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Via Electronic Filing

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Marlene H. Dortch, Esq.
Secretary
Federal Communications Commission
45 L Street NE
Washington, DC 20554

Re: *Wireless Telecommunications Bureau and Office of Engineering and Technology
Seek Comment on NextNav Petition for Rulemaking
WT Docket No. 24-240; RM-11989*

Dear Ms. Dortch:

The Consumer Technology Association (CTA)¹ writes in opposition to 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 that “complements and backs up” the U.S. Global Positioning System (GPS).²

Although NextNav is correct that GPS resiliency is critical to modern consumer technology, there are other paths for the public and private sectors to take to support GPS resiliency that would not jeopardize the millions of unlicensed devices in the Lower 900 MHz Band.³

Unlicensed Spectrum Is an Important Aspect of an All-of-the-Above Spectrum Approach. As the National Spectrum Strategy highlights, “America’s technological leadership has been

¹ As North America’s largest technology trade association, CTA® is the tech sector. Our members are the world’s largest innovators—from startups to global brands—helping support more than 18 million American jobs. CTA owns and produces CES®—the most powerful tech event in the world.

² Petition of NextNav for Rulemaking, WT Docket No. 24-240, at i (filed Apr. 16, 2024); Letter from Robert Lantz, General Counsel, NextNav, to Marlene H. Dortch, Secretary, FCC, WT Docket No. 24-240 (filed June 7, 2024) (collectively “Petition”); see also *Wireless Telecommunications Bureau and Office of Engineering and Technology Seek Comment on NextNav Petition for Rulemaking*, Public Notice, DA 24-776 (WTB OET rel. Aug. 6, 2024) (*Notice*).

³ See *Notice* at 4.

accompanied by a willingness to pursue ... policy ideas such as spectrum auctions, unlicensed spectrum access, and dynamic spectrum sharing.”⁴ Supporting current and future spectrum needs requires the continued embrace of a variety of licensing approaches (unlicensed, licensed, sharing) and bands (low, mid, high). In evaluating NextNav’s Petition, the Commission should recognize, consistent with CTA’s long-standing advocacy, that unlicensed spectrum is a critical element of innovation in the United States.⁵ Unlicensed spectrum has paved the way for numerous innovations and tremendous benefits to Americans, and unlicensed spectrum—including in the Lower 900 MHz Band—is critical to future innovations.

In opposing NextNav’s Petition, CTA has heard from a wide variety of members, including manufacturers, retailers and integrators who are opposed to any changes in the Lower 900 MHz Band that will materially impact their business. These companies, which are both small and large, have hundreds of millions of customers and employ over three million workers in the U.S.

The Lower 900 MHz Is an Innovation Band that Powers Innumerable Unlicensed Devices. Far from “underutilized,”⁶ the Lower 900 MHz Band is home to a huge variety of unlicensed devices and services, both new and old; it is an important complement to the higher throughput but shorter range of 2.4 GHz and higher unlicensed bands. For example, at CES 2024, innovators debuted numerous devices operating in the Lower 900 MHz Band, such as those using the Z-Wave and Zigbee standards to automate homes.⁷ The marketplace for Z-Wave products alone is estimated at nearly \$13 billion and projected to reach more than \$30 billion by 2031.⁸ Recent innovations also include the ability to connect devices over relatively long-distances with very low bandwidths, such as through Amazon Sidewalk.⁹ CES 2024 showcased Wi-Fi HaLow bringing

⁴ NTIA, National Spectrum Strategy, at 23 (Nov. 13, 2023), https://www.ntia.gov/sites/default/files/-publications/national_spectrum_strategy_final.pdf.

⁵ Letter from J. David Grossman, Vice President, Regulatory Affairs, CTA, to Marlene H. Dortch, Secretary, FCC, ET Docket No. 18-295 & GN Docket No. 17-183 (Feb. 7, 2022).

⁶ Petition at ii.

⁷ See, e.g., Kevin Purdy, *I was wrong to ignore Zigbee and Z-Wave. They’re the best part of my smart home*, Ars Technica (Feb. 12, 2024), <https://arstechnica.com/gadgets/2024/02/i-was-wrong-to-ignore-zigbee-and-z-wave-theyre-the-best-part-of-my-smart-home/>; Press Release, Z-Wave Alliance, *Z-Wave Alliance Kicks Off 2024 With New Members, Updated Educational Materials, And CES 2024 Presence* (Jan. 9, 2024), https://z-wavealliance.org/news_p/alliance-kicks-off-2024-new-members-updated-educational-materials-ces-2024/ (announcing that over 30 member companies exhibiting at CES 2024); Jennifer Pattison Tuohy, *Aqara’s new hub is a multi-protocol Matter powerhouse*, The Verge (Jan. 8, 2024), <https://www.theverge.com/2024/1/8/24028209/aqara-hub-m3-matter-controller-thread-border-router-ces2024>.

⁸ Pooja Tayade, *Z-Wave Products Market Analysis*, Coherent Market Insights (Feb. 2024), <https://www.coherentmarketinsights.com/market-insight/z-wave-products-market-6117>.

⁹ Amazon, Help & Customer Service, Welcome to Amazon Sidewalk, <https://www.amazon.com/gp/-help/customer/display.html%3FnodeId%3DGN9U5W9UZU2G5VBW> (last visited Aug. 31, 2024).

"crazy Wi-Fi range" to security cameras.¹⁰ The Lower 900 MHz Band is also used to read utility meters, operate drones, power toll transponders, power baby monitors, communicate over enterprise wireless handsets, provide correction signals for precision agriculture, and more.¹¹

CTA is concerned that the proposals in the NextNav Petition, including the reconfiguration of the band, increase in power levels, and the removal of certain testing requirements, could adversely affect the permissionless innovations currently in the band and those to come.¹²

GPS Resiliency Is Critical, and CTA Supports the Years-Long Efforts to Explore the Issue. GPS, and location-awareness in general, is central to nearly every aspect of daily life, including for access to first responders through 911, critical infrastructure, navigating our world, accessing content on our devices, and more. It is prudent that our nation explores GPS backup technologies, a process that the U.S. Department of Transportation has been studying for many years.¹³ CTA supports this goal and is agnostic as to which technology or technologies are used for GPS backup, but this resiliency should be achieved without interfering with tens of millions of existing unlicensed devices and future innovations.

Consumers, households and businesses around the country rely on devices and services using unlicensed spectrum in the Lower 900 MHz Band every day. CTA encourages the Commission to partner with federal agencies as well as other interested stakeholders that are exploring options to support GPS resiliency and work to find complementary PNT solutions that will not

("Amazon Sidewalk uses Bluetooth, the 900 MHz spectrum and other frequencies to extend coverage and provide these benefits.").

¹⁰ See *The Best of CES 2024*, WIRED (Jan. 10, 2024), <https://www.wired.com/gallery/best-of-ces-2024/>.

¹¹ See *Unlicensed Spectrum and the U.S. Economy: Quantifying the Market Size and Diversity of Unlicensed Devices*, CTA (Jan. 2022), <https://shop.cta.tech/collections/research/products/unlicensed-spectrum-and-the-us-economy-quantifying-the-market-size-and-diversity-of-unlicensed-devices> (enumerating hundreds of devices that use unlicensed spectrum, including 900 MHz).

¹² See Notice at 4.

¹³ See, e.g., Press Release, U.S. Department of Transportation, *U.S. DOT releases "Complementary Positioning, Navigation, and Timing (PNT) and GPS Backup Technologies Demonstration" Report to Congress* (Jan. 15, 2021), <https://www.transportation.gov/briefing-room/us-dot-releases-complementary-positioning-navigation-and-timing-pnt-and-gps-backup>; Press Release, U.S. Department of Transportation, *Department of Transportation Awards \$7 Million for Complementary Positioning, Navigation and Timing Technologies* (July 3, 2024), <https://www.transportation.gov/briefing-room/department-transportation-awards-7-million-complementary-positioning-navigation-and>.

interfere with the existing, vibrant consumer technology ecosystem in the Lower 900 MHz Band.¹⁴

Respectfully submitted,

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¹⁴ See, e.g., Department of Homeland Security, Science and Technology, *Positioning, Navigation, and Timing (PNT Program)* (last updated Dec. 26, 2023), <https://www.dhs.gov/science-and-technology/pnt-program>; GPS.gov, PNT Resilience, Resilience Through Responsible Use of PNT, <https://www.gps.gov/-resilience/#federal> (last visited Aug. 31, 2024).