



Communications and External Relations Subcommittee US National Space-based PNT Advisory Board

Subcommittee Mandate:

- *User & industry outreach*
- *Messaging to U.S. public*
- *Inform & educate government stakeholders*

CER Subcommittee	
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Member	Pat Diamond

National PNT Advisory Board – November 2022 Recommendation – White House Summit: Future GPS & PNT Infrastructure for National Security & Economic Growth (50 years on)

• **Finding:**

- GPS is America's gift to the world – first approved 1973.
- The PNT services it provides are fundamentally embedded in our national security and the successful functioning of our economy.
- China's BeiDou system and the EU's Galileo surpass US PNT in both resilience and capability.
- Adversaries are able to deny GPS service to America.
- GPS & PNT modernization requires holistic systems approach, including protecting signals, toughening receivers, and augmenting services.
- Needed technologies are mature and readily available.
- U.S. Government efforts appear disparate and unfocused. Industry cannot fill gaps without clearer government leadership and support.
- PNT decision-making authority is diffuse and lacks a clear locus of leadership.

• **Recommendation:**

- Convene a White House summit celebrating U.S. achievements with GPS and launch new era of innovation and prosperity.
 - Goal: Sharpen, improve agility of PNT governance
 - Goal: Facilitate, enable, direct implementation of systems approach to resilient National PNT Architecture

• **Reason for Recommendation:**

- GPS & PNT services are essential yet face significant threats.
- Enormous economic benefits (services, device manufacture, R&D, new applications, ex: autonomy, spectrum efficiency)

• **Consequences of No Action on the Recommendation:**

- U.S. competitiveness suffers; U.S. leadership in PNT technology will be unsustainable.
- U.S. becomes increasingly vulnerable to GPS and/or PNT disruption impacting infrastructure, economic activity including supply chains.





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GPS at 50 Celebration

- More agile governance
- National Resilient PNT Architecture



Celebrating GPS 50th Anniversary

Recommitting to U.S. Leadership in Positioning, Navigation, & Timing

Bottom Line Up Front: This year marks the 50th anniversary of the Global Positioning System program. In December 1973 the Defense Systems Acquisition Review Council (DSARC) gave the U.S. Air Force approval to proceed with the development of the ~~Navstar~~ Global Positioning System (GPS).

GPS has provided America and the world innumerable and incalculable benefits. It has also been a symbol of America's strength and global leadership for decades.

Recommitting to U.S. positioning, navigation, and timing (PNT) leadership must be a key public policy objective in an era of great power competition.

A visible celebration of the 50th Anniversary of GPS will remind Americans and the world what GPS has done for humankind and must serve as the catalyst to elevate global PNT leadership to its proper place in our national policy agenda.

Opportunities at GPS 50 celebration to highlight:

- Fighting climate change with GPS
- Women & minorities' historic & ongoing contributions to GPS (ex: Gladys Mae West)
 - International cooperation & engagement around GPS & Global Navigation Satellite System issues (GNSS)
 - GPS as the progenitor, inspiring other GNSS & multiple augmentations
 - International cooperation on GNSS at United Nations & peaceful engagement
 - Benefits of GPS for entire planet population regardless of nationality, etc.
- Vice President role leading space issues through Space Council
 - Planning for the next 50 years of GPS & U.S. leadership in PNT
 - Leading whole of government effort to execute national GPS & PNT policy, ensure U.S. leadership & competitiveness in key cyber, information technology (IT), infrastructure areas (see attachment 4).
 - Supporting a key element of national security, economic growth, & international cooperation.

Reminding America & the World

GPS has brought innumerable benefits to the nation and the world.

This has made it a pillar of America's soft power and global leadership for 40 years.¹ Other nations have taken note. Some are attempting similar successes and challenging our leadership with their own GNSS and PNT systems.²

¹ In September 1983 President Reagan authorized GPS for civil use after the downing of KLA Flight 007 by the Soviet Union.

² China's BeiDou: New Dimensions of Great Power Competition, Harvard Belfer Center, February 2023

GPS' outstanding record of performance has made it a silent utility that is taken for granted by most users.

The celebration must highlight important contributors to GPS, its many important benefits, and recommit the nation to providing leadership for GPS & American PNT going forward.

More Focused and Agile Governance

GPS is a "dual use" technology key to both national security and economic prosperity. It is a key utility in IT and cybersecurity, transportation, economic development, and sustainment of day-to-day life in the homeland.

As such, GPS and American PNT requires a whole-of-government approach led by focused, agile day to day leadership addressing the countless issues impacting its utility, reliability, and security.

The greatly improved awareness generated by the celebration should engender improvements to governance for the next 50 years of GPS and U.S. PNT leadership and competitiveness.

A National Resilient PNT Architecture

American leadership and competitiveness in PNT, and the countless technology and applications it supports, will require a comprehensive system of systems approach.

The nation requires reliable, robust, resilient PNT for the next 50 years so that the "silent utility" remains just that, verses a series of challenges to be overcome.

The celebration should engender coordination of public and private PNT efforts resulting in a resilient national PNT architecture that will ensure military and civilian users have services whenever and wherever needed.

Recommendations

Convene a White House summit celebrating U.S. achievements with GPS and launch new era of innovation and prosperity. The summit should:

- Raise awareness of GPS' contributions and importance to America and the world,
- Lead to improvements in the agility of PNT governance by assigning a senior responsible federal official, and
- Lead to implementation of a systems approach to a resilient national PNT architecture to underpin national security and economic prosperity.

Attachments:

- 1) Potential agenda items for GPS 50th Anniversary Summit
- 2) GPS, an Essential but Silent Utility
- 3) GPS, PNT and Great Power Competition
- 4) Some necessary steps for global PNT leadership
- 5) Brief GPS & PNT Policy History
- 6) "What's the economic impact of GEO services?" - ~~Oxera~~ for Google, 2013 (excerpt)
- 7) "Putting the U.S. Geospatial Services Industry on the Map" Boston Consulting Group, 2012 (excerpt)
- 8) "White House Summit - Future GPS & PNT for National Security & Economic Growth (50 years on) - PNT Advisory Board Recommendation, November 2022

National PNT Advisory Board – May 2023 Recommendation –

EXCOMM provide feedback on recommendations w/in 90 days

- **Finding:**

- The PNT Advisory Board has made many recommendations to the EXCOMM since its establishment in 2004
- Some recommendations have been implemented, some not. The board has occasionally received informal verbal feedback on its written recommendations
- Board deliberations could be improved if it better understood the administration's response & rationale to recommendations

- **Recommendations:**

- EXCOMM provide a written response to board recommendations within 90 days of them being submitted.
- NCO to examine records & compile a list of all board recommendations since its founding & provide to the board.

- **Reason for Recommendations:**

- PNT Advisory Board deliberations & subsequent recommendations will be improved w/ better feedback fm EXCOMM
- Understanding previous recommendations will inform future deliberations, discussions, recommendations

- **Consequences of No Action on the Recommendation:**

- Much less effective PNT Advisory Board deliberations & service to EXCOMM



Wither goest?

