

# ATIS Response to FCC Notice of Inquiry

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WSTS May 2025, Savannah





# FCC Notice of Inquiry (NOI)

ATIS submitted a response to a March 2025 U.S. Federal Communication Commission (FCC) Notice of Inquiry regarding Position, Navigation and Timing Technologies

***Promoting the Development of Positioning, Navigation, and Timing Technologies and Solutions, Notice of Inquiry, WT Docket No. 25-110 (Mar. 27, 2025)***



# ATIS

**ATIS is a global standards development and technical planning organization that develops and promotes worldwide technical and operations standards for information, entertainment, and communications technologies.**

ATIS' diverse membership includes key stakeholders from the Information and Communications Technologies (ICT) industry – wireless, wireline, and VoIP service providers, equipment manufacturers, broadband providers, software developers, consumer electronics companies, public safety agencies, and internet service providers. ATIS is also a founding partner and the North American Organizational Partner of the Third Generation Partnership Project (3GPP), the global collaborative effort that has developed the 4G Long-Term Evolution (LTE) and 5G New Radio (NR) wireless specifications. Nearly 600 industry subject matter experts work collaboratively in ATIS' open industry committees and incubator solutions programs.



# ATIS SYNC

**ATIS' input to the *Notice of Inquiry* reflects input from the ATIS Synchronization Committee (SYNC). Industry subject matter experts work collaboratively in ATIS' open industry committees, such as SYNC.**

ATIS SYNC develops and recommends standards and prepares technical reports related to telecommunications network synchronization interfaces. This includes those functions and characteristics necessary to define and establish synchronization between networks and areas concerned with network time/phase/frequency characteristics that require theoretical, analytical and empirical investigations to ensure that solutions meet the highest norms of technical integrity and completeness; and the interconnection of signals comprising network transport, including aspects of both asynchronous and synchronous networks.



# ATIS Response to FCC NOI

**In the *Notice of Inquiry*, the Commission seeks comment on alternatives and complements to the Global Positioning System (GPS) to develop a “system of systems” for Positioning, Navigation, and Timing (PNT) technologies.**

- ATIS supports the Commission’s efforts to improve PNT resiliency and has recommended steps for the Commission to act on regarding PNT resiliency and alternatives and complements to GPS.
- ATIS also notifies the Commission of its upcoming publication of a technical report on resilient timing architecture.



# Telecom Reliance on PNT

It is well known that both wireline and wireless telecommunication technologies, including 4G, 5G, and in the future, 6G, critically rely on Positioning, Navigation, and Timing (PNT) systems. Specifically, GPS plays a crucial role in wireless cellular systems, enabling a wide range of functionalities that improve network efficiency, enhance user experiences, and support critical services. GPS is used globally for accurate UTC (Coordinated Universal Time) time traceability, synchronization, and position location.

Since the advent of 2G, GPS has been an embedded technology that has enabled an evolving world of wireless communication. Over the last three decades, many innovations and adaptations have been employed to optimize and manage the reliability, resilience, and distribution of GPS timing receivers to synchronize telecommunication networks. GPS remains a vital element necessary to obtain and maintain maximum network performance.





# ATIS Recommendations (1)

As the United States confronts the challenges and threats facing GPS, complementary and alternative PNT (Positioning, Navigation, and Timing) methods are being actively explored to enhance resilience, reliability, and operational continuity in the event of disruptions. However, **no single alternative has been identified that can fully replicate the comprehensive PNT capabilities provided by GPS.**

Therefore, we urge the Commission and all relevant federal agencies to **prioritize the protection, maintenance, and advancement of the GPS system** and its associated RF spectrum to safeguard its critical role in national infrastructure and security



# ATIS Recommendations (2)

Regarding the national telecommunications sector, we urge the Commission and other U.S. federal agencies **identify and promote the adoption of multiple CPNT and APNT sources**. The adoption of multiple CPNT and APNT sources provides a variety of independent methods to the user to increase resilience. This is critical to safeguarding national infrastructure and ensuring reliable service for the vast population of enterprise and consumer users who depend on PNT-based applications, including E911 emergency response, asset tracking, general navigation, and a wide range of location-based services.





# ATIS Recommendations (3)

In response, the telecommunications infrastructure sector needs to transition beyond its current reliance on GPS and adopt a modernized timing architecture that incorporates: **1) multiple distributed sources of UTC** via resilient CPNT and APNT solutions, and **2) new and innovative time distribution** methods at local, regional, and national levels.

ATIS is preparing a technical report focusing on resilient timing architecture to outline and illustrate these concepts while exploring potential solutions. This technical report notes the telecommunications industry's dependence on GNSS, emphasize the vulnerabilities of GNSS that are of particular concern to the communications sector, and propose a resilient architecture for mitigating these risks. Once complete, this report will be made publicly available and sent directly to the Commission for its review and consideration.



Questions?