U.S. Space-Based Positioning, Navigation & Timing (PNT) Policy Update

53rd Civil GPS Service Interface Committee Meeting
Nashville, Tennessee

Col Harold W. Martin III
Deputy Director
National Coordination Office
Overview

• Policy
• U.S. Space-Based PNT Organization
• Recent Space-Based PNT EXCOM Activities
• Outreach
National Space Policy, 2010

The U.S. must maintain its leadership in the service, provision and use of Global Navigation Satellite Systems (GNSS)

- Provide continuous worldwide access to GPS for peaceful uses, free of direct user charges
- Encourage compatibility and interoperability with foreign GNSS services
- Operate and maintain constellation to satisfy civil and national security needs
  - Foreign PNT may be used to strengthen resiliency
- Invest in domestic capabilities and support international activities to detect, mitigate and increase resiliency to harmful interference
U.S. Space-Based PNT Organization Structure

WHITE HOUSE

NATIONAL EXECUTIVE COMMITTEE FOR SPACE-BASED PNT

Executive Steering Group
Co-Chairs: Defense, Transportation

NATIONAL COORDINATION OFFICE
Host: Commerce

ADVISORY BOARD
Sponsor: NASA

Defense
Transportation
State
Interior
Agriculture
Commerce
Homeland Security
Joint Chiefs of Staff
NASA

GPS International Working Group
Chair: State

Engineering Forum
Co-Chairs: Defense, Transportation

Ad Hoc Working Groups
National Coordination Office (NCO) for Space-Based PNT

• **Director:** Dr. Jan Brecht-Clark, DOT
• **Deputy Director:** Col Harold Martin, DOD/AF

- Ken Alexander, DOT/FAA
- Maj Ben Calhoon, DOD/AF
- Robert Crane, DHS
- Anita Eisenstadt, State
- Rick Foote, DOC/NOAA
- Glenn Guempel, DOI
- Everett Hinkley, USDA
- Jason Kim, DOC
- Trent Skidmore, NASA
- Colleen Alexander, AGS
- Jim Burton, Overlook
- Steve Sidorek, Overlook

*Many new faces, strong continuity of mission*
National Space-Based PNT Advisory Board

• Provides independent advice/recommendations on PNT policy and management issues

• 25 members, including 5 international
  - Chair: Hon. James Schlesinger
  - Vice Chair: Dr. Brad Parkinson

• Met May 7-8 to discuss ways to measure and communicate economic value of GPS to our Nation
Recent EXCOM Activities

- PNT Critical Infrastructure Resiliency (CIR)
- U.K. Patent Issue
- Spectrum
PNT CIR

- GPS dependencies & next steps discussed 2010-2012
  - Cell phone towers
  - Power grid synchronization
  - NextGen
- Updated Guidance: February 2013
  - Presidential Policy Directive 21
  - Executive Order 13636
- Ongoing Interagency effort to address PNT CIR
  - National Infrastructure Protection Plan Framework
  - “All Hazards” approach
  - Jamming and spoofing of civil systems remain focus area
U.K. Patent Issue

• Interagency effort began in 2012
• January 2013 Joint U.S. and U.K. Statement
  - *U.K.* commitment to dedicate all patents relating to U.S. GPS civil signal designs to the public domain
  - *Joint* commitment to free/openly available GPS civil signals
  - *Interagency* commitment to follow-up actions
Spectrum

- **2010 & 2013 Presidential Memorandums**
  - 500 MHz broadband initiative, with sharing

- **LightSquared, Dish, Globalstar**
  - Multiple broadband companies with filings near GPS

- **National Advanced Spectrum & Communications Test Network (NASCTN)**
  - Facilitate and Coordinate: testing and evaluation of spectrum sharing capabilities

**Spectrum Protection Issues Continue for GPS and Have National-Level Attention**
Outreach

• GPS.gov
  – Mobile version of homepage and CGSIC section
  – Educational section

• Educational efforts
  – Developed & distributed new poster via National Science Teachers Association, Earth Science Week, etc. (22K+)
  – 4H Geospatial Summit

• Exhibits
  – Smithsonian, GPS Adventures

• International conferences
  – Moscow, IGC, APEC GIT, ION

• Newsletter for Capitol Hill
Summary

• GPS receives national-level attention and guidance
• U.S. policy upholds longstanding commitments to free, continuous, worldwide GPS access
• Spectrum issues continue for GPS
• Broad outreach efforts to promote understanding of GPS across America and beyond
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