

# P802.15.4v

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**Submitter Email:** [bheile@ieee.org](mailto:bheile@ieee.org)

**Type of Project:** Amendment to IEEE Standard 802.15.4-2015

**PAR Request Date:** 07-Feb-2016

**PAR Approval Date:**

**PAR Expiration Date:**

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

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**1.1 Project Number:** P802.15.4v

**1.2 Type of Document:** Standard

**1.3 Life Cycle:** Full Use

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**2.1 Title:** Approved Draft Standard for Low-Rate Wireless Personal Area Networks (WPANs)  
Amendment enabling/updating the use of Regional Sub-GHz bands

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**3.1 Working Group:** Wireless Personal Area Network (WPAN) Working Group (C/LM/WG802.15)

**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)

**Contact Information for Sponsor Chair**

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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:** 03/2017

**4.3 Projected Completion Date for Submittal to RevCom:** 10/2017

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**5.1 Approximate number of people expected to be actively involved in the development of this project:** 100

**5.2.a. Scope of the complete standard:** This standard defines the physical layer (PHY) and medium access control (MAC) sublayer specifications for low-data-rate wireless connectivity with fixed, portable, and moving devices with no battery or very limited battery consumption requirements. In addition, the standard provides modes that allow for precision ranging. Physical layers (PHYs) are defined for devices operating various license-free bands in a variety of geographic regions

**5.2.b. Scope of the project:** This amendment defines changes to the IEEE Std 802.15.4-2015 SUN PHYs enabling the use of the 870-876 MHz & 915-921 MHz bands in Europe, the 902-928 MHz band in Mexico, the 902-907.5 MHz & 915-928 MHz bands in Brazil, the 915-928 MHz band in Australia/New Zealand and Asian regional frequency bands that are not in IEEE Std 802.15.4-2015. This amendment also changes the channel parameters listed in the SUN PHYs, Low Energy Critical Infrastructure Monitoring (LECIM) PHY and the TV White Space (TVWS) PHY for the 470-510 MHz band in China and the 863-870 MHz band in Europe, and aligns these channel parameters with regional requirements. The amendment includes channel access and/or timing changes to the MAC necessary for conformance to regional requirements for these bands.

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

**5.4 Purpose:** The standard provides for ultra low complexity, ultra low cost, ultra low power consumption, and low data rate wireless connectivity among inexpensive devices. In addition, one of the alternate PHYs provides precision ranging capability that is accurate to one meter. Multiple PHYs are defined to support a variety of frequency bands.

**5.5 Need for the Project:** With the rapid growth in applications for Short Range Devices in Europe, Conference of Postal and Telecommunications Administrations (CEPT) Electronic Communications Committee (ECC) has allocated 870-876 MHz and 915-921 MHz spectrum. The new spectrum in various other regions, including 902-928 MHz band in Mexico, 902-907.5 MHz & 915-928 MHz band in Brazil, 915-928 MHz band in Australia/ New Zealand and Asian regional frequency bands have also been opened up. The availability of this additional spectrum will bring considerable benefits, as it supports applications such as smart metering and new uses in the automotive industry.

The 470-510 MHz band in China and the 863-870 MHz band in Europe and their channel parameters as specified in IEEE Std 802.15.4-2015 need to be aligned with the updated regional requirements.

**5.6 Stakeholders for the Standard:** The stakeholders include silicon vendors, manufacturers and users of telecom, medical, environmental, energy, and consumer electronics equipment and manufacturers and users of equipment involving the use of wireless sensor and control networks.

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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?:** No

### **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):**