

National Security Matters

Achieving National PNT Resilience

The UK has Transitioned from Strategy to Action The U.S. is Still Studying the Problem

In my Winter 2024 Defense Matters article (see “The UK Government’s National PNT Initiative Imitation — the Sincerest Form of Flattery — Time will Tell,” ION-Winter2024.pdf, pp 14-15), I questioned whether the UK’s National PNT ten-point plan would move beyond policy rhetoric to take steps to deliver meaningful, resilient PNT capability.

At the time, the UK’s strategy was dominated by phrases such as “develop a proposal” and “consider options,” raising concerns about downstream execution.

But just two years later, those concerns appear to have been unfounded, as the UK has transitioned from policy development to being well on its way to a substantially funded multi-year program in execution for the delivery of a National PNT Resilience capability.

The UK’s National PNT Office, within the Department for Science, Innovation and Technology (DSIT), has not only assumed a central role in the development of policy, but has stepped up to the challenge of broad agency coordination and implementation, achieving new levels of PNT resilience to mitigate the economic risks associated with PNT disruption across the UK.

This is being accomplished at a pace that should, at the very least, be commended, and now (turning the tables from my earlier article) should serve as a model for the U.S. to imitate.

UK Government’s Approach

In November 2025, the UK government committed to nearly \$200 million (£155 million actual) in funding for resilient PNT initiatives, adopting a system-of-systems approach to address multi-domain, cross-government PNT use cases that the UK fully recognizes as a risk in the context of broad-scale PNT disruption.

This effort includes the establishment of

eLoran as a terrestrial UK backup to GNSS; investment in the National Timing Centre to establish a distributed national timing infrastructure; development of a nationwide GNSS interference monitoring capability to detect jamming and spoofing; and space-based timing R&D to obtain independent timing from space.

As part of this effort, the UK has established a fundamental guideline that the resulting capabilities must be delivered to meet international standards with a clear pathway to certification for safety-of-life services.

The decision to move forward with eLoran is particularly significant. For more than a decade, eLoran has been widely recognized within the PNT community as a viable terrestrial complement to GNSS. The UK has now moved beyond debate and into deployment of eLoran as a cornerstone of its National PNT Resilience system.

In their efforts to do this, the UK is planning to build a national eLoran configuration with six transmitting stations interconnected via a fiber-based timing distribution network, augmented by a resiliency component from a space-based augmentation system.

Equally important to the eLoran effort is the UK’s commitment to develop a sovereign timing capability. The National Timing Centre is being developed as a distributed, terrestrial timing architecture capable of supporting critical infrastructure independent of GNSS.

This directly addresses the ever-growing awareness that reliance on space-based timing, for everything from telecommunications to financial systems, is a major vulnerability in critical infrastructure, with potentially catastrophic economic consequences if not protected from disruption.



Doug Taggart
President
Overlook
Systems
Technologies, Inc.
and ION Fellow

In short, the UK has done something the U.S. has struggled to do: elevate PNT to the level of protected national critical infrastructure rather than treating it as a supporting utility.

Here in the U.S., despite years of analysis and bureaucratic handwringing, we have yet to take prudent steps to treat PNT with that same level of importance.

Actions, Not Intentions

Returning to my Winter 2024 ION Newsletter article, I stated toward the end of the article that “talk is cheap, but actions are what count.” That observation has only grown more relevant.

The UK has moved from acknowledging the problem to funding and fielding solutions. It has committed to terrestrial PNT, sovereign timing, and integrated national resilience—not as future options, but as current programs of record.

Here in the U.S., by contrast, we remain caught in never-ending cycles of analysis without execution—reaching the point where everything regarding the need for a diverse U.S. National

PNT architecture has been said, but not everyone has said it.

This is no longer simply a matter of technological leadership; It is a matter of national security posture.

There is no denying that PNT underpins a broad array of national security functions. From military operations to financial systems, telecommunications, energy distribution, and emergency services, all rely on PNT without question. To rely on a single, vulnerable PNT source from space, no matter how advanced, is to accept undue risk at a national scale.

Clearly, the UK has reached that conclusion based on its actions. Here in the U.S., we have articulated it, but we have failed to act.

This is a profound shift for the UK. It reflects an understanding that resilience is not achieved by simply hardening GPS, but by diversifying PNT sources and ensuring they are operationally integrated.

The UK is also moving aggressively on industry engagement and standards. The

UK National PNT Office has launched initiatives to drive its adoption, including a national call for evidence to inform a PNT growth strategy, and is collaborating with industry to define resilience best practices.

It is also working with international partners to advance cooperation on a European eLoran Alliance beyond the UK.

Taken together, these developments demonstrate that the UK is no longer “admiring the problem.” It is actively building a national PNT enterprise that is sovereign, layered, and increasingly operational.

In doing so, it has arguably taken a more aggressive and coherent approach to national PNT resilience than the U.S. has achieved over the past two decades.

By that measure alone, the UK is no longer following, it is setting the pace and providing an example the U.S. should now move urgently to emulate. 🌟



Save
The Date



JOINT NAVIGATION CONFERENCE 2027

JUNE 7-10, 2027

Northern Kentucky
Convention Center,
Greater Cincinnati Area

www.ion.org/jnc