

Update - Summary

Splitting IEEE P802.3ct Project - Proposed Project Documentation Packages

John D'Ambrosia
Chair, IEEE P802.3ct Task Force
Futurewei, U.S. Subsidiary of Huawei

Joint IEEE P802.3cn / IEEE P802.3ct Task Force Meeting
IEEE 802.3 Sept 2019 Interim
Indianapolis, IN, USA

Current Status

- Updated per feedback from 8/29 Interim Teleconference Meeting
- Presentation is being given with my “Chair” hat on.
 - This presentation is my interpretation, as chair, of conversations in Task Force Meetings and associated interim teleconference meetings.
 - Discussion of 400 GbE over DWDM baseline proposals has raised the question, because of schedule concerns, whether the IEEE P802.3ct Project should be split, based on 100 GbE and 400GbE objectives.
 - 100 GbE over DWDM targeting MSO / Mobile Networks
 - 400 GbE over DWDM targeting DCI
 - As previously discussed, as Chair, I have prepared proposed project documentation (PAR Response / CSD) for the two potential different projects
 - This presentation summarizes the proposed modified project documentation.

Overview of Current IEEE P802.3ct Objectives

- 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

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.

400 Gb/s Ethernet

- 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 on a single wavelength capable of at least 80 km over a DWDM system.

Proposed Modified IEEE P802.3ct Objectives

- 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

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.

~~400 Gb/s Ethernet~~

- ~~• 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 on a single wavelength capable of at least 80 km over a DWDM system.~~

Proposed IEEE P802.3cw Objectives

- 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

~~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.~~

400 Gb/s Ethernet

- 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 on a single wavelength capable of at least 80 km over a DWDM system.

Documentation Package Options

- IEEE P802.3ct Project (100 GbE over DWDM Systems)
 - Proposed PAR Response: dambrosia_3ct_02_0919
 - Proposed CSD Response: dambrosia_3ct_03_0919
- IEEE P802.3cw Project (400 GbE over DWDM Systems)
 - Proposed PAR Response: dambrosia_3ct_04_0919
 - Proposed CSD Response: dambrosia_3ct_05_0919