P1904.1

Submitter Email: glen.kramer@ieee.org
Type of Project: New IEEE Standard
PAR Request Date: 09-Oct-2009
PAR Approval Date:
PAR Expiration Date:
Status: Unapproved PAR, PAR for a New IEEE Standard

1.1 Project Number: P1904.1
1.2 Type of Document: Standard
1.3 Life Cycle: Full Use

2.1 Title: Standard for Service Interoperability in Ethernet Passive Optical Networks

3.1 Working Group:

3.2 Sponsoring Society and Committee: IEEE Communications Society/Service Interoperability in Ethernet Passive Optical Networks (COM/SIEPON)
Contact Information for Sponsor Chair
Name: Alexander Gelman
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4.1 Type of Ballot: Entity
4.2 Expected Date of submission of draft to the IEEE-SA for Initial Sponsor Ballot: 11/2011
4.3 Projected Completion Date for Submittal to RevCom: 05/2012

5.1 Approximate number of entities expected to be actively involved in the development of this project: 15
5.2 Scope: This standard describes the system-level requirements needed to ensure service-level, multi-vendor interoperability of Ethernet Passive Optical Network (EPON) equipment. The specifications complement the existing IEEE Std. 802.3 and IEEE Std. 802.1 standards which ensure the interoperability at the Physical layer and Data Link layer. Specifically included in the proposed work are:
- EPON system-level interoperability specifications covering equipment functionality, traffic engineering, and service-level QoS/CoS mechanisms;
- Management specifications covering: equipment management, service management, and power utilization.
5.3 Is the completion of this standard dependent upon the completion of another standard: No
5.4 Purpose: To build upon the IEEE 802.3ah (1G-EPON) and IEEE 802.3av (10G-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: More than 30 million subscribers are being served by 1G-EPON now, and it is expected that deployment volumes soon will reach more than 10 million new subscribers annually. There are no open, international, system-level specifications describing how to achieve multi-vendor interoperability.
A detailed system-level standard, 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:
- EPON 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;
- 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 EPON 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)

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?: No
7.2 International Activities
a. Adoption
Is there potential for this standard (in part or in whole) to be adopted by another national, regional or international organization?: Do Not Know
Organization:
Technical Committee Name:
Technical Committee Number:
Contact Name:
Phone:
Email:
b. Joint Development
Is it the intent to develop this document jointly with another organization?: No
c. Harmonization
Are you aware of another organization that may be interested in portions of this document in their standardization development efforts?: No

8.1 Additional Explanatory Notes (Item Number and Explanation): The following entities expect to join the SIEPON project as voting members:
Cavera Systems: Venkat Vankayalapati (venkatv@caverasys.com)
China Telecom: Wang Bo (wangbo@chinatelecom.com.cn)
FiberHome Telecommunications Technologies Corp.: Duane Remein (duane.remein@att.net)
Teknovus, Inc.: Glen Kramer, (glen.kramer@teknovus.com)
University of New Hampshire, Interoperability Lab: Jeff Lapak (jrlapak@iol.unh.edu)
ZTE Corp.: Marek Hajduczenia (marek.hajduczenia@zte.com.cn)

Several other entities, including US MSOs, have expressed their support for this project and have indicated their intent to participate after the project approval.