

P802.3ct

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Type of Project: Modify Existing Approved PAR

PAR Request Date: 11-Sep-2019

PAR Approval Date:

PAR Expiration Date:

Status: Unapproved PAR, Modification to a Previously Approved PAR for an Amendment

Root PAR: P802.3ct **Approved on:** 08-Feb-2019

1.1 Project Number: P802.3ct

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 100 Gb/s Operation over DWDM (dense wavelength division multiplexing) systems

Changes in title: Standard for Ethernet Amendment: Physical Layers and Management Parameters for 100 Gb/s ~~and 400 Gb/s~~ Operation over 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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Name: Adam Healey

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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: 11/2020

4.3 Projected Completion Date for Submittal to RevCom

Note: Usual minimum time between initial sponsor ballot and submission to Revcom is 6 months.: 08/2021

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 100 Gb/s at reaches greater than 10 km over DWDM systems.

Changes in scope of the project: Define physical layer specifications and management parameters for the transfer of Ethernet format frames at 100 Gb/s ~~and 400 Gb/s~~ at reaches greater than 10 km over DWDM systems.

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 100 Gb/s operation at reaches in excess of 10 km over a DWDM system will address the bandwidth growth and reach requirements of Cable/MSO (multiple system operator) distribution networks, and mobile backhaul networks where reaches greater than 10 km are required, or where fiber availability drives the need for multiple instances of Ethernet over a DWDM system.

5.6 Stakeholders for the Standard: Users and producers of systems and components for mobile backhaul networks, Cable/MSO (multiple system operator) distribution networks and any other networks needing 100 Gb/s operation at reaches in excess of 10 km over DWDM systems.

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

7.1 Are there other standards or projects with a similar scope?: Yes

If Yes please explain: While there are no other IEEE standards or projects with a similar scope, the IEEE 802.3 Working Group has received a liaison from ITU-T Study Group 15 that communicated that it is revising Recommendation ITU-T G.698.2 to include multi-vendor interoperable 100 Gb/s single channel optical interfaces that operate over a DWDM system for approximately 80 km distances. Stakeholders have expressed the desire for this IEEE project, as it will define physical layer specifications and Protocol Implementation Conformance Statements (PICS) for 100 Gb/s Ethernet operation over DWDM systems that are consistent and completely integrated with existing IEEE 802.3 Ethernet specifications.

and answer the following

Sponsor Organization: ITU-T SG15

Project/Standard Number: Recommendation ITU-T G.698.2

Project/Standard Date: 29-Nov-2018

Project/Standard Title: Recommendation ITU-T G.698.2 Amplified multichannel dense wavelength division multiplexing applications with single channel optical interfaces

7.2 Joint Development

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

8.1 Additional Explanatory Notes: It became apparent to the IEEE 802.3 Working Group that the market demands and the state of technology for 100 Gb/s Ethernet and 400 Gb/s Ethernet over DWDM systems are different, and that a faster timeline for the 100Gb/s Ethernet portion of the IEEE P802.3ct project could be achievable. As a result, the 400 Gb/s Operation over DWDM Systems portion of the project has been removed from the IEEE P802.3ct amendment PAR and placed in the new IEEE P802.3cw amendment PAR.