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

|  |
| --- |
| Draft response to NextNav’s petition for rulemaking |
| Date: 2024-08-13 |
| Author(s): |
| Name | Company | Address | Phone | email |
| Dave Halasz | Morse Micro |  |  | dave.halasz@morsemicro.com |
| Pelin Salem | Cisco Systems |  |  | pmohamed@cisco.com  |
| Ben Rolfe | Blind Creek Associates |  |  | ben@blindcreek.com  |

This document drafts a proposed response to NextNav’s petition for rulemaking (WT Docket No. 24-240)

**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.

Electronic filing September 5, 2024

Re: WT Docket No. 24-240.

Dear Secretary,

IEEE 802 LAN/MAN Standards Committee (LMSC) thanks the Wireless Telecommunications Bureau and the Office of Engineering and Technology of the Federal Communications Commission for issuing a public notice on NextNav’s petition for rulemaking and for the opportunity to provide feedback on this important topic.

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

IEEE 802 LMSC is a committee of the IEEE Standards Association and of Technical Activities, two of the Major Organizational Units of the IEEE. IEEE has about 400,000 members in over 160 countries and its core purpose is to foster technological innovation and excellence for the benefit of humanity. IEEE is also a major accredited standards development organization whose standards are recognized worldwide. In submitting this document, IEEE 802 LMSC acknowledges and respects that other components of IEEE Organizational Units may have perspectives that differ from, or compete with, those of IEEE 802 LMSC. Therefore, this submission should not be construed as representing the views of IEEE as a whole[[1]](#footnote-1).

Please find below the IEEE 802 LMSC’s comments on this petition for rulemaking.

**Discussion: 902-928 MHz band is extensively used by the unlicensed Part 15 operations including Wi-Fi CERTIFIED HaLow   -- thriving IoT ecosystem**

Permitting NextNav operations at significantly higher power levels, higher OOBE, removing existing restrictions on M-LMS operations, expanding operations to Fixed and Mobile interference will potentially disrupt the operation of 100s of millions of currently deployed IoT devices using IEEE802 standards-based technology, including smart meters, streetlights, smart-parking devices, smart signs, environmental sensors, door entry systems, fire and security alarms and structural integrity sensors. . NextNav completely failed to demonstrate how coexistence with millions of Part 15 devices can be achieved, which will risk seriously impacting day-to-day operations of a wide range of applications, as well as impeding ongoing technological development and investments.

**Discussion: Other spectrum bands lack sub-1GHz propagation characteristics.**

Sub-1 GHz frequency has better penetration capabilities due to longer range and cleaner propagation spectrum due to less interference which allows sensors and low power devices to operate more efficiently. This band is necessary for proper coverage since there is no alternative spectrum available for the Part 15 devices currently occupying this band.

**Discussion: NextNav wrongly asserts that “Part 15 devices do not have any allocation status in the Commission’s rules“ (Petition at FN 65)**

Part 15 devices are allocated see § 2.106, pg 31

**Discussion: NextNav fails to recognize that the Commission’s rules clearly define “harmful interference” from Part 15 devices to M-LMS**

By proposing to suppress §90.361, NextNav seeks to eliminate carefully balanced coexistence arrangement

**Discussion: NextNav proposal to eliminate the testing requirements of current rule section 90.353(d) is without merit and contrary to public interest**

NextNav contradicts itself by arguing that “Coexistence between the NextGen system and unlicensed Part 15 operations should be achievable” while seeking to eliminate requirement for “field tests” to demonstrate such coexistence.

**Discussion: NextNav wrongly asserts “The Lower 900 MHz Band Is Underutilized Due to Outdated Service and Technical Rules”**

The 900 MHz band is widely used by systems such as Wi-Fi HaLow and Wi-SUN FAN, both using IEEE802 standards for their underlying technology. IEEE standards-based devices have been operating in this band for more than a decade, with estimated deployment exceeding 120 million devices across North America. In addition to the IEEE802 standards-based technologies deployed as WiFi HaLow and Wi-SUN FAN, as well as LPWAN technologies such as SigFox and LoRa deployments, there are millions of proprietary 900MHz systems deployed in large scale outdoor applications such as Utility SCADA systems, wastewater monitoring and processing stations, potable water towers, streetlights, electric, gas and water meters (AMR), oil and gas processing and distribution monitoring, agriculture, and many more. Approval of the changes petitioned by NextNav would require cities and towns to spend millions of dollars to migrate their existing systems to different technologies. This is a heavy and seemingly unnecessary burden to urban and rural communities both financially and organizationally in replacing existing systems which are currently meeting application needs. For some of these applications, there may not even be a a viable alternative available.

In addition to these outdoor network, in a myriad of wireless consumer products such as cordless phones, intercoms, sensors, toys, garage door openers, are deployed using the 902-928MHz band.  These products may not be able to coexist with the proposed NextNav deployments.

(*~References pending*)

Respectfully submitted

By: /ss/.

James Gilb

IEEE 802 LAN/MAN Standards Committee Chairman

em: gilb\_ieee@tuta.com

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. [↑](#footnote-ref-1)