OST-R
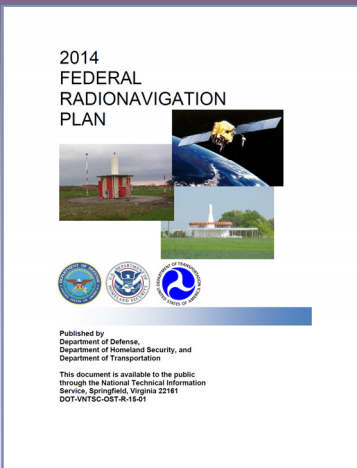### Office of Positioning, Navigation and Timing (PNT) & Spectrum Management

"Advancing PNT and Spectrum Policy and Research"

2014 FEDERAL RADIONAVIGATION PLAN

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Office of Positioning, Navigation and Timing (PNT) & Spectrum Management Program Overview

Civil Global Positioning System (GPS)/PNT Leadership

- Coordinate the development of departmental positions on PNT and spectrum policy and protection from harmful radio frequency interference and operational degradation of capabilities.
- Responsible for the development of requirements for civil applications from all United States Government civil Departments and Agencies.
- Represent the civil Departments and Agencies in the development, acquisition, management, and operations of GPS.
- Provide civil PNT systems analysis and coordination, including requirements development and architectural development.
- Represent the civil Departments and Agencies in Radionavigation Systems Policy, Planning, and Analysis via publishing of the Federal Radionavigation Plan (FRP), the official source of positioning, navigation, and timing policy and planning for the Federal Government.

## Spectrum Policy, Planning, and Analysis

- Coordinates spectrum policy among DOT modal administrations.
- Interacts with other Federal Agencies, including the National Telecommunications and Information Administration (NTIA) and Federal Communications Commission (FCC) to support national spectrum policy.
- Day-to-day responsibility for spectrum management is handled by the FAA for aviation and space transportation issues and by OST-R for cross-modal transportation issues such as PNT, as well as surface transportation.

Dedicated Short Range Communications (DSRC)

OST-R's Office of PNT and Spectrum Management works closely with the Intelligent Transportation Systems Joint Program Office (ITSJPO), Federal Highway Administration (FHWA), and the National Highway Traffic Safety Administration (NHTSA) to ensure access to spectrum designated for DSRC for ongoing deployments supporting safety critical communications such as Vehicle-to-Vehicle and Vehicle-to-Infrastructure applications.

For more information, please visit us at https://www.transportation.gov/pnt

U.S. Department of Transportation
Office of the Assistant Secretary
for Research and Technology
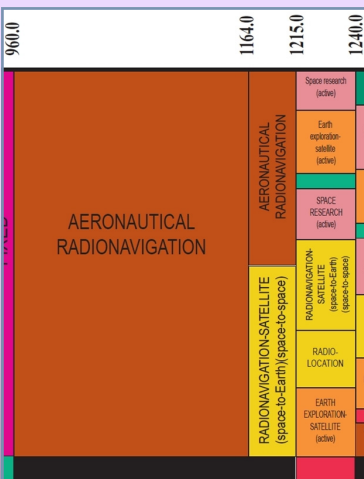
National PNT Architecture

The National PNT Architecture identifies recommendations to be implemented to overcome PNT capability gaps, predominantly resulting from the limitations of GPS. There are increasing occurrences of unintentional and intentional interference to GPS, including the potential for spoofing of the signal. DOT works closely with the Departments of Homeland Security and Defense to increase awareness of vulnerabilities of GPS, evaluate the impact, and to research complementary sources of PNT to increase resiliency for safety-critical transportation applications. DOT also coordinates research on new technologies to address emerging PNT needs for applications, such as autonomous vehicles, across all modes of transportation.
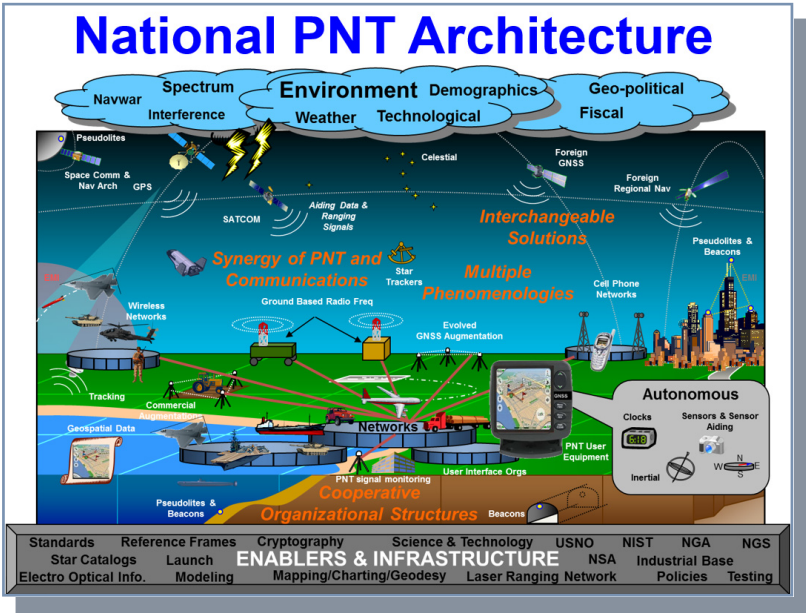
Civil GPS Service Interface Committee (CGSIC)

The Civil Global Positioning System Service Interface Committee (CGSIC) is the recognized worldwide forum for effective interaction between all civil GPS users and the U.S. GPS authorities. It was established and chartered to identify civil GPS user needs (e.g. navigation, timing, and positioning) and exchange information concerning GPS with the civil user community in support of DOT's civil GPS leadership role. OST-R chairs the CGSIC and the U.S. Coast Guard Navigation Center (NAVCEN) serves as Deputy Chair and Secretariat of the CGSIC.

GPS Adjacent Band Compatibility Assessment Study

The goal of the GPS Adjacent Band Compatibility Assessment Study is to evaluate the adjacent radio frequency band power levels that can be tolerated by GPS and Global Navigation Satellite System (GNSS) receivers and to advance the Department's understanding of the extent to which such power levels impact devices used for transportation safety and other civil GPS/GNSS applications.

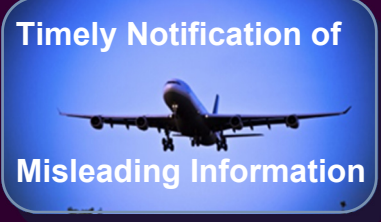### PNT Capability Gaps

Urban Canyon
ThinkStock

Jamming & Spoofing
U.S.DOT

High Accuracy With Integrity
ThinkStock

Timely Notification of Misleading Information
ThinkStock

Inaccurate and/or Out-of-Date Maps
ThinkStock