

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D. C. 20554**

In the Matter of)	
)	GN Docket No. 25-110
Promoting the Development of Positioning,)	
Navigation, and Timing Technologies and)	
Solutions)	

To: The Commission

**REPLY COMMENTS OF ARRL, THE NATIONAL ASSOCIATION
FOR AMATEUR RADIO**

ARRL, the National Association for Amateur Radio, formally known as the American Radio Relay League, Incorporated (“ARRL”), submits these reply comments in response to the Notice of Inquiry (NOI) released on March 28, 2025 in the above-captioned docket. In its NOI the Commission sought public comment on specific actions that it can take to help identify and develop complements and alternatives to GPS with the goal of ensuring robust and reliable Positioning, Navigation and Timing (PNT) technologies and solutions.¹ Throughout the NOI the Commission emphasized that this is a “whole-of-government” effort to protect and improve PNT. The FCC has critical knowledge of the spectrum resource and is one of the multiple federal agencies working to protect, improve, and harden GPS and related PNT systems.

ARRL agrees that it is of urgent national importance that complementary PNT methods be developed and implemented in short order, and we commend the Commission for addressing these important economic and national security issues in a comprehensive and detailed manner that will

¹ *Promoting the Development of Positioning, Navigation, and Timing Technologies and Solutions*, Notice of Inquiry, WT Docket No. 25-110, FCC 25-20 (released Mar. 28, 2025).

benefit the national interest. We file these comments to highlight that the Commission, as the non-federal government spectrum expert among the agencies addressing PNT, should take the lead in intra-governmental discussions to explain spectrum limitations and implications to its fellow agencies where expertise is focused in non-spectrum related areas.

More specifically, ARRL strongly agrees with the many parties that point out in the record of this proceeding that, in working with its sister federal agencies on this issue, one of the Commission's primary goals should be to ensure that existing services already operating in the spectrum, such as in the crowded 902-928 MHz band, should not be disrupted by complementary PNT if equal or better means are available. Many *billions* of unlicensed devices are in use to provide hundreds of applications and functionalities to the American public, and the number of devices and the functionalities that they provide continue to grow.² These devices coexist with amateur radio operations in the 902-928 MHz band but they as well as amateur radio operations would be displaced if a 5G-like PNT service was authorized to use this spectrum.³

The record in this proceeding amply demonstrates that most PNT technologies and solutions would not employ this band, including some very effective ones that would use existing infrastructure and signals and would require little to no additional spectrum. Such solutions would not disrupt the millions of existing users in the 902-928 MHz band, and this benefit should be accorded significant decisional weight in considerations of the various technologies and solutions.

Many commenters have pointed to such systems in the record. For example, the National Telecommunications and Information Administration (NTIA), U.S. Department of Commerce, urged the Commission to "take into account the emergence of non-spectrum-based alternative or complementary

² See Consumer Technology Association, *Unlicensed Spectrum and the U.S. Economy: Quantifying the Market Size and Diversity of Unlicensed Devices* (dated January, 2022).

³ See *generally*, WT Docket No. 24-240, Wireless Telecommunications Bureau and Office of Engineering and Technology Seek Comment on NextNav Petition for Rulemaking, Public Notice, DA 24-776, 39 FCC Rcd 8695 (2024).

PNT technologies. These have the potential to lessen the demand for spectrum resources both for existing PNT systems and their foundational technologies, as well as to minimize or even obviate the need for more spectrum for new systems.”⁴

With regard to the 902-928 MHz band in particular that has been proposed for one specific type of PNT⁵, the Enterprise Wireless Alliance (EWA) concluded that: “... the NOI demonstrates that alternative solutions are available that could be implemented without requiring a wholesale realignment of an established band (902-928 MHz) that supports a wide variety of valuable services.”⁶ The International Bridge, Tunnel, & Turnpike Association set forth in detail how the 902-928 MHz proposal from NextNav “(1) would disrupt important licensed and unlicensed services in the Lower 900 MHz band; (2) is not necessary to achieve the NOI’s goals and unlikely to produce a workable GPS supplement according to PNT experts; (3) would impose economic costs that far outweigh its potential benefits; and (4) conflicts with the Commission’s spectrum policies and the Administration’s regulatory principles.”⁷

Among these and others, The U.S. Chamber of Commerce urged the Commission to “...focus on solutions that have been established do not adversely impact existing spectrum users.”⁸ The IEEE 802 LAN/MAN Standards Committee concluded that “... options that rely or incorporate solutions provided by NextNav Inc will cause excessive interference to Part 15 devices currently operating in this [902-928 MHz] band, and will severely impact their operation.”⁹ Similarly WISPA, The Association for Broadband Without Boundaries (WISPA) urged the Commission “...to give special consideration to the

⁴ U.S. Department of Commerce, National Telecommunications Information Administration, Comments at p.10 (filed April 29, 2025).

⁵ *Supra* note 3.

⁶ Enterprise Wireless Alliance, Comments at p.4 (filed April 29, 2025).

⁷ The International Bridge, Tunnel & Turnpike Association, Comments at p.2 (filed April 28, 2025).

⁸ U.S. Chamber of Commerce, Reply Comments at p.2 (filed May 10, 2025).

⁹ James Gelb, IEEE 802 LAN/MAN Standards Committee, Reply Comment, p.2 (filed May 6).

disruption to existing services that would be caused by the implementation of any particular PNT technology and solution, including the economic impact of compelling existing spectrum users to replace and/or rebuild networks and systems that provide valuable, even essential, benefits and services to the American public, as well as the potential disruption to or even loss of those services themselves.”¹⁰

ARRL strongly agrees with these and other parties that reached similar conclusions. We commend the Commission for initiating this proceeding to take a holistic approach to the problem and possible solutions thereto, rather than a piece-meal approach that might have led to systems that would unnecessarily use valuable spectrum with inferior results and take years longer to construct from scratch. The Commission is the civilian spectrum expert among the collection of agencies that are addressing this issue. We rely on the Commission to make clear the value of each megahertz of spectrum and the trade-offs in designating any particular band for the purpose of complementary PNT.

Respectfully submitted,

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¹⁰ WISPA, The Association for Broadband Without Boundaries, Comments at p.3 (filed April 29, 2025).