

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

In the Matter of

Promoting the Development of Positioning,
Navigation, and Timing Technologies and
Solutions

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WT Docket No. 25-110

COMMENTS OF THE WIRELESS INFRASTRUCTURE ASSOCIATION

The Wireless Infrastructure Association (“WIA”)¹ is pleased to submit these comments in response to the Federal Communications Commission’s (“FCC” or “Commission”) Notice of Inquiry on how it can support Positioning, Navigation, and Timing (“PNT”) technologies and solutions to complement the traditional GPS system.² As the Commission notes, the United States is a relative global outlier in our reliance on a single system for PNT services.³ Further, U.S. adversaries, including Russia and China, have already deployed complementary systems that could leave American activities both domestically and abroad vulnerable to bad actors attempting to disrupt GPS services.⁴ For this reason, and to support a robust and resilient PNT ecosystem, WIA supports the Commission taking steps to encourage the development of complements and alternatives to GPS that ensure access to reliable PNT information wherever it is needed.

¹ The Wireless Infrastructure Association (“WIA”) represents the businesses that build, develop, own, and operate the nation’s wireless infrastructure. Members include infrastructure providers, wireless carriers, and professional services firms that are responsible for telecommunications facilities around the globe.

² *Promoting the Development of Positioning, Navigation, and Timing Technologies and Solutions*, Notice of Inquiry, WT Docket No. 25-110 (rel. Mar. 28, 2025) [PNT NOI].

³ PNT NOI at 2.

⁴ *Id.*

PNT data is a critical input for public and national security along with many commercial and consumer operations. Whether navigating around a city, tracking shipments, or directing first responders to an emergency, these services have limited tolerance for errors and must be available 24/7, 365 days a year. Indeed, PNT data may be most needed on some of our worst days including responding to, or avoiding, emergencies. When this data is needed, there can be no excuses for degradation such as inclement weather or being in a hard to serve area. This is why it is so important to develop a robust ecosystem that is not vulnerable to a single point of failure.

As the Commission notes, PNT services can be delivered through a host of technologies including RF and non-RF solutions delivered through a combination of terrestrial and non-terrestrial based infrastructure, that each come with their own benefits and challenges.⁵ Through supporting a “system of systems” the Commission can ensure that even where one technology would struggle, alternatives are available to fill in the gaps. While satellites have historically provided the bulk of PNT services, new applications for terrestrial networks along with innovation in low- and medium-earth satellites have brought new solutions to market that can deliver PNT services more reliably in both accessibility and availability. In fact, WIA members such as NextNav have been delivering high-quality vertical location information utilizing terrestrial networks for several years now.⁶

Terrestrial options for PNT services are particularly key in ensuring a robust and reliable ecosystem. While satellites, particularly at higher orbits, provide expansive coverage, the technology also has inherent limitations—such as when delivering services in-building and in

⁵ PNT NOI at 9-14 (providing a survey of PNT solutions including terrestrial and non-terrestrial applications).

⁶ Gillian Smith, *FirstNet, Built with AT&T, Selects NextNav’s Pinnacle Service to Provide Critical Vertical Location Capabilities for First Responders*, NextNav (Feb. 8, 2021), <https://nextnav.com/firstnet-vertical-location/>.

urban canyons—that terrestrial options are well positioned to cover. Additionally, terrestrial PNT systems are often deployed on top of existing communications infrastructure which can reduce time and cost for deployment. Deploying on this infrastructure, which is designed to withstand all types of disruption, will further contribute to ensuring that PNT services are readily available all the time. By crafting rules that encourage these types of solutions the Commission can achieve its stated goal of supporting a system of systems that provide redundancy and reliability.

Some of the most critical users of PNT services, first responders, have provided their support for the FCC taking steps to develop a more robust ecosystem for GPS alternatives.⁷ WIA and its members support first responders across the country and recognize their critical input in deliberations like this to ensure rules and regulations are workable and support their mission. Accordingly, WIA associates itself with the comments of Arlington County Fire Department and the Nevada Department of Emergency Management and urges the Commission to give these recommendations due consideration.

WIA further supports the Commission undergoing a comprehensive review of GPS alternatives and taking reasonable steps to support a permissive and innovative ecosystem. This includes opening up candidate spectrum bands, on both experimental and permanent basis, for PNT applications where doing so would serve the public interest.

The Commission is undertaking important and necessary work in ensuring its rules support a resilient GPS ecosystem for domestic applications, including through supporting alternative PNT services to complement the existing GPS system. By supporting a variety of solutions, delivered by a broad array of technologies, the Commission can ensure that first responders, businesses, and

⁷ See Comments of Arlington County Fire Department, VA, WT Docket No. 25-110 (Apr. 22, 2025); Comments of the Nevada Department of Emergency Management, WT Docket No. 25-110 (Apr. 14, 2025).

consumers have consistent and reliable access to PNT information. WIA agrees that there is no silver bullet, and a resilient system of systems is the best approach to meet these needs.⁸ The Commission should adopt rules pursuant to recommendations in this docket that encourage innovation and allow multiple solutions to flourish.

Respectfully submitted,

/s/ Stephen Keegan

Senior Counsel, Government and Legal Affairs

WIA – The Wireless Infrastructure Association

2111 Wilson Blvd., Suite 210

Arlington, VA 22201

(703) 621-0525

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⁸ PNT NOI at 9, fn. 50.