

John D'Ambrosia

Futurewei, Subsidiary of Huawei

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IEEE 802.3 Beyond 10km Optical PHYs Study Group IEEE 802 May 2018 Interim, Pittsburgh, PA, USA

Study Group Objectives Discussions to Date

	50 GbE	100 GbE	200 GbE	400 GbE
80km	Minimal Interest (Nov 17, Straw Poll #3)	Objective Adopted	More education needed (Jan 2018, Straw Poll #6)	
40 km	Objective Adopted	No Interest (Jan 2018, Straw Poll #2)	Objective Adopted	Tech Feasibility being addressed

Rate / BER Objectives

- 1. 50 Gb/s
 - 1. Support a MAC data rate of 50 Gb/s
 - 2. 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
- 2. 100 Gb/s
 - 1. Support a MAC data rate of 100 Gb/s
 - 2. 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
- 3. 200 Gb/s
 - 1. Support a MAC data rate of 200 Gb/s
 - 2. 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
- 4. 400 Gb/s
 - 1. Support a MAC data rate of 400 Gb/s
 - 2. Support a BER of better than or equal to 10^-13 at the MAC/PLS service interface (or the frame loss ratio equivalent) for 400 Gb/s

- Move that the Beyond 10km Optical PHYs Study Group adopt the following objectives:
 - Support a MAC data rate of 400 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 400 Gb/s
 - Provide a physical layer specification supporting 400 Gb/s operation over eight wavelengths capable of at least 40 km of SMF
- M: Xinyuan Wang
- S: Shuto Yamamoto
- Technical (>=75%)
- Results Y: 24 N: 1 A: 24
- Motion Passes

- Move that the Beyond 10km Optical PHYs Study Group adopt the following objective:
 - Provide a physical layer specification supporting 400 Gb/s operation on a single wavelength capable of at least 80 km over a DWDM system.
- Technical (>=75%)
- M: Gary Nicholl
- S: Rich Baca
- Results all Y: 32 N: 0 A: 18
- Motion Passes

- Move that the Beyond 10km Optical PHYs Study Group develop documentation for two projects:
 - Project #1 Objectives related to "at least 40 km of SMF"
 - Project #2 Objectives related to "*at least 80 km over a DWDM system*"
- Technical (>=75%)
- M: Peter Stassar
- S: Pete Anslow
- Results all Y: 16 N: 15 A: 18
- Motion Fails

- Move to replace objective
 - Provide a physical layer specification which supports four-lane 200 Gb/s operation over at least 40km of SMF.

With

- Provide a physical layer specification supporting 200 Gb/s operation over four wavelengths capable of at least 40 km of SMF
- M: Pete Anslow
- S: David Lewis
- Tech (=> 75%)
- Approved by voice vote without opposition

- Move to adopt:
 - The PAR responses in PAR_P8023cn_180521_draft.pdf
 - The CSD "Managed Objects", "Coexistence", "Broad Market Potential", "Compatibility", "Distinct Identity", "Technical Feasibility", and "Economic Feasibility" responses, as per CSD_P8023cn_180521_draft.pdf
- M: David Ofelt
- S: David Malicoat
- Tech (=>75%)
- Results Y 20 N 0 A 0
- Motion Passes

Move that the IEEE 802.3 Beyond 10km Study Group approve:

• IEEE_802d3_to_SG15_B10k_0518_draft

with editorial license granted to the Chair (or his appointed agent) as liaison communications from the IEEE 802.3 Working Group to ITU-T Study Group 15.

- Technical (>=75%)
- M: Trowbridge
- S: Anslow
- Approved by voice vote without opposition.

Attendance Strawpolls

- Attend July 2018 SG Plenary, San Diego, CA, USA
- Y: N: M:
- Attend Sept 2018 SG Interim, Spokane, WA, USA
- Y: N: M:
- Not taken due to low participation at time polls were considered.