

P802.19.3a

Type of Project: Amendment to IEEE Standard 802.19.3-2021

Project Request Type: Initiation / Amendment

PAR Request Date:

PAR Approval Date:

PAR Expiration Date:

PAR Status: Draft

Root Project: 802.19.3-2021

1.1 Project Number: P802.19.3a

1.2 Type of Document: Recommended Practice

1.3 Life Cycle: Full Use

2.1 Project Title: IEEE Recommended Practice for Local and Metropolitan Area Networks--Part 19: Coexistence Methods for IEEE 802.11 and IEEE 802.15.4 Based Systems Operating in the Sub-1 GHz Frequency Bands
Amendment: Additional recommendations for improving coexistence

3.1 Working Group: Wireless Coexistence Working Group(C/LAN/MAN/802.19 WG)

3.1.1 Contact Information for Working Group Chair:

Name: Stephen Shellhammer

Email Address: shellhammer@ieee.org

3.1.2 Contact Information for Working Group Vice Chair:

Name: Tuncer Baykas

Email Address: tbaykas@gmail.com

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

Email Address: gilb@ieee.org

4.1 Type of Ballot: Individual

4.2 Expected Date of submission of draft to the IEEE SA for Initial Standards Committee Ballot:
 Jul 2025

4.3 Projected Completion Date for Submittal to RevCom: Jul 2026

5.1 Approximate number of people expected to be actively involved in the development of this project: 12

5.2.a Scope of the complete standard: This recommended practice provides guidance on the implementation, configuration, and commissioning of systems sharing spectrum in frequencies below 1 GHz. It addresses the IEEE Std 802.11-2020 sub 1 GHz (S1G) physical layer (PHY), the IEEE Std 802.15.4 smart utility networking (SUN) frequency shift keying (FSK) PHY, and the IEEE Std 802.15.4 SUN Orthogonal Frequency Division Multiplexing (OFDM) PHY.

Change to scope of the complete standard: This recommended practice provides guidance on the implementation, configuration, and commissioning of systems sharing spectrum between in frequencies below 1 GHz. It addresses the IEEE Std 802.11-2020 sub 1 GHz (S1G) physical layer (PHY), and the IEEE Std 802.15.4 smart utility networking (SUN) frequency shift keying (FSK) physical PHY, and the layer IEEE (PHY) Std 802.15.4 SUN operating Orthogonal in Frequency sub-1 Division GHz Multiplexing frequency (OFDM) bands PHY.

5.2.b Scope of the project: This amendment updates and expands coexistence recommendations to address new market requirements, increasing data traffic, greater device density of devices, and increased potential for congestion based on both IEEE Std 802.11-2020 and IEEE Std 802.15.4 sub-1 GHz standards. This amendment includes recommendations with respect to new devices, as well as compatibility with deployed legacy devices.

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.

5.5 Need for the Project: Since publication of the initial recommended practice, both underlying standards and market requirements have changed. These changes and spectrum regulation changes have resulted in new requirements driving new solutions which use both IEEE Std 802.11 Sub-1 GHz (S1G) and IEEE Std 802.15.4 S1G standards. There are many millions of deployed legacy 802.15.4 S1G devices (commonly referred to as 802.15.4g in the industry). Devices based on IEEE Std 802.11 S1G (commonly referred to as 802.11ah in the industry) are expected to begin widespread deployment. The need for new devices using different technologies to coexist is critical to support and sustain growth in the markets.

5.6 Stakeholders for the Standard: Silicon vendors, equipment manufacturers, and utility network operators, with applications including smart grid, smart city, internet of things (IoT), home automation, medical and environmental monitoring

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?

No

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: As indicated in 5.2a, 5.2b and 5.5, the recommended practice will cite:
IEEE Std 802.11-2020: IEEE Standard for Information Technology—Telecommunications and Information Exchange between Systems Local and Metropolitan Area Networks— Specific Requirements Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) Specifications

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