

IEEE 802.3 Beyond 10km Optical PHYs Study Group Closing Report

John D'Ambrosia
Futurewei, Subsidiary of Huawei
Chicago, IL, USA
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IEEE 802.3 Beyond 10km Optical PHYs Study Group Project information

Study Group Organization

John D'Ambrosia, Chair, IEEE 802.3 Beyond 10km Optical PHYs SG

Task force web and reflector information

Reflector: <http://www.ieee802.org/3/B10K/reflector.html>

Home page: <http://www.ieee802.org/3/B10K/index.html>

PAR: No Draft Yet

CSD: *(Draft responses, not approved by Study Group, based on adopted objectives, Jan 2018)*

http://www.ieee802.org/3/B10K/project_docs/csd_draft_0118_notapproved.pdf

Objectives: http://www.ieee802.org/3/B10K/project_docs/objectives_180308.pdf

Timeline: None Adopted

Ad Hoc page: <http://www.ieee802.org/3/B10K/public/adhoc/index.shtml>

Private Area: None Yet

This Week's Accomplishments

- Consensus building on PAR / Objectives / CSD
 - ≈ 48 attendees
- Terminology for SG use
- 4 technical presentations
- Approved Objectives – See Next Pages
- Considered liaisons
 - Proposed Response to OIF- IEEE_802d3_to_OIF_400ZR_0318_draft
 - Proposed Response to ITU-T – deferred until May Interim
- Approved requesting rechartering of Study Group

Objectives Motions (1 of 2)

- Update of 50GbE PHY Objective – approved by voice vote without objection
 - “Provide a physical layer specification which supports 50 Gb/s operation over at least 40 km of SMF”
- Adoption of 100GbE Objectives –
 - Objectives
 - Support a MAC data rate of 100 Gb/s
 - Support a BER of better than or equal to 10^{-12} at the MAC/PLS service interface (or the frame loss ratio equivalent) for 100 Gb/s
 - Provide a physical layer specification supporting 100 Gb/s operation on a single wavelength capable of at least 80 km over a DWDM system.
 - Vote ($\geq 75\%$)

➤ All (y/n/a)	42 / 14 / 6	75%
➤ 802.3 (y/n/a)	29 / 11 / 3	72.5%

Objectives Motions (2 of 2)

- Adoption of 200GbE Objectives –
 - Objectives
 - Support a MAC data rate of 200 Gb/s
 - Support a BER of better than or equal to 10^{-13} at the MAC/PLS service interface (or the frame loss ratio equivalent) for 200 Gb/s
 - Provide a physical layer specification which supports four-lane 200 Gb/s operation over at least 40km of SMF.
 - Vote ($\geq 75\%$)

➤ All (y/n/a)	34 / 3 / 18
➤ 802.3 (y/n/a)	28 / 2 / 15

Current SG Adopted Objectives

* - Adopted by SG Jan 2018 Interim. Not approved by IEEE 802.3 WG.

** - Adopted by SG Mar 2018 Plenary. Not approved by IEEE 802.3 WG.

- Support full-duplex operation only*
- Preserve the Ethernet frame format utilizing the Ethernet MAC*
- Preserve minimum and maximum FrameSize of current Ethernet standard*
- Provide appropriate support for OTN*

50 Gb/s Ethernet

- Support a MAC data rate of 50 Gb/s*
- Support a BER of better than or equal to 10^{-12} at the MAC/PLS service interface (or the frame loss ratio equivalent) for 50 Gb/s*
- Provide a physical layer specification which supports 50 Gb/s operation over at least 40 km of SMF**

100 Gb/s Ethernet

- Support a MAC data rate of 100 Gb/s **
- Support a BER of better than or equal to 10^{-12} at the MAC/PLS service interface (or the frame loss ratio equivalent) for 100 Gb/s **
- Provide a physical layer specification supporting 100 Gb/s operation on a single wavelength capable of at least 80 km over a DWDM system. **

200 Gb/s Ethernet

- Support a MAC data rate of 200 Gb/s **
- Support a BER of better than or equal to 10^{-13} at the MAC/PLS service interface (or the frame loss ratio equivalent) for 200 Gb/s **
- Provide a physical layer specification which supports four-lane 200 Gb/s operation over at least 40km of SMF. **

WG Motion #1

Move that the IEEE 802.3 Working Group approve:

- IEEE_802d3_to_OIF_400ZR_0318_draft

with editorial license granted to the Chair (or his appointed agent) as liaison communications from the IEEE 802.3 Working Group to OIF.

Technical ($\geq 75\%$)

M: D'Ambrosia

S: Ofelt

Results

WG Motion #2

Move that the IEEE 802.3 Working Group request the re-chartering of the Beyond 10 km Optical PHYs Study Group

> 50%

M: J. D'Ambrosia

S: M. Nowell

Results:

What's Next

- Ad hoc on 100 GbE CSD Responses to be formed. Chair and teleconferences to be announced.
- Ad hoc on 200 GbE CSD Responses to be formed. David Lewis to chair and teleconferences to be announced.
- May 2018 Interim in Pittsburgh, PA, USA – week of May 21.

Questions?

Thank you!