



**U.S. Department of Transportation**



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Transportation**

# DOT GPS Liaison Activities



**Dr. Andrew Hansen – SSC Liaison**

**Mr. Shawn M. Skalski – SpOC Liaison**



Our Purpose - Advancing transportation innovation for the public good.

## OUR CORE VALUES

- Public Service
- Innovative Solutions
- Collaboration and Partnering
- Professional Excellence
- Employee Well-Being



# Overview

## Space Systems Command Liaison

- **Resilient and Assured PNT Information Dissemination-Team**
  - Current iteration of the Information Dissemination Collaboration Team (IDCT) to open discussions between Civil organizations
  - Following the Support to Users of the NAVSTAR Global Positioning System MOA
    - Department of Transportation
    - US Coast Guard Navigation Center
    - Federal Aviation Administration Wide Area Augmentation System Operations
    - Department of Homeland Security Cybersecurity and Infrastructure Agency
    - Federal Communications Commission Operations Center
    - SpOC PNT Integrated Mission Delta
- **Objectives**
  - Development and publication of directives and procedures to facilitate the coordination of activities in the GPS radio frequency spectrum to ensure the DoD can test, exercise, and train as necessary to develop military PNT capabilities
  - Facilitate cooperation, implement procedures, and develop agreements for interagency sharing and coordination of GPS operational information
  - Ensure the proper sharing and coordination of information associated with US PNT systems operations, interference tests, exercises, training, and other PNT signal interference-related matters
  - Coordinate with military and civil agencies on the planning and execution of all tests that may disrupt PNT service
  - Develop an organizational structure and publish procedures for the C2 of the new GPS civil signals and capabilities

# Civil Signal Monitoring in the Enterprise

Space Systems Command Liaison

- Progress Toward GPS Enterprise Capabilities (3 gold stars on the roadmap!)
  - Supporting CGCX on OCX FQT/GDR and TRRO events
  - Participating in EIWG to coordinate MCS product distribution to USCG, FAA, DOT
  - Informing and reviewing DT/OT activities, e.g. IST 3-I test procedures
  - Coordinating with CGS on 4-SV PVT Event, to support CTX and SpOC TPRP
- CSMS Development, Architecture, and Implementation
  - Full Civil Signal Monitoring Performance Specification (CMPS) requirement set
  - CSMS Phase I CDR completed 22 Jun 2023: Baselined security, sensors, network, orbit determination, monitor processing, and user consoles
  - CSMS Phase I implementation, referred to as “d0”, supports DOT needs for LI C/A operations at CTX
  - Collaborative TATX support on Constellation Integrity (EN-3063) risk mitigation

# Overview

## Space Operations Command Liaison

- Coordination with HQ Space Operations Command (SpOC)
  - Working with the PNT Mission Area Team (MAT) and 2 SOPS on constellation management and recent anomaly events
    - Recent anomalies on SVN 79, 63, 44
  - HQ SpOC out-of-cycle GPS Constellation Sustainment Assessment Team (CSAT) – 27 July 2023
    - Final recommendation: Remove SVN 63 from the operational constellation and bring SVN 44 into the GPS constellation
  - PNT Integrated Mission Delta
    - HQ SpOC PNT MAT, 2 SOPS, and SSC CGG
- Coordinated efforts and discussions between 2 SOPS and FAA/WAAS Team
  - Discusses impacts to WAAS LPV-200 outages and RAIM impacts
- 4-SV PVT Test- HQ SpOC Trial Period Review Panel (TPRP)
  - SSC CGX is coordinating with the PNT MAT a second TPRP meeting for DOT to provide data-driven input ahead of the constellation transfer
  - Provides inputs to HQ SpOC's TPRP and the DOT/FAA concurrence/non-concurrence based on outcomes from 4-SV Test

# Overview

## Space Operations Command Liaison

- **Out-of-Band Navigation Message Authentication (OOB NMA) Requirements Modifications Proposal (DoD 1067)**
  - DOT providing funding to SSC
  - Working with SpOC on DoD1067 routing
- **AEP Inherent Mode Recovery DoD 1067 - Backwards Data Migration**
  - Rough Order Magnitude (ROM) created for SV memory dump capability
  - DOT providing funding to SSC
  - Working with SpOC on DoD 1067 routing

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# Questions?

## Contacts

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