International Civil GPS Service Interface Committee (CGSIC) Meeting

Geneva, Switzerland
May 28, 2007

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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
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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