September 20, 2024

Via ECFS

Marlene H. Dortch
Secretary
Federal Communications Commission
Washington, DC 20554

Re: Reply Comments, WT Docket No. 24-240 RM-11989, *WTB and OET Seek Comment on NextNav Petition for Rulemaking*

The Computer & Communications Industry Association (CCIA)[1] is pleased to provide these reply comments[2] regarding the NextNav Inc. ("NextNav") "petition for rulemaking requesting that the Commission initiate a proceeding to reconfigure the 902-928 MHz band (Lower 900 MHz Band) and adopt new rules to enable the deployment of a 5G terrestrial positioning, navigation, and timing (PNT) network[.]"[3] As the Commission is aware, CCIA has consistently supported efforts to ensure maximum use of our scarce spectrum resources, particularly in the 6 GHz and 12 GHz bands, so long as reasonably effective precautions are employed to prevent harmful interference within and between bands.[4] In this instance, however, the request to expand the set of authorized uses for the Lower 900 MHz Band does not seem amenable to sufficient precautions against harmful interference.

The record evidences a great deal of concern regarding NextNav's proposal to use the Lower 900 MHz Band for "a high-quality, terrestrial complement and backup to the U.S. Global Positioning System ('GPS') on which the nation relies[.]"[5] Comments are largely focused on two issues: (1) the assertion that the Lower 900 MHz Band is "underutilized";[6] and (2) NextNav has not conducted the necessary technical analysis to ensure that its proposed operations will not cause harmful interference to existing services in the Lower 900 MHz Band. CCIA will address these points in turn.

[1] For more than fifty years, CCIA has promoted open markets, open systems, and open networks. CCIA members employ more than 1.6 million workers, invest more than $100 billion in research and development, and contribute trillions of dollars in productivity to the global economy. The list of CCIA members is available at https://ccianet.org/about/members/.

[2] In the initial round of comments, CCIA joined the letter organized by the U.S. Chamber of Commerce (filed Sept. 5, 2024) ("Chamber of Commerce Letter").

[3] WT Docket No. 24-240, Public Notice, DA 24-776 (Aug. 6, 2024).

[4] *E.g.*, ET Docket No. 18-295 & GN Docket No. 17-183, Letter from Stephanie Joyce, CCIA, to Marlene Dortch, Secretary, FCC (filed July 31 2024) (supporting expanded authorization of low-power devices in 6 GHz band); WT Docket No. 20-443 & GN Docket No. 22-352, Letter from Stephanie Joyce, CCIA, to Marlene Dortch, Secretary, FCC (filed Aug. 9, 2023) (supporting authorization of 12.2-12.7 GHz and 12.7-13.25 GHz bands for broadband service).

[5] WT Docket No. 24-240, Petition for Rulemaking of NextNav Inc. at i (filed Apr. 16, 2024) (the "Petition").

[6] *E.g.*, Petition at ii, 1-2, 17.

The Lower 900 MHz Band Is Not "Underutilized"

The Lower 900 MHz Band supports "systems such as Wi-Fi HaLow, Wi-SUN, ZigBee and LoRa."[7] Millions,[8] if not billions,[9] of devices are currently using the Lower 900 MHz Band, including devices supporting critical infrastructures used for traffic control, weather monitors, distribution of utility services, toll collection, and natural disaster warning systems. One commenter, the PrePass Safety Alliance, lists 114 safety-oriented organizations and 25 U.S. military organizations that could be negatively impacted if the Petition's proposal were granted.[10]

In addition, the Lower 900 MHz Band supports myriad types of devices used by and for consumers. Smart home devices ranging from thermostats to security cameras[11] and video doorbells[12] to baby monitors[13] use the Lower 900 MHz Band. So do luggage-locator tags, self-checkout terminals in retail stores, and inventory systems.[14]

The docket also contains more than 500 initial comments from private citizens who oppose the Petition, including persons who have amateur radio operations in the Lower 900 MHz Band[15] and persons who rely on "the operation and accessibility of decentralized communication networks like Meshtastic" that operate in this Band.[16]

The record thus appears to soundly refute the assertion that the Lower 900 MHz Band is "underutilized." The scores of services described in detail by commenters like the LoRa Alliance and PrePass Safety Alliance should be taken closely into account. That so many services and devices for preserving public safety and home security rely extensively on the 900 MHz Band could be in itself grounds for denying the Petition.

The Petition Fails to Demonstrate that the Proposed Use of the Lower 900 MHz Band Will Not Cause Harmful Interference

Several commenters note that the Petition fails to explain why introducing PNT/GPS

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[7] WT Docket No. 24-240, Comments of the Wireless Broadband Alliance at 2 (filed Aug. 31, 2024).
[8] WT Docket No. 24-240, Comments of Z-Wave Alliance at 10 (filed Sept. 5, 2024).
[9] WT Docket No. 24-240, Comments of the LoRa Alliance at 1, 9 (filed Sept. 5, 2024).
[10] WT Docket No. 24-240, Comments of PrePass Safety Alliance in Opposition to the Petition, Attachments (Military Uses of 902 to 928 MHz Band; Medical Uses of 902 to 928 MHz Band) (filed Sept. 5, 2024).
[11] Chamber of Commerce Letter at 2.
[12] WT Docket No. 24-240, Comments of the Open Technology Institute at New America, *et al*. at 14 (filed Sept. 5, 2024) ("OTI Comments") ("Globally, more than 1.4 million video doorbells were sold by Ring in 2020 alone."). More than 200 billion Radio Frequency Identification ("RFID") devices are in use, and it is predicted that RFID shipments will reach 115 billion annually by 2028. OTI Comments at 16.
[13] WT Docket No. 24-240, Comments of the Consumer Technology Association at 3 (filed Sept. 5, 2024).
[14] OTI Comments at 16.
[15] E.g., WT Docket No. 24-240, Comment of George Bednekoff, Submission ID 10905079504692 (Sept. 5, 2024); Comment of John W. Benedict, Submission ID 1090594577130 (Sept. 5, 2024); Comment of Christian Clark, Submission ID 10906058322033 (Sept. 5, 2024) ("Clark Comment").
[16] WT Docket No. 24-240, Comment of Sean Frost, Submission ID 1090445344066 (Sept. 4, 2024); *see also* Clark Comment.

operations into the Lower 900 MHz Band will not cause harmful interference. These operations require high-powered devices[17]—"two orders of magnitude more powerful" than devices presently using the Band, according to the Los Angeles County Metropolitan Transportation Authority[18]—that would cause more disruption than NextNav appears to appreciate. According to the Electronic Frontier Foundation, the proposed changes to the 900 MHz Band "would render the entire remaining band allocation nearly unusable for amateur radio and other innovative applications."[19] And because the degree of disruption has not been appropriately gauged, the Petition fails to allay the grave concerns of many interested parties regarding harmful interference in the Band. Even worse, the Petition was supplemented with a request "to eliminate the safe harbor for Part 15 unlicensed devices."[20]

Via what a few commenters call "cavalier hand-waving," the Petition obscures its failure to "present results from the required field testing or any other evidence to support" a conclusion that "coexistence is feasible" between the proposed PNT/GPS operations and existing Lower 900 MHz Band users.[21] LACMTA states, for example, that the impact of the proposed operations "on Metro's roadside antennas/readers an in-vehicle transponders have not been properly evaluated."[22] This failure to accurately set forth the technical implications of introducing PNT/GPS to this band militates against opening a full proceeding on the NextNav proposal.

Further, the record already suggests that, in fact, "coexistence" is not "feasible." The Edison Electric Institute states that "[i]nterference from NextNav's proposed PNT service … could jeopardize the accuracy and reliability of smart meter data."[23] The LoRa Alliance states that the proposed PNT/GPS operations would create "unacceptable levels of interference to LoRaWAN [long-range wide area network] devices" unless they were drastically restricted.[24] In general, PNT/GPS might not "allow Part 15 devices to operate in the 900 MHz band as they do today,"[25] which would contravene the Commission's long-standing commitment to ensure operations in the Lower 900 MHz Band "do not cause unacceptable levels of interference to part 15 devices.[26] Writ large, the relief that the Petition proposes would, according to the Z-Wave Alliance, "give NextNav free rein to saturate the Lower 900 MHz band with high-power traffic, drowning out low-power signals from millions of currently deployed devices."[27]

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[17] WT Docket No. 24-240, Comments of WiFiForward at 5 (filed Sept. 5, 2024) ("NextNav's proposed high-power system" will transmit at "power levels more than 600 times NextNav's existing 30-watt limit."); Comments of Z-Wave Alliance at 11 (filed Sept. 5, 2024) (NextNav would introduce "high-power traffic").

[18] WT Docket No. 24-240, Comments of the Los Angeles County Metropolitan Transportation Authority at 2 (filed Aug. 30, 2024) ("LACMTA Comments").

[19] WT Docket No. 24-240, Comments of the Electronic Frontier Foundation at 4 (filed Sept. 5, 2024).

[20] OTI Comments at 11.

[21] OTI Comments at 11.

[22] LACMTA Comments at 2.

[23] WT Docket No. 24-240, Comments of the Edison Electric Institute at 3 (filed Sept. 5, 2024).

[24] LoRa Alliance Comments at 11.

[25] WiFi Forward Comments at 5.

[26] DA 24-776 at 2.

[27] Z-Wave Alliance Comments at 10.

For such a young proceeding, the record is remarkably developed—and it is overwhelmingly opposed to the Petition. Commenters have shown that the technical parameters of PNT/GPS are unavoidably incompatible with the scores of existing operations in the Lower 900 MHz Band. Commencing a rulemaking on the requested relief—necessarily expending additional resources of interested parties and the Commission—is unlikely to result in a different conclusion.

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CCIA appreciates the opportunity to participate in this proceeding and is available to provide any additional information that might be helpful to the Commission.

Sincerely,

Stephanie Joyce
Chief of Staff and Senior Vice President
CCIA