



Two Key Reports from NIST Frame U.S. Government Recommendations to Solve the Nation's Resilient Timing Needs

Reports highlight the suitability of STL from Satelles for reliable timing and as a key component of a resilient U.S. timing architecture

RESTON, Va., March 2, 2022 – Satelles, Inc. (www.satelles.com), innovative provider of highly secure satellite-based time and location services, today recognizes two reports published last month by the U.S. National Institute of Standards and Technology (NIST), the government entity responsible for maintaining the national standards for time and frequency in the United States in coordination with the United States Naval Observatory. The reports confirm Satellite Time and Location (STL) as a source of resilient time and describe its benefit as an element of the agency's recommendation for a resilient timing architecture.

"These well-researched and expertly prepared reports articulate the urgent and important requirement for having reliable timing sources beyond GPS," said Dr. Michael O'Connor, CEO of Satelles. "It's great to have STL categorized as one of the limited number of technologies available today with the performance specifications and operational characteristics to immediately meet the needs of critical infrastructure providers."

The first NIST report, "An Evaluation of Dependencies of Critical Infrastructure Timing Systems on the Global Positioning System (GPS)" ([NIST Technical Note 2189](#)), calls attention to the critical need for reliable time signals that are resilient to outages of GPS. It underscores that need by closely examining the timing requirements and dependencies of three critical infrastructure sectors that rely the most on precise time synchronization. The report describes multiple technologies that are available today to solve this critical need, including STL, a resilient, alternative PNT service from low Earth orbit (LEO) satellites that enterprise customers rely on as a primary timing source.

Specifically, NIST identifies STL as a resilient public access time distribution technology capable of microsecond accuracy. In confirming this finding, NIST states that "Due in part to the success of GPS, which has at least indirectly led to the demise of eLoran and other systems, only a small number of free public access time distribution systems remain that are under U.S. control." The report refers to STL as a commercial alternative.

A February 2020 presidential executive order encouraging the responsible use of positioning, navigation, and timing (EO 13905) includes multiple directives emphasizing PNT resilience, technological diversity, and urgency of action. "A Resilient Architecture for the Realization and Distribution of Coordinated Universal Time to Critical Infrastructure Systems in the United States" ([NIST Technical Note 2187](#)), is an essential deliverable from the executive order.

The second report from NIST fulfills an important part of the agency's obligation under the executive order to make available a GPS-independent source of Coordinated Universal Time (UTC) to support critical infrastructure owners and operators in the private and public sectors. The comprehensive architecture defined by NIST comprises technical descriptions and recommendations for bolstering national resilience by having multiple ways to realize and distribute UTC in the U.S.

NIST's architecture classifies STL as an indirect distribution source for UTC(NIST), meaning that critical infrastructure-protective applications can obtain accurate and reliable timing without using GPS by incorporating STL into a plan that comports with the responsible use of PNT. The agency based its findings on a thorough technical evaluation showing that STL is a reliable source of timing that is highly consistent with UTC(NIST) and is based on a signal that is resilient to regional outages of GPS.

"It is important for our customers to have the assurance that STL is fully capable of indirectly distributing UTC with a solution that's available right now," said Christina Riley, Vice President of Commercial PNT at Satelles. "Such a capability is not only a vital element of NIST's architecture to realize and distribute UTC but also a way for Satelles to help ensure the survivability and resilience of our national critical infrastructure."

Visit satelles.com/nist for more information about NIST reports that detail the performance of STL and collaborations between Satelles and NIST.

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About Satelles

Satelles provides secure time and location signals from low Earth orbit (LEO) that are resilient to regional outages of the Global Positioning System (GPS) and other Global Navigation Satellite Systems (GNSS). Satelles' Satellite Time and Location (STL) service safeguards against devastating attacks to GPS/GNSS capable of disrupting or disabling electrical grids, wireless communications networks, financial systems, and other private and public infrastructure in ways that seriously imperil the safety and security of our society.

Available anywhere on the planet, the STL service delivers assured positioning, navigation, and timing (PNT) via a satellite broadcast signal that is stronger and more secure than other solutions. The company delivers assured PNT at levels of stability, reliability, and trust required by commercial enterprises and government entities across a range of critical infrastructure, IoT, and cybersecurity applications. Satelles partners with device manufacturers to incorporate STL signal support into today's latest equipment, bringing the benefits of Satellite Time and Location to customers around the world.

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