ieee.org/groups/802/3/cu/public/Sept20/rodes\_3cu\_01\_092220.pdf</a>

- Author recommends increasing Average launch power max spec to 0.7 dB higher than Outer Optical Modulation Amplitude max spec: 4.4dB for FR4 and 5.1dB on LR4-6
- Authors claim this change:
  - Allows transmitter to meet OMA max spec by lowering the ER up to 4 dB
  - Allows full Tx OMA range with ER > 4dB

- Does not affect Receiver overload
- Aligns power levels on IEEE LR4-6 with LR4 in 100G Lambda MSA
- Reduces cost by enabling uncooled, high-yield PMD implementation

#### Presentation #5: "In support of I-87 proposed resolution", David Lewis

See <a href="http://grouper.ieee.org/groups/802/3/cu/public/Sept20/lewis-3cu-01-092220.pdf">http://grouper.ieee.org/groups/802/3/cu/public/Sept20/lewis-3cu-01-092220.pdf</a>

 Reviewed proposed changes to resolve comment I-87 on including references versus duplicating material in draft

=>Comment Resolution resumed

Chair adjourned the meeting at 9:02AM (Pacific)

#### **Attendees**

(Taken from Webex Attendance- Affiliations we're not captured by Webex tool this time so affiliations have been entered manually based on previous minutes. Please let Chair or Recording Secretary know if any modifications are needed)

Alex Haser [Molex]	molex
Ali Ghiasi	Ghiasi Quantum
Allan Zhang	molex
Bo Zhang	inphi
BRIAN WELCH	cisco
Chan Chih (David) Chen [AOI]	ao-inc
david malicoat (Independent / Senko)	independent/Senko
David Piehler [Dell]	dell
Dino Pozzebon	microchip
DREW GUCKENBERGER	cisco
Earl Parsons [CommScope]	commscope
Ed Ulrichs	intel
Eric Maniloff (Ciena)	ciena
Frank Chang	Source photonics

Gary Nicholl (Cisco)	cisco
Gianpiero Bognanni	Innolight
Greg D Le Cheminant	keysight
guangcan mi /huawei	huawei
Hao Ren (Huawei)	huawei
Hideki Isono (FOC)	jp.fujitsu
Inho Kim	marvell
jeff Hutchins Ranovus	ranovus
Jeffery Maki [Juniper]	juniper
Jim Theodoras (HG Genuine)	genuine-opto
Jodi Haasz	ieee
John D'Ambrosia	Futurewei
John DeAndrea, II-VI Inc	finisar
John S Abbott(Corning)	corning
Kangmin Hu	broadcom
Kenneth Jackson (Sumitomo)	sei-device
KT Tsai	molex
Lemon_geng (huawei)	huawei
Leon Bruckman (Huawei)	huawei
Marco Mazzini	cisco
Marco Vitali (Sicoya) (Guest)	sicoya
Mark Kimber	semtech
Mark Nowell	cisco
Massimo Sorbara [GlobalFoundries]	globalfoundries
Michael Takefman	inphi
Mike Dudek	marvell
Nathan Tracy (TE)	te
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Peter Stassar	huawei
Phil Sun	credosemi
Phong Pham	charter
Piers Dawe [Nvidia]	nvidia
Qing Xu (Ranovus)	ranovus
Rajesh Radhamohan	broadcom
RICARDO RABINOVICH	keysight
roberto.rodes	finisar
roman chuang	molex
Ruoxu Wang(Huawei)	huawei
Scott Sommers	molex
Seat2 802Webex	gmail
Shimon	Axalume
Steve Trowbridge [Nokia]	nokia
Steven E Swanson	corning
Takeo Masuda	oitda
Tedros Tsegaye [Innolight]	innolight
Thomas Palkert	МАСОМ
Tom Huber [Nokia]	nokia
Tom Issenhuth	Huawei
Vince Ferretti Corning	corning
Vipul Bhatt (II-VI)	finisar
Xiang He (Huawei)	huawei
Xinyuan Wang (Huawei)	huawei
Yoshiaki Sone (NTT)	NTT