P1904.3

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Type of Project: New IEEE Standard
Project Request Type: Initiation / New
PAR Request Date: 15 Jan 2020
PAR Approval Date:
PAR Expiration Date:
PAR Status: Draft

1.1 Project Number: P1904.3
1.2 Type of Document: Standard
1.3 Life Cycle: Full Use

2.1 Project Title: Standard for Service Interoperability in
25 Gb/s and 50 Gb/s Ethernet Passive
Optical Networks

3.1 Working Group: Access Networks Working Group(COM/AccessCore-SC/1904_WG)
    3.1.1 Contact Information for Working Group Chair:
      Name: Glen Kramer
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    3.1.2 Contact Information for Working Group Vice Chair:
      None
3.2 Society and Committee: IEEE Communications Society/Access and Core Networks Standards
Committee(COM/AccessCore-SC)
    3.2.1 Contact Information for Standards Committee Chair:
      Name: Alexander Gelman
      Email Address: adg@ieee.org
    3.2.2 Contact Information for Standards Committee Vice Chair:
      None
    3.2.3 Contact Information for Standards Representative:
      None

4.1 Type of Ballot: Individual
4.2 Expected Date of submission of draft to the IEEE SA for Initial Standards Committee Ballot:
Dec 2022
4.3 Projected Completion Date for Submittal to RevCom: Aug 2023

5.1 Approximate number of people expected to be actively involved in the development of this project: 15
5.2 Scope of proposed standard: This standard describes the system-level requirements needed to provide service-level, multi-vendor interoperability of Ethernet Passive Optical Network (EPON) equipment. The specifications complement the existing IEEE 802.3(TM) and IEEE 802.1(TM) standards, which enable the interoperability at the Physical Layer and Data Link Layer. Specifically included in
this specification are:
- 25G-EPON and 50G-EPON system-level interoperability specifications covering equipment functionality, traffic engineering, and service-level quality of service/class of service (QoS/CoS) mechanisms;
- Management specifications covering equipment management, service management, and power utilization.

5.3 Is the completion of this standard contingent upon the completion of another standard? No
5.4 Purpose: The purpose of this standard is to build upon the IEEE 802.3ca (25G-EPON and 50G-EPON) Physical Layer and Data Link Layer standards and create a system-level and network-level standard, thus allowing full "plug-and-play" interoperability of the transport, service, and control planes in a multi-vendor environment.
5.5 Need for the Project: There are no open, international, system-level specifications describing how to achieve multi-vendor interoperability for the 25GEPON and 50G-EPON technologies.
A detailed system-level standard for 25G-EPON and 50G-EPON technologies, developed in an open fashion by the IEEE, will eliminate the need for service providers and national bodies to create unique interoperability specifications that needlessly fragment the market. This will serve a number of important purposes:
- Devices will follow a common specification for the world-wide market, resulting in larger volumes and

reduced costs;
- Operators will not face the challenge of developing system-level specifications and interoperability testing procedures before they can deploy EPON;
- Vendors will not need to implement multiple options to comply with multiple proprietary/national specifications. Reduced device complexity will further reduce costs;
- Competition among equipment and component suppliers will increase, thus driving further innovation and cost reductions.

5.6 Stakeholders for the Standard: The stakeholders include telecom system and component vendors, telecommunications carriers, and multiple system operators (MSOs)

6.1 Intellectual Property

    6.1.1 Is the Standards Committee aware of any copyright permissions needed for this project?
    No

    6.1.2 Is the Standards Committee aware of possible registration activity related to this project?
    No

7.1 Are there other standards or projects with a similar scope? No
7.2 Is it the intent to develop this document jointly with another organization? No

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8.1 Additional Explanatory Notes :