

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

WebEx Meeting
February 13, 2020
Prepared by Mabud Choudhury

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

Date/Location: Thursday, February 13, 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 (16 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 12:03 PM Eastern Standard Time (EST/ UTC -5), Thursday, February 13, 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)

[lingle_100GSR_adhoc_01_021320.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
- 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-Behavior-Individual-Method.pdf>
- SG Status
- Call for Contributions at Atlanta Plenary
- Presentations: "100G VCSELs with 30 m OM3 or 50 m OM4 Links" Earl Parsons (CommScope)
- Future Meetings

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 7-8 of [lingle_100GSR_adhoc_01_021320.pdf](#) entitled "IEEE SA Copyright Policy" at 12:09 PM EST/ UTC -5.

IEEE SA Participation Policy: Mr. Lingle showed the participation policy slides 8-9 of [lingle_100GSR_adhoc_01_021320.pdf](#).

Mr. Lingle covered status of 100GSR Study Group project and progress during January Geneva meeting. He covered that SG approved Draft PAR/CSD have been submitted to EC 30 days in advance of Review at March Plenary. Assuming WG approves PAR, CSD and adopted Objectives (those approved by SG in January and additional objectives, if any, adopted in March) and if both WG and EC authorize IEEE P802.3db, Task Force probably begins meeting at May Interim, and definitely by July Plenary. Mr. Lingle was very excited about getting the coveted 802.3db designation. His request to write P802.3dB (dB instead of db) have been rebuffed by the 802.3 leadership.

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 reviewed primary focus and logistics for Atlanta March Plenary SG meeting:

- Primary focus:
 - Potentially consider additional objectives for SMF, if proposals are made to the SG
 - Hear further contributions supporting the Objectives
 - Conduct comment resolution on pre-submitted PAR, CSD after receiving feedback from 802 EC
 - WG Motion to approve PAR, CSD and Objectives.
- Atlanta Plenary, Hilton Atlanta, Study Group Meeting Dates:
 - Tuesday March 17th, 2020, 13:00-18:00 Eastern Standard Time (EST, UTC-5)
 - Wednesday, March 18th, 2020, 08:00-18:00 EST/UTC-5
 - <http://schedule.802world.com/schedule/schedule/show#>

Chair indicated that four Study Groups had pre-submitted PAR/CSD to EC, so there will be overlapping SG meetings on Wednesday to resolve EC comments to PAR and CSD for each respective group. There is also overlap with P802.3ck, P802.3cu, P802.3cw Task Force meetings and 100GSR SG meeting. Concern was indicated by an attendee about being able to participate in all these parallel meetings. Chair indicated that he would try to accommodate individual schedule conflicts as best as he can to allow participation in 100GSR, but that most of the schedule conflicts are unavoidable during Plenary week, with TFs getting schedule priority over SGs, and with four SGs having to be scheduled on Wednesday.

Chair announced call for contributions for Atlanta March meeting:

- Deadlines/Topics
 - The presenter shall request time by **MONDAY, MARCH 9th, 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 **THURSDAY, MARCH 12th, 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.
- Procedure for Presenters:
<http://www.ieee802.org/3/100GSR/public/presentproc.html>

Chair reminded the group that two more previously announced 100GSR ad hoc WebEx telecons are scheduled, pending contributions for February 27 and March 12, 2020. Meeting invites have been provided via reflector. Meeting information also available on <http://www.ieee802.org/3/100GSR/public/adhoc/>

Presentation #2:

Title: “100G VCSELs with 30 m OM3 or 50 m OM4 Links”

Presenter: Earl Parsons (CommScope)

[parsons_100GSR_adhoc_01_021320.pdf](#)

- Presentation provided analysis showing that 100G VCSELs with 30 m OM3 is essentially equivalent to 50 m OM4 links.
- Author presented some data center architectures for server-to-switch and switch-to-switch links that are relevant for 100GSR SG.
- Author concludes that: the 50 m objectives adopted in Geneva will not increase the cost of 30 m switch-to-server links, supporting economic feasibility. The 50 m objectives will accommodate switch-to-switch links and increase the broad market potential.
- Discussion about evaluating potential ≤ 10 m MMF reaches in terms of relative cost/economic feasibility. No contributions from experts have yet indicated that relative cost could be significantly reduced by dropping reach to < 10 m.
- Discussion about SMF objective. Chair encouraged future contributions in ad hocs or in Atlanta.
- Extensive discussion about ToR elimination, various data center architectures, elimination of one Tier of switching, lower latency advantages, and other economic feasibility advantages.
- It was clarified that ToR elimination does in fact reduce the number of layers of switches from three to two in some hyperscale architectures. This means that the economic feasibility of short reach optical PMDs is based on a more complex calculation than simply comparing the relative costs of fiber links to copper links.
- Author welcomed feedback from the group and will update contribution based on that input.

The Study Group Ad Hoc meeting was adjourned at 1:38 PM EST/ UTC -5, Thursday, February 13, 2020.

Next Meeting:

Scheduled (pending contributions) 100GSR SG ad hoc WebEx meeting for Thursday, February 27, 2020 at 12:00 noon – 2 pm EST/UTC -5.

Appendix A: Attendees at the IEEE 802.3 100 Gb/s Wavelength Short Reach PHYs Study Group WebEx Ad Hoc Meeting, 13 February 2020.

16 individuals attended on Thursday, 13 February 2020, 12:03 PM – 1:38 PM EST/UTC -5

	Last Name	First Name	Employer	Affiliations
1	Abbott	John	Corning	Corning
2	Bhatt	Vipul	II-VI	II-VI
3	Bruckman	Leon	Huawei	Huawei
4	Choudhury	Mabud	OFS	OFS
5	Ghiasi	Ali	Ghiasi Quantum	Ghiasi Quantum
6	Guedes	Marcelo	Idea Electronic Systems	Idea Electronic Systems
7	Ingham	Jonathan	Broadcom	Broadcom
8	Kamino	John	OFS	OFS
9	LeCheminant	Greg	Keysight Technologies	Keysight Technologies
10	Lewis	Dave	Lumentum	Lumentum
11	Lingle, Jr	Robert	OFS	OFS
12	Lusted	Kent	Intel	Intel
13	Malicoat	David	Malicoat Networking Solutions	SENKO
14	Maniloff	Eric	Ciena	Ciena
15	Parsons	Earl	CommScope	CommScope
16	Swanson	Steve	Corning	Corning