NPEF Civil Navigation (CNAV) Message Validation Task

Presented to: CGSIC
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NPEF CNAV Background

• Initial CNAV Testing
  – Test plan developed to outline how initial messages would be broadcast and monitored
  – Approach presented and discussed at the NPEF meeting in January 2013

• Evaluation of broadcast messages
  – First Live-Sky Test plan was established
  – Initial candidate messages broadcasted and evaluated with involvement of manufacturers and government
  – Daily updates to MT 10, 11, 30 and 31 started in December 2014

• Future efforts underway for additional Live-Sky tests of CNAV messages
  – Fifteen Message Types currently defined in the Interface Specifications
  – Optional messages include (12, 13, 14, 15, 31, 32, 35, 36 and 37)
NCO NPEF Task

- Prioritize the development and testing of remaining CNAV message types
- Task includes:
  - Validate need for candidate CNAV messages
  - Define specific application & associated ‘needs’
  - Identify importance or significance that would lead to prioritizing candidate message types
- Results will be used to establish priorities for development and test of CNAV messages
  - Cooperative effort between civil community (identify needed message types) & GPSD (perform message type testing & validation)
NPEF Status

• Teleconference on August 13, 2015
  – Broad participation by civil community as well as DoD organizations

• Discussion Items
  – Reviewed the origin of CNAV message development (RTCA input) and current status
  – Message type(s) identification & validation timeline
  – Utility of L5 as an independent stand-alone signal
  – Upcoming schedule for Live-Sky testing

• Path Forward
  – DOT/FAA to develop template for CNAV message type survey
    • In coordination with GPS Directorate
  – Civil Agencies to identify and determine CNAV message requirements
    • Review at next NPEF meeting in January 2016
  – Validate ‘need’ for L5 as standalone signal
  – Interim status review in October 2015
NPEF Status (cont)

- **CNAV Message Type (MT) survey**
  - Ensure civil community needs are properly defined and prioritized
  - Will request input on all optional MTs:
    - Describe the intended or envisioned application where the MT would be utilized
    - Provide an assessment of the significance or importance of the MT for the application
  - Solicit input on L5 as a standalone signal
QUESTIONS?