

## P802.22b

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**Submitter Email:** [apurva\\_mody@yahoo.com](mailto:apurva_mody@yahoo.com)

**Type of Project:** Amendment to IEEE Standard 802.22-2011

**PAR Request Date:** 02-Oct-2011

**PAR Approval Date:** 07-Dec-2011

**PAR Expiration Date:** 31-Dec-2015

**Status:** PAR for an Amendment to an existing IEEE Standard

**Root Project:** 802.22-2011

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**1.1 Project Number:** P802.22b

**1.2 Type of Document:** Standard

**1.3 Life Cycle:** Full Use

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**2.1 Title:** IEEE Standard for Information Technology--Telecommunications and information exchange between systems Wireless Regional Area Networks (WRAN)--Specific requirements 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

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

**Contact Information for Working Group Chair**

**Name:** Apurva Mody

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**Contact Information for Working Group Vice-Chair**

**Name:** Gerald Chouinard

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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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**Contact Information for Standards Representative**

None

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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:** 11/2013

**4.3 Projected Completion Date for Submittal to RevCom:** 08/2014

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

**5.2 Scope:** This amendment specifies alternate Physical Layer (PHY) and necessary Medium Access Control Layer (MAC) 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 Std. 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.

**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 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 use cases mentioned above are supported by the IEEE Std. 802.22-2011 and hence, a new project is required.

**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.

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**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?:** Yes

**If Yes please explain:** 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).

**and answer the following**

**Sponsor Organization:** IEEE ComSocSCV

**Project/Standard Number:**

**Project/Standard Date:**

**Project/Standard Title:**

**7.2 Joint Development**

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

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**8.1 Additional Explanatory Notes (Item Number and Explanation):**