P802.3cn

Submitter Email: david_law@ieee.org
Type of Project: Modify Existing Approved PAR
PAR Request Date: 12-Nov-2018
PAR Approval Date:
PAR Expiration Date:
Status: Unapproved PAR, Modification to a Previously Approved PAR for an Amendment
Root PAR: P802.3cn **Approved on:** 27-Sep-2018

1.1 Project Number: P802.3cn
1.2 Type of Document: Standard
1.3 Life Cycle: Full Use

2.1 Title: Standard for Ethernet Amendment: Physical Layers and Management Parameters for 50 Gb/s, 200 Gb/s, and 400 Gb/s Operation over Single-Mode Fiber

Changes in title: Standard for Ethernet Amendment: Physical Layers and Management Parameters for 50 Gb/s, ~~100 Gb/s,~~ 200 Gb/s, and 400 Gb/s Operation over Single-Mode Fiber~~and DWDM (dense wavelength division multiplexing) systems~~

3.1 Working Group: Ethernet Working Group (C/LM/WG802.3)
Contact Information for Working Group Chair
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3.2 Sponsoring Society and Committee: IEEE Computer Society/LAN/MAN Standards Committee (C/LM)
Contact Information for Sponsor Chair
  Name: Paul Nikolich
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4.1 Type of Ballot: Individual
4.2 Expected Date of submission of draft to the IEEE-SA for Initial Sponsor Ballot: 11/2019
4.3 Projected Completion Date for Submittal to RevCom
Note: Usual minimum time between initial sponsor ballot and submission to Revcom is 6 months.: 05/2020

5.1 Approximate number of people expected to be actively involved in the development of this project: 80
5.2.a. Scope of the complete standard: This standard defines Ethernet local area, access and metropolitan area networks. Ethernet is specified at selected speeds of operation; and uses a common media access control (MAC) specification and management information base (MIB). The Carrier Sense Multiple Access with Collision Detection (CSMA/CD) MAC protocol specifies shared medium (half duplex) operation, as well as full duplex operation. Speed specific Media Independent Interfaces (MIIs) provide an architectural and optional implementation interface to selected Physical Layer entities (PHY). The Physical Layer encodes frames for transmission and decodes received frames with the modulation specified for the speed of operation, transmission medium and supported link length. Other specified capabilities include: control and management protocols, and the provision of power over selected twisted pair PHY types.

5.2.b. Scope of the project: Define physical layer specifications and management parameters for the transfer of Ethernet format frames at 50 Gb/s, 200 Gb/s, and 400 Gb/s at reaches greater than 10 km over single-mode fiber. Make TDECQ (Transmitter and dispersion eye closure for PAM4) related changes to existing 200 Gb/s and 400 Gb/s

Changes in scope of the project: Define physical layer specifications and management parameters for the transfer of Ethernet format frames at 50 Gb/s, ~~100 Gb/s,~~ 200 Gb/s, and 400 Gb/s at reaches greater than 10 km over single-mode fiber~~and DWDM systems~~. Make TDECQ (Transmitter and dispersion eye closure for PAM4) related changes to

physical medium dependent sublayers over single-mode fiber. existing 200 Gb/s and 400 Gb/s physical medium dependent sublayers over single-mode fiber.

5.3 Is the completion of this standard dependent upon the completion of another standard: No

5.4 Purpose: This document will not include a purpose clause.

5.5 Need for the Project: Optical solutions targeting greater than 10 km over single-mode fiber will address the bandwidth requirements of mobile backhaul networks fueled by consumer video.

5.6 Stakeholders for the Standard: Users and producers of systems and components for mobile backhaul networks and any other networks needing reaches in excess of 10 km over single-mode fiber.

Intellectual Property

6.1.a. Is the Sponsor aware of any copyright permissions needed for this project?: No

6.1.b. Is the Sponsor aware of possible registration activity related to this project?: No

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7.1 Are there other standards or projects with a similar scope?: No

7.2 Joint Development

  Is it the intent to develop this document jointly with another organization?: No

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8.1 Additional Explanatory Notes: It became apparent to the IEEE 802.3 Working Group that the 50 Gb/s, 200 Gb/s, and 400 Gb/s Operation over Single-Mode Fiber portion of the IEEE P802.3cn project, which is an extension of existing IEEE 802.3 specifications, could be developed on a faster timeline than the DWDM portion of the IEEE P802.3cn project. As a result the 100Gb/s and 400 Gb/s Operation over DWDM Systems portion of the project has been removed from the IEEE P802.3cn PAR and placed in the new IEEE P802.3ct amendment PAR.
Item 5.2b: PAM4 expands to 4-level pulse amplitude modulation