

## PAR FORM- P802.22b, Amendment to IEEE Std. 802.22-2011

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PAR Status: Unapproved PAR, PAR for an amendment to an existing IEEE Standard

Type of Project: Amendment to IEEE Standard 802.22-2011

PAR Request Date: Expected 2-Oct-2011

PAR Approval Date: Expected 06-Dec-2011

PAR Expiration Date: Expected 31-Dec-2015

1.1 Project Number: P802.22b

1.2 Type of Document: Standard

1.3 Life Cycle: Full Use

2.1 Title: Part 22: Cognitive Wireless RAN Medium Access Control (MAC) and Physical Layer (PHY) specifications: Policies and procedures for operation in the TV Bands

- Amendment: ~~Enhancement for broadband services and monitoring applications~~  
~~Enhanced Broadband and Monitoring~~

3.1 Working Group: Wireless Regional Area Networks (WRAN) Working Group (C/LM/WG802.22)

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)

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None

4.1 Type of Ballot: Individual

4.2 Expected Date of submission of draft to the IEEE-SA for Initial Sponsor Ballot: 11/2013

4.3 Projected Completion Date for Submittal to RevCom: 06/2014

5.1 Approximate number of people expected to be actively involved in the development of this project: 40

5.2 Scope:

This ~~standard amendment~~ specifies alternate Physical Layer (PHY) and necessary Medium Access Control Layer (MAC) amendments-enhancements to IEEE std. 802.22-2011 for operation in Very High Frequency (VHF)/ Ultra High Frequency (UHF) TV broadcast bands between 54 MHz and 862 MHz to support enhanced broadband services and monitoring applications. The standard supports- aggregate data rates greater than the maximum data rate supported by the IEEE Sstd. 802.22-2011. This standard defines new classes of- 802.22 devices to address these- applications and supports more than 512 devices in a network. This standard also specifies techniques to enhance communications among the devices and makes necessary amendments to the cognitive, security & parameters and connection management clauses. This amendment supports mechanisms to enable coexistence with other 802 systems in the same band.

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

5.4 Purpose:

The purpose of this amendment is to enhance the MAC and define an alternate PHY to accommodate broadband extensions and monitoring use cases for IEEE 802.22 devices operating in VHF/UHF TV broadcast bands between 54 MHz and 862 MHz.

~~This document will not have a purpose clause.~~

5.5 Need for the Project:

There are various broadband services and monitoring applications in the context of wireless regional area networks where communications can be better served by introducing new classes of 802.22 devices with capabilities appropriate for such applications. In addition, extending regional area broadband services to applications such as real-time and/or near real-time monitoring, emergency broadband services, remote medical services etc, requires higher data rates and greater number of devices. Enhanced technologies become necessary to enable communications among devices to support those applications. None of the ~~features-use cases~~ mentioned above ~~can be~~ supported by the IEEE Sstd. 802.22-2011 and hence, a new project is required ~~for amendment~~.

5.6 Stakeholders for the Standard: The stakeholders include: Chip and equipment manufacturers, government organizations, broadcasters, utility companies, wireless internet and data service providers and operators of IEEE Std. 802.22-2011 devices and other entities such as database service providers to which the standard may need to interface. ~~Manufacturers and users of IEEE Std. 802.22-2011 devices and other operating entities to which the standard may need to interface.~~

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.~~ Yes

The IEEE P1900.7 PAR scope specifies that it will provide means to support P1900.4a for white space management and P1900.6 to obtain and exchange sensing related information (spectrum sensing and geolocation information), whereas, P802.22b PAR is an amendment to the IEEE Std. 802.22-2011 which provides enhanced features to combine broadband wireless access and monitoring services in the TV white space (54 MHz to 862 MHz).

7.2 Joint Development: No.

8.1 Additional Explanatory Notes: (note for 5.2 Scope)

~~This amendment supports mechanisms to enable coexistence with other 802 systems in the same band.~~