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**P802.15.15**

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**Submitter Email:****Type of Project:** New IEEE Standard**Project Request Type:** Initiation / New**PAR Request Date:****PAR Approval Date:****PAR Expiration Date:****PAR Status:** Draft

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**1.1 Project Number:** P802.15.15**1.2 Type of Document:** Standard**1.3 Life Cycle:** Full Use

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**2.1 Project Title:** Standard for Wireless Ad Hoc Networks

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**3.1 Working Group:** Wireless Specialty Networks (WSN) Working Group(C/LM/802.15 WG)**3.1.1 Contact Information for Working Group Chair:****Name:** PATRICK KINNEY**Email Address:** pat.kinney@kinneyconsultingllc.com**3.1.2 Contact Information for Working Group Vice Chair:****Name:** Richard Alfvín**Email Address:** alfvín@ieee.org**3.2 Society and Committee:** IEEE Computer Society/LAN/MAN Standards Committee(C/LM)**3.2.1 Contact Information for Standards Committee Chair:****Name:** Paul Nikolich**Email Address:** p.nikolich@ieee.org**3.2.2 Contact Information for Standards Committee Vice Chair:****Name:** James Gilb**Email Address:** gilb@ieee.org**3.2.3 Contact Information for Standards Representative:****Name:** James Gilb**Email Address:** gilb@ieee.org

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**4.1 Type of Ballot:** Individual**4.2 Expected Date of submission of draft to the IEEE SA for Initial Standards Committee Ballot:**

Sep 2022

**4.3 Projected Completion Date for Submittal to RevCom:** May 2023

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**5.1 Approximate number of people expected to be actively involved in the development of this project:** 30**5.2 Scope of proposed standard:** This standard specifies the physical layer (PHY) and medium access control (MAC) sublayer for wireless ad hoc network connectivity with fixed, portable, and moving devices with very low energy consumption requirements. PHYs are defined for devices operating in a variety of regulatory domains.**5.3 Is the completion of this standard contingent upon the completion of another standard?** No**5.4 Purpose:** The standard provides for low complexity, low cost, low power consumption, low energy consumption wireless connectivity among inexpensive devices, with PHY and MAC sublayer using frequency shift keying (FSK), direct sequence spread spectrum (DSSS), and orthogonal frequency division multiplexing (OFDM) modulation, especially targeting the communications requirements of what is now commonly referred to as the Internet of Things.**5.5 Need for the Project:** The 802.15.4-2020 standard, including the 802.15.4w-2020, 802.15.4y-2021, and 802.15.4z-2020 amendments, hereafter referred to collectively as 802.15.4-2020, is extensively implemented and has been adopted for an increasingly diverse range of applications commonly referred to as the Internet of Things.

However, 802.15.4-2020 has become extremely difficult to understand, amend or enhance. Recently it has become clear that the wireless ad hoc network functionality and features have become increasingly complex to support inside the framework of 802.15.4-2020. The inclusion by reference of wireless ad hoc network functionality and features into a new standard (802.15.15) improves the accessibility and comprehension of the standard and more easily enables further amendments and enhancements.

**5.6 Stakeholders for the Standard:** The stakeholders include manufacturers and users of telecom,

medical, environmental, industrial, energy, transportation, agricultural and consumer electronics equipment and users of equipment involving the use of wireless sensor and control networks.

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## 6.1 Intellectual Property

**6.1.1 Is the Standards Committee aware of any copyright permissions needed for this project?**

No

**6.1.2 Is the Standards Committee aware of possible registration activity related to this project?**

Yes

**Explanation:** This standard specifies the use of Extended Unique Identifiers (EUI) and the Company ID (CID).

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**7.1 Are there other standards or projects with a similar scope?** Yes

**Explanation:** As specified in the need for the project, some IEEE Std 802.15.4-2020 functionality will be included by reference into IEEE P802.15.15.

**7.1.1 Standards Committee Organization:** IEEE Computer Society/LAN/MAN Standards Committee (C/LM)

**Project/Standard Number:** IEEE Std 802.15.4-2020

**Project/Standard Date:**

**Project/Standard Title:** IEEE Standard for Low-Rate Wireless Networks

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

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**8.1 Additional Explanatory Notes:** IEEE Std 802.15.4 is used and referenced by many different organizations (SDO's, consortia, etc.) and will not be modified as part of this project.

List of standards referenced in the PAR are as follows:

IEEE Std 802.15.4-2020, IEEE Standard for Low-Rate Wireless Networks

IEEE Std 802.15.4w-2020, IEEE Standard for Low-Rate Wireless Networks Amendment for a Low Power Wide Area

Network (LPWAN) extension to the Low Energy Critical Infrastructure Monitoring (LECIM) Physical layer (PHY)

IEEE Std 802.15.4y-2021, IEEE Standard for Low-Rate Wireless Networks Amendment Defining Support for Advanced Encryption Standard (AES)-256 Encryption and Security Extensions

IEEE Std 802.15.4z-2020, IEEE Standard for Low-Rate Wireless Networks Amendment: Enhanced Ultra Wideband (UWB) Physical Layers (PHYs) and Associated Ranging Techniques