P802.15.4

Type of Project: Amendment to IEEE Standard 802.15.4-2020
Project Request Type: Initiation / Amendment
PAR Request Date:
PAR Approval Date:
PAR Expiration Date:
PAR Status: Draft
Root Project: 802.15.4-2020

1.1 Project Number: P802.15.4
1.2 Type of Document: Standard
1.3 Life Cycle: Full Use

2.1 Project Title: IEEE Standard for Low-Rate Wireless Networks Amendment: Privacy Enhancements

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: Clinton Powell
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Name: PHILIP E BEECHER
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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
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3.2.3 Contact Information for Standards Representative:
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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: Jul 2024
4.3 Projected Completion Date for Submittal to RevCom: Mar 2025

5.1 Approximate number of people expected to be actively involved in the development of this project: 20
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. PHYs are defined for devices operating in a variety of geographic regions.
5.2.b Scope of the project: This amendment specifies modifications to the IEEE Std 802.15.4 medium access control (MAC) specification to specify new mechanisms that address and improve user privacy.

5.3 Is the completion of this standard contingent upon the completion of another standard? No
5.4 Purpose: This document will not include a purpose clause.
Change to Purpose: ~~The standard provides for ultra-low complexity, ultra-low cost, ultra-low power consumption, and low data rate wireless connectivity among inexpensive devices, especially targeting the communications requirements of what is now commonly referred to as the Internet of Things. In addition, some of the alternate PHYs provide 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: Users and regulatory agencies are concerned about protecting personal information such as locations, movements, contacts and activities, etc. Devices incorporating IEEE Std 802.15.4 are increasingly integrated in personal mobile devices carried with people. IEEE Std 802.15.4-2020 does not sufficiently protect users from user tracking and user profiling attacks. To ensure continued growth and support for IEEE Std 802.15.4, this project standardizes user privacy solutions applicable to IEEE Std

802.15.4 for mobile devices.
5.6 Stakeholders for the Standard: The stakeholders include 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 especially when those devices are mobile.

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 project might need a Organizationally Unique Identifier (OUI) allocated for privacy addresses.

7.1 Are there other standards or projects with a similar scope? No
7.2 Is it the intent to develop this document jointly with another organization? No

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8.1 Additional Explanatory Notes: This is similar activity that is ongoing in other IEEE standards, like IEEE Std 802.11 for privacy addresses. This project tries to learn the issues found in those other projects.