
P802.15.4ac

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: P802.15.4ac

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/LAN/MAN/802.15 WG)

3.1.1 Contact Information for Working Group Chair:

Name: Clinton Powell

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3.1.2 Contact Information for Working Group Vice Chair:

Name: PHILIP E BEECHER

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3.2 Society and Committee: IEEE Computer Society/LAN/MAN Standards Committee(C/LAN/MAN)

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

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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 mechanisms that address and improve user privacy. These mechanisms include randomized addresses, and exchanges that support session continuity. This amendment will maintain backward compatibility with the base standard.

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 may amend the usage of MAC addresses, for example assigning randomized MAC 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

8.1 Additional Explanatory Notes: