**IEEE P802.15**

**Wireless Specialty Networks**

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| Project | IEEE P802.15 Working Group for Wireless Specialty Networks (WSNs) | |
| Title | **Proposed PAR for 15.4x** | |
| Date Submitted | January 16, 2018 | |
| Source | Kunal Shah (Itron)  Matt Gillmore (Itron) | E-Mail: [kshah @ itron.com Matthew.Gillmore @ itron.com] |
| Re: |  | |
| Abstract | [Proposed draft PAR for 15.4x] | |
| Purpose | [Draft PAR for 15.4x] | |
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**P802.15.4**

**Submitter Email:**

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

**PAR Request Date:** 15-Jan-2018

# PAR Approval Date: PAR Expiration Date:

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

* 1. **Project Number:** P802.15.4x
  2. **Type of Document:** Standard
  3. **Life Cycle:** Full Use

**2.1 Title:** Standard for Local and metropolitan area networks--Part 15.4: Low-Rate Wireless Personal Area Networks (LR-WPANs) – Amendment for Field Area Network Enhancements including Long Range and higher Data Rate Applications

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

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* 1. **Sponsoring Society and Committee:** IEEE Computer Society/LAN/MAN Standards Committee (C/LM)

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* 1. **Type of Ballot:** Individual

# Expected Date of submission of draft to the IEEE-SA for Initial Sponsor Ballot: 09/2018

* 1. **Projected Completion Date for Submittal to RevCom: 12/2018**

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

* + 1. **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-exempt bands in a variety of geographic regions. Specifically, SUN-OQPSK 100 k/chips per second Physical layer market operation clarifications will be made along with clarifying how higher SUN-OFDM Physical layers can be used to data rates up to 2.4mbps.

* + 1. **Scope of the project:**

This amendment defines enhancements to existing IEEE Std 802.15.4-2015 SUN PHYs enabling the support for high data rates, as well as support for long range applications in additional markets.

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

* 1. **Purpose:** This document does not include a purpose clause.

# Need for the Project:

Building upon the numerous successful deployments of 802.15.4 technology and rapid growth in applications, such as Internet of Things (IoT), Smart Grid, and Smart Cities, PHY enhancements are needed to support higher data rates along with enhancements for longer range. These enhancements are easily achievable with existing hardware deployments based upon 802.15.4 SUN PHY’s.

* 1. **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.

**Intellectual Property**

* + 1. **Is the Sponsor aware of any copyright permissions needed for this project?: No**
    2. **Is the Sponsor aware of possible registration activity related to this project?: No**
  1. **Are there other standards or projects with a similar scope?:** No
  2. **Joint Development**

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

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