



---

# International Civil GPS Service Interface Committee (CGSIC) Meeting

Geneva, Switzerland

May 28, 2007

Richard Brancato

U.S. Department of Transportation

Research and Innovative Technology Administration



# Outline

---

- U.S. Space-Based Positioning, Navigation and Timing (PNT) Policy activities
- GPS modernization and status update
- U.S. GPS augmentation system updates
- Other PNT activities
- Conclusion



# U.S. Space-Based PNT Policy Activities

---

- National Space-Based PNT Executive Committee formed
  - Co-chaired by Deputy Secretary of Defense Gordon England, and Acting Deputy Secretary of Transportation Thomas Barrett
  - Providing senior guidance to the Executive Branch Departments and Agencies
  - Six meetings conducted since inception
- National Space-Based PNT Coordination Office established
  - Executive Secretariat for PNT Executive Committee
  - Director: Michael E. Shaw
  - Multiple planning activities and efforts underway
  - U.S. Space-Based PNT 5 Year Plan being developed



# Aspects of the U.S. Space-Based PNT Policy

---

- Increased role of civilian Departments and Agencies
- **DOT shall provide resources to DoD** for assessment, development, acquisition, implementation, operation, and sustainment of GPS III civil capabilities
  - DOT FY 08 President's Budget for GPS: \$7.2M
- GPS civil signal performance monitoring, augmentations, and ***other unique*** PNT capabilities will be funded by the ***agency or agencies*** requiring those services or capabilities



# GPS Modernization

---

- GPS Modernization continuing
  - All future GPS satellites will transmit both the L1 C/A and the L2C civil signals
  - GPS Block IIF will add the third civil signal (L5)
  - GPS Block III will add the fourth civil signal (L1C)
- GPS IIR-M satellite launches continuing
  - Next launch currently scheduled for August 30, 2007
  - Will add fourth L2C-capable satellite to constellation
- GPS III acquisition
  - Incremental acquisition strategy adopted to reduce risk
  - Source selection activities moving forward



# U.S. GPS Augmentation Update

---

- Wide Area Augmentation System (WAAS)
  - Expanding monitor stations into Canada and Mexico
    - Planned to complete by December 2008
  - Operational approval to 200' decision altitude (DA)
    - Technical feasibility established, implementation of the first LPV procedure to 200' DA planned for 2007
- Nationwide Differential GPS (NDGPS)
  - DOT's Research and Innovative Technology Administration (RITA) assumed program sponsorship
  - Interagency Policy Implementation Team meetings ongoing
  - RITA assessing current and future requirements for NDGPS and developing recommendation for long term management plan



# Other PNT Activities

---

- PNT Architecture Effort Ongoing
  - Co-chaired by DOT/RITA and DoD/NSSO
  - Final report due this summer
- International GNSS Activities
  - GPS/Galileo cooperation making significant progress towards interoperability
  - GPS/GLONASS cooperation continuing
  - International Committee on GNSS
  - International GPS augmentations and regional PNT systems continue to expand
    - EGNOS, GRAS, GAGAN, MSAS, QZSS, etc.



# Other PNT Activities (cont.)

---

- PNT vulnerability assessment updates underway
  - DHS Interference Detection and Mitigation Plan completed
  - DOT, in coordination with DHS reassessing GPS timing criticalities
  - GPS vulnerability assessment updates planned as well
- DOT Congestion Initiative
  - Secretarial effort to focus on utilizing new technologies and operating concepts to mitigate transportation congestion
  - Proof of concept demo planned for major U.S. metropolitan region
  - Strong PNT component envisioned
- Federal Radionavigation Planning
  - GPS SPS Performance Standard update in progress



# Conclusion

---

- Strengthened GPS modernization and management
  - More senior government visibility and guidance
  - Greater focus on civil aspects
- International GNSS harmonization work continuing
  - Achieving global interoperability is a worthy challenge
  - More work remains
- U.S continues to work with PNT stakeholders to ensure a PNT system-of-systems
- Importance of GPS and global PNT continues to grow
  - Reflected by amount of increased PNT planning and development