

Unapproved Minutes
IEEE 802.3 100 Gb/s Wavelength Short Reach PHYs Study Group Ad Hoc Meeting

WebEx Meeting

March 26, 2020

Prepared by Mabud Choudhury

Group Name: IEEE 802.3 100 Gb/s Wavelength Short Reach PHYs Study Group

Date/Location: Thursday, March 26, 2020. WebEx meeting.

Chair: Robert Lingle, Jr, affiliated with OFS

Recording Secretary: Mabud Choudhury, affiliated with OFS

Meeting Participants: Attendance is listed in Appendix A (37 attendees)

Call to order:

IEEE 802.3 100 Gb/s Wavelength Short Reach PHYs (100GSR) Study Group (SG) Ad Hoc WebEx meeting was convened at 12:08 PM Eastern Daylight Time (EDT/ UTC -4), Thursday, March 26, 2020 by Robert Lingle, Jr., 100GSR SG Chair.

Mr. Lingle welcomed attendees. He noted that WebEx tool does not record attendance, and requested that each attendee indicate their name and employer/affiliation in an e-mail to the ad hoc recording secretary: Mabud Choudhury (mchoudhury@ofsoptics.com) for the meeting minutes.

Presentation #1:

Title: “Agenda, Study Group Status and Work”

Presenter: Robert Lingle, Jr. (OFS)

[linge_100GSR_adhoc_01_032620.pdf](#)

Mr. Lingle then proceeded with reviewing the **Agenda** and asked if there any modifications, additions or deletions? There were none.

The agenda was approved by the ad hoc. Approved Agenda:

- Meeting Attendance and WebEx
- Approve Agenda
- Approve February 13th ad hoc meeting minutes
- 100GSR Study Group ad hoc communications
- IEEE Patent Policy reminder:
<https://mentor.ieee.org/myproject/Public/mytools/mob/preparslides.pdf>
- IEEE SA Copyright Policy reminder: <https://standards.ieee.org/ipr/index.html>
- IEEE Participation Requirements reminder: <https://standards.ieee.org/content/dam/ieee-standards/standards/web/documents/other/Participant-BehaviorIndividual-Method.pdf>
- SG Status
- Call for Contributions for May 13th 100GSR SG Interim Teleconference
- Presentation – “Objectives for 100 Gb/s shorter-reach PMDs” David Lewis (Lumentum)
- Future Meetings

SG approved February 13, 2020 ad hoc **meeting minutes**.

Chair showed the links to the IEEE 100GSR Study Group page, ad hoc page and the email reflector.

Chair reviewed the **Guidelines for IEEE SA Meetings**, which includes IEEE patent policy for pre-PAR projects.

IEEE SA Copyright Policy: Mr. Lingle provided overview of slides 8-9 of [lingle_100GSR_adhoc_01_032620.pdf](#) entitled “IEEE SA Copyright Policy” at 12:15 PM EDT/ UTC -4.

IEEE SA Participation Policy: Mr. Lingle showed the participation policy slides 10-12 of [lingle_100GSR_adhoc_01_032620.pdf](#) .

The Chair provided links for Draft PAR, CSD and Objectives.

- [PAR](#)
- [Criteria for Standards Development](#)
- [Objectives](#)

Chair reviewed the SG approved Objectives.

The Chair then provided information for the **SG Interim Teleconference on May 13, 2020 meeting:**

- Details:
 - May 13, 2020 at 10am US Eastern Time for up to 3 hours, Webex meeting
 - Will be able to take votes by 802.3 voters (preliminary view) and conduct the business of the SG
- Goal:
 - Vote on motions for additional objectives plus potential changes to the previously adopted PAR/CSD responses
 - We need to forward our final PAR, CSD responses to the EC going into the July Plenary

There was a question about limiting voters to 802.3 voters for SG telephonic interims since for face to face interims anyone in the room (who has registered to attend 802.3 interim or plenary) can vote. Chair indicated that WG Chair David Law will provide further guidance before finalizing the voting procedure for SG telephonic interims.

Chair indicated that there are four (including current March 26 meeting) Ad Hoc calls scheduled between now and the Telephonic Interim.

Future meetings:

- Ad Hoc Meetings:
 - April 9, 2020, 12 noon – 2 pm EDT/UTC -4
 - April 23, 2020, 12 noon – 2 pm EDT/UTC -4
 - May 7, 2020, 12 noon – 2 pm EDT/UTC -4
 - Ad Hoc Call Schedule & Info: <http://www.ieee802.org/3/100GSR/public/adhoc/>
- Interim Teleconference:
 - May 13, 2020, 10 am – 1 pm EDT/UTC -4

Chair announced call for contributions for May 13th SG Interim Teleconference meeting:

- Deadlines/Topics
 - The presenter shall request time by **MONDAY, MAY 4th, 2020 11:59pm** (AoE). Requests shall be submitted by sending an email to the Chair, rlingle@ofsoptics.com
 - The presenter shall submit a PDF, soft-copy version of the presentation, by e-mailing it to the Chair, rlingle@ofsoptics.com. This shall be done by **FRIDAY, MAY 8th, 2020 11:59pm** (AoE) for publication to the IEEE 802.3 100 Gb/s Wavelength Short Reach PHYs Study Group webpage.
 - Presentations directly related to PAR, CSD and Objectives are encouraged. Contributions on other topics will only be considered after all other agenda items are completed.
- Procedure for Presenters:
<http://www.ieee802.org/3/100GSR/public/presentproc.html>

Presentation #2:

Title: “Objectives for 100 Gb/s shorter-reach PMDs”

Presenter: David Lewis (Lumentum)

[lewis_100GSR_adhoc_01_032620.pdf](#)

- Presentation proposed:
 - Add an objective for intra-rack and active cable applications
 - Define a physical layer specification that supports 100 Gb/s operation over 1 pair of MMF with lengths of up to at least 20 m
 - 940 nm VCSELs to potentially leverage volume and lower cost of 3D sensing (3DS), while factoring that a 50 Gbd PAM4 VCSEL is a different device design to the 3DS array.
 - Consider adding an interoperability objective between the 20 m and 50 m PMDs
 - Requires receivers of both to work over the superset of wavelengths and at the same power levels
- Extensive technical discussion followed.
- Topics discussed included:
 - 3DS vs. 100 Gb/s chip bandwidth
 - 940 nm vs. 980 nm
 - relative cost difference/benefit in comparison to 850 nm VCSELs
 - VCSEL bandwidth vs. spectral width
 - customer challenges with 2 PMDs and 2 fiber types
 - interoperability, upgrading over time
 - utilizing AOC-type thought process for IEEE standard
 - for slide 5, using OM5 DC for OM3/OM4
 - the importance of this type of proposal for a Study Group
 - two use cases: server-switch and switch-switch –
 - better served by one PMD or two PMDs?
 - One reach objective (50 m) or two reach objectives (<= 20 m and >50 m)?
 - 30 m vs. 50 m reach objectives
 - VCSEL cost as percentage of overall module cost
 - reach objectives based on hyperscale architectures and customer perspective
- Author welcomed feedback from the group.

The Study Group Ad Hoc meeting was adjourned at 2:00 PM EDT/ UTC -4, Thursday, March 26, 2020.

Next Meeting:

Scheduled (pending contributions) 100GSR SG ad hoc WebEx meeting for Thursday, April 9, 2020 at 12:00 noon – 2 pm EDT/UTC -4.

Appendix A: Attendees at the IEEE 802.3 100 Gb/s Wavelength Short Reach PHYs Study Group WebEx Ad Hoc Meeting, 26 March 2020.

37 individuals attended on Thursday, 26 March 2020, 12:08 PM – 2:00 PM EDT/UTC -4

	Last Name	First Name	Employer	Affiliations
1	Abbott	John	Corning	Corning
2	Akbaba	Enis	Maxim Integrated	Maxim Integrated
3	Bhatt	Vipul	II-VI	II-VI
4	Bruckman	Leon	Huawei	Huawei
5	Chen	Chan Chih (David)	AOI	AOI
6	Choudhury	Mabud	OFS	OFS
7	D'Ambrosia	John	Futurewei	Futurewei, U.S. Subsidiary of Huawei
8	Dawe	Piers	Mellanox	Mellanox
9	Ghiasi	Ali	Ghiasi Quantum	Ghiasi Quantum
10	Guedes	Marcelo	Idea Electronic Systems	Idea Electronic Systems
11	He	Xiang	Huawei	Huawei
12	Ingham	Jonathan	Broadcom	Broadcom
13	Jackson	Ken	Sumitomo Electric	Sumitomo Electric
14	Kamino	John	OFS	OFS
15	LeCheminant	Greg	Keysight Technologies	Keysight Technologies
16	Lewis	David	Lumentum	Lumentum
17	Lingle, Jr	Robert	OFS	OFS
18	Lusted	Kent	Intel	Intel
19	Malicoat	David	Malicoat Networking Solutions	Senko Advanced Components
20	Maniloff	Eric	Ciena	Ciena
21	Marques	Flávio	Furukawa Electric LatAm S.A.	Furukawa Electric LatAm S.A.
22	Mi	Guangcan	Huawei	Huawei
23	Murray	Dale	LightCounting	LightCounting
24	Nicholl	Gary	Cisco	Cisco
25	Nish	Takeshi	YEU	YEU
26	Parsons	Earl	CommScope	CommScope
27	Piehler	David	Dell Technologies	Dell Technologies
28	Sorbara	Massimo	GlobalFoundries	GlobalFoundries
29	Stassar	Peter	Huawei Technologies	Huawei Technologies

30	Summers	Robert	Maxim Integrated	Maxim Integrated
31	Swanson	Steve	Corning Incorporated	Corning Incorporated
32	Thompson	Lance	II-VI	II-VI
33	Ulrichs	Ed	Source Photonics	Source Photonics
34	Welch	Brian	Cisco	Cisco
35	Xu	Qing	Ranovus	Ranovus
36	Young	Dianna	Corning	Corning
37	Young	James	CommScope	CommScope