P1905.1

Submitter Email: paul.houze@orange-ftgroup.com
Type of Project: New IEEE Standard
PAR Request Date: 23-Sep-2010
PAR Approval Date: 08-Nov-2010
PAR Expiration Date: 31-Dec-2014
Status: PAR for a New IEEE Standard

1.1 Project Number: P1905.1
1.2 Type of Document: Standard
1.3 Life Cycle: Full Use

2.1 Title: Standard for a Convergent Digital Home Network for Heterogeneous Technologies

3.1 Working Group: Convergent Digital Home Network (COM/SC/CDHN)
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3.2 Sponsoring Society and Committee: IEEE Communications Society/Standards Committee (COM/SC)
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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: 12/2011
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: 10
5.2 Scope: The standard defines an abstraction layer for multiple home networking technologies. The abstraction layer provides a common data and control Service Access Point to the heterogeneous home networking technologies described in the following specifications: IEEE P1901, IEEE 802.11, IEEE 802.3 and MoCA 1.1. The standard is extendable to work with other home networking technologies.
The abstraction layer supports dynamic interface selection for transmission of packets arriving from any interface (upper protocol layers or underlying network technologies). End-to-end Quality of Service (QoS) is supported.
Also specified are procedures, protocols and guidelines to provide a simplified user experience to add devices to the network, to set up encryption keys, to extend the network coverage, and to provide network management features to address issues related to neighbor discovery, topology discovery, path selection, QoS negotiation, and network control and management.

5.3 Is the completion of this standard dependent upon the completion of another standard: No
5.4 Purpose: The abstraction layer common interface allows applications and upper layer protocols to be agnostic to the underlying home networking technologies. The purpose of the standard is to facilitate the integration of P1901 with other home networking technologies.
Additionally the purpose of the standard is to define an abstraction layer that allows: Common Network Setup among heterogeneous network technologies defined in the PAR and provide same user experience in the process of adding a device to the network and the same user experience while setting an encryption key; Intelligent network interface and path selection for delivery of packets that provides Improved coverage performance, Improved data rate on poorest link, Improved network capacity, Improved network

reliability and QoS, support for end-to-end Quality of Service (QoS) for different traffic classes; Seamless / transparent path switching; Real time mapping of connection links and paths for each traffic class / stream; Green - energy management.

5.5 Need for the Project: A convergent specification would be beneficial to the industry suppliers, OEMs and the market, not only in terms of delivering products to the market earlier, and healing the fragmented market, but also towards building synergies between different protocols and improving performance for the applications they support.
The convergent specification would also address the following:
*It would facilitate the installation and the operation/management of multi-technology devices in home networks.
*It would improve the end-user experience and open doors to new markets.
*It would provide a scalable and reusable specification for present and future technologies.
*It would enhance the opportunity to use Quality of Service (QoS)-sensitive applications over a multi-technology home network.

5.6 Stakeholders for the Standard: Includes the buying public, home occupants with home networks, communications component manufacturers, consumer electronics companies, utility companies, broadband service providers, internet service providers, cable companies.

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
7.3 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?: Yes
Organization: TBD
Technical Committee Name: TBD
Technical Committee Number:
Contact Name: TBD
Phone:
Email:
b. Harmonization
Are you aware of another organization that may be interested in portions of this document in their standardization development efforts?: Yes
Organization: IEEE
Technical Committee Name: Draft Standard for Broadband over Power Line
Technical Committee Number: 1901
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8.1 Additional Explanatory Notes (Item Number and Explanation): 5.2: The standard provides a common data and control Service Access Point to the heterogeneous home networking technologies described in the following specifications: IEEE P1901 (Standard for Broadband over Power Line Networks: Medium Access Control and Physical Layer Specifications), IEEE 802.11 (Standard for Information technology-Telecommunications and information exchange between systems-Local and metropolitan area networks-Specific requirements Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) Specifications), IEEE 802.3 (Standard for Information technology-Telecommunications and information exchange between systems-Local and metropolitan area networks-Specific requirements Part 3: Carrier Sense Multiple Access with Collision Detection (CSMA/CD) Access Method and Physical Layer Specifications) and MoCA 1.1 (Multimedia over Coax Alliance).
Organizations expressing interest in participating in this project include service providers, telecom and networking equipment manufacturers, and semiconductor suppliers.