

1
2

IEEE P802.18
Radio Regulatory Technical Advisory Group (RR-TAG)

Draft response to FCC NOI Reply Comments				
Date: 2025-04-22				
Author(s):				
Name	Company	Address	Phone	email
Dave Halasz	Morse Micro			dave.halasz@morsemicro.com

3
4

This document drafts a proposed Reply Comments to the FCC NOI, Promoting the Development of Positioning, Navigation, and Timing Technologies and Solutions (WT Docket No. 25-110)

Notice: This document has been prepared to assist IEEE 802.18. It is offered as a basis for discussion and is not binding on the contributing individual(s) or organization(s). The material in this document is subject to change in form and content after further study. The contributor(s) reserve(s) the right to add, amend or withdraw material contained herein.

5 Electronic filing

May 6, 2025

6

7 Re: WT Docket No. 25-110.

8

9 Dear Secretary,

10

11 IEEE 802 LAN/MAN Standards Committee (LMSC) thanks the Wireless Telecommunications
12 Bureau and the Office of Engineering and Technology of the Federal Communications
13 Commission for issuing a Notice of Inquiry (NOI) on promoting the development of positioning,
14 navigation, and timing (PNT) technologies and solutions and for the opportunity to provide
15 feedback on this important topic.

16

17 IEEE 802 LMSC is a leading consensus-based open standards development committee for
18 networking standards that are used by industry globally. It produces standards for networking
19 devices, including wired and wireless local area networks (“LANs” and “WLANs”), wireless
20 specialty networks (“WSNs”), wireless metropolitan area networks (“Wireless MANs”), and
21 wireless regional area networks (“WRANs”). Technologies produced by implementers of our
22 standards are a critical element for all networked applications today.

23

24 IEEE 802 LMSC is a committee of the IEEE Standards Association and of Technical Activities,
25 two of the Major Organizational Units of the IEEE. IEEE has about 460,000 members in over 190
26 countries and its core purpose is to foster technological innovation and excellence for the benefit
27 of humanity. IEEE is also a major accredited standards development organization whose standards
28 are recognized worldwide. In submitting this document, IEEE 802 LMSC acknowledges and
29 respects that other components of IEEE Organizational Units may have perspectives that differ
30 from, or compete with, those of IEEE 802 LMSC. Therefore, this submission should not be
31 construed as representing the views of IEEE as a whole¹.

32

33 **The 902 MHz to 928 MHz frequency band is extensively used by the Part 15 devices,**
34 **including IEEE 802.11ah²-based Wi-Fi HaLow and IEEE 802.15.4³-based Wi-SUN FAN, to**
35 **enable a thriving IoT ecosystem**

36

37 IEEE 802 standards-based devices, such as IEEE 802.11ah-based Wi-Fi HaLow and IEEE
38 802.15.4-based Wi-SUN Field Area network (FAN), have been operating in the 902 MHz to 928
39 MHz frequency band (collectively termed as 900 MHz band) under Part 15 rules, with applications
40 including door entry systems, environmental sensors, fire and security alarms, smart meters, smart-
41 parking devices, smart signs, streetlights, and structural integrity sensors. As an example, there
42 are estimated over 120 million smart electric meters⁴ deployed across North America.

43

44 Since sub-1 GHz frequencies have propagation properties such as range and wall/obstacle
45 penetration, it allows IoT sensors and other low power devices to operate efficiently. Therefore,
46 the 902 MHz to 928 MHz license exempt spectrum band is essential for Wi-Fi HaLow and Wi-
47 SUN FAN devices to continue to operate effectively.

¹ This document solely represents the views of IEEE 802 LMSC and does not necessarily represent a position of either the IEEE or the IEEE Standards Association or the IEEE Technical Activities.

² IEEE Std 802.11ah-2016, 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 - Amendment 2: Sub 1 GHz License Exempt Operation.

³ IEEE Std 802.15.4-2024, IEEE Standard for Low-Rate Wireless Networks.

⁴ Information derived from Guidehouse Global AMI Tracker 4Q23 research data.

48

49 In addition to the devices based on IEEE 802 technologies operating in this band, there is also
50 a large number of devices deployed in this band based on technologies such as SigFox, LoRa, and
51 other proprietary systems that cover a range of outdoor applications that include agriculture,
52 electric, gas and water meters (AMR), potable water towers, streetlights, Utility SCADA systems,
53 oil and gas processing and distribution monitoring, and wastewater monitoring and processing
54 stations.

55

56 In addition to the outdoor networks, myriad of consumer products such as cordless phones,
57 intercoms, sensors, toys, garage door openers, also operate in the 900 MHz band under the Part 15
58 rules.

59

60 **NextNav’s 5G Operation will cause excessive Interference to Part 15 Devices in the lower 900**
61 **MHz band.**

62

63 The NOI expressed an interest in “exploring options that rely or incorporate solutions provided by
64 NextNav Inc”. IEEE 802 encourages the development of complementary PNT technologies and
65 solutions that will not cause interference to other Part 15 devices in the band.

66

67 The RAIN Alliance, LoRa Alliance, Wi-Fi Alliance, Wi-SUN Alliance, and Z-Wave Alliance have
68 stated in their summary comment, “The impact on outdoor Part 15 devices is likely to be severe
69 ...”.⁵

70

71 Comments from the Wi-Fi Alliance titled “Impact of 5G Network Transmissions on Wi-Fi HaLow
72 Performance in the 902-928 MHz Band”⁶ clearly states “The results clearly show that 5G
73 operations in the Lower 900 MHz Band will effectively block the functionality of Wi-Fi HaLow
74 devices across large areas”.

75

76 ***Summary: NOI options that rely or incorporate solutions provided by NextNav Inc will cause***
77 ***excessive interference to Part 15 devices currently operating in this band, and will severely***
78 ***impact their operation..***

79

80 IEEE 802 commends the commission in leading the promotion of complementary PNT
81 technologies and solutions. Given that the solutions provided by NextNav Inc. will cause excessive
82 interference to Part 15 devices currently operating in the 900 MHz band and will severely impact
83 their operation, we respectfully request the commission to consider these adverse impact on the
84 current devices and services, and reject the option provided by NextNav.

85

86 Respectfully submitted

87

88 By: /ss/.

89 James Gilb

90 IEEE 802 LAN/MAN Standards Committee Chairman

91 em: gilb_ieee@tuta.com

⁵ In re: Promoting the Development of PNT Technologies and Solutions NOI, Docket No. 25-110, Comments of RAIN Alliance, LoRa Alliance, Wi-Fi Alliance, Wi-SUN Alliance, and Z-Wave Alliance (Apr. 28, 2025) [hereinafter 5A Comments], <https://www.fcc.gov/ecfs/document/1042817716000/1>

⁶ In re: Promoting the Development of PNT Technologies and Solutions NOI, Docket No. 25-110, Comments of Wi-Fi Alliance (Apr. 28, 2025) [hereinafter WFA Comments], <https://www.fcc.gov/ecfs/document/10428132781589/1>