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

52nd Civil GPS Service Interface Committee Meeting
Nashville, Tennessee

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

• U.S. Space-Based PNT Organization
• Policy and Issues Update
• Spectrum Update
• GPS.gov
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:** Anthony Russo, 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

- Dan Good, USDA
- Glenn Guempel, DOI
- Jason Kim, DOC
- Jim Burton, Overlook
- Steve Sidorek, Overlook

*Many new faces, strong continuity of mission*
• 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 Aug 14-15 to discuss ways to measure and communicate economic value of GPS to our Nation
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
Recent EXCOM Issues

• LightSquared Recommendation to NTIA
  – Testing showed harmful interference, FCC has not approved the proposed terrestrial deployment

• Interference Detection, Mitigation, and Reporting
  – Department of Homeland Security IDM activities

• Development of Spectrum Interference Standards
  – NTIA and DoT proposing various assessments to begin the journey
Spectrum Update

- January 2012: EXCOM letter to NTIA on test results
  - "Unanimous conclusion of the test findings ... proposed mobile network would cause harmful interference to many GPS receivers"
  - No practical solutions or mitigations
- February 2012: NTIA letter to FCC states NTIA conclusions
  - "it is clear that LightSquared’s proposed implementation ... would impact general/personal and certified aviation GPS receivers"
  - There are no mitigation strategies that solve the problem
- February 2012: FCC proposed to vacate conditional waiver
  - Would also suspend indefinitely LightSquared’s ATC authorization
  - Comment period closed 30 Mar 2012
  - No further action from FCC since that time

FCC Statement: “The Commission will not lift the prohibition on LightSquared”
Development of Spectrum Interference Standards

- EXCOM proposed to draft new GPS Spectrum interference standards
- NTIA beginning to discuss potential receiver standards to repurpose spectrum in the vicinity of GPS spectrum
- DOT planning assessment to develop spectrum protection criteria for GPS applications

*Spectrum Protection Issues Continue for GPS and Have National-Level Attention*
• NCO maintains GPS.gov as a central public resource for official USG information about GPS and related topics
• Recently consolidated PNT.gov website with GPS.gov
• Currently migrating CGSIC website to GPS.gov
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
  - Broadband priorities seek to squeeze efficiencies from already congested spectrum
  - Development of spectrum interference standards
- GPS.gov is an increasingly useful resource for information on GPS and related topics
Col Harold W. Martin III

National Coordination Office for Space-Based PNT
1401 Constitution Ave, NW – Room 2518
Washington, DC  20230

Phone: (202) 482-6726

Harold.Martin@pnt.gov
www.gps.gov