

Civil GPS Service Interface Committee (CGSIC)

**International Committee on GNSS
06-11 November 2016**



**Russell Holmes
CGSIC Deputy Chair
U.S. Coast Guard Navigation Center**





30th Anniversary of the CGSIC



- CGSIC Charter Civil GPS Service Interface Committee was chartered in 1986 to be the forum needed by civil users.
- Worldwide forum recognized for effective interaction between civil GPS users and U.S. GPS authorities.
- Established and chartered to identify civil GPS user needs (e.g. positioning, navigation, and timing).
- Used to exchange information concerning GPS with the worldwide civil user community.
- Reports activities to the Office of the Assistant Secretary for Research and Technology.



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SUPPORT:

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Meetings

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TAKE ACTION:



56th Meeting of the Civil GPS Service Interface Committee



**At the Institute of Navigation GNSS+ 2016 Conference
Oregon Convention Center
Portland, Oregon
September 12-13, 2016**



Agenda

(Updated September 13, 2016)

Jump to session:

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56th Meeting of the CGSIC

- **Adjacent Band Compatibility Assessment results:** *Ms. Karen Van Dyke, Committee Chair*
- **UTC Offset event Impacts to civil community**
<http://www.gps.gov/systems/gps/performance/2016-UTC-offset-anomaly-impact.pdf>
- **GPS Forensics:** *Mr. Matt Peterson, Robson Forensics*
- **GPS/GNSS Interference Mitigation:** *Mr. Jan Van Hees, Septentrio*
- **GPS and Time Synchronization in the Electric Industry:**
Ms. Alison Silverstein, North American SynchroPhasor Initiative (NASPI)
- **Using GPS Precise Point Positioning to Test the Theory of Relativity:**
Dr. Demetrios Matsakis, U.S. Naval Observatory
- **Space Weather Action Plan and the GPS/GNSS User Community:**
Mr. Robert Steenburgh, NOAA, National Weather Service
- **All presentations posted to www.gps.gov/cgsic**



Our Economy Depends on Critical Infrastructure, & Our Infrastructure Depends on GPS

- **Usage:** Accurate position, navigation and timing (PNT) information is necessary for the functioning of many critical infrastructure sectors
 - Precision timing is particularly important
 - Primary source of distributed and accurate timing is currently through GPS
- Just released a best practices document on the Dec 31 Leap Second.
<http://navcen.uscg.gov/pdf/gps/BestPracticesForLeapSecond12312016.pdf>
- Just completed first year of the Infrastructure Security and Resilience PNT Program Management Office, which is working to enhance resilience of PNT in critical infrastructure
 - New Director, New staff



**Homeland
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Science and Technology

Vulnerability Assessment & Awareness: WSMR Exercise Overview

- **Purpose:** Conducted live testing and demonstrations of first responder communications in electronic jamming threat environment provided by White Sands Missile Range, including:
 - First responder communications systems against commercial jamming
 - Anti-jamming technologies against commercial jamming
 - Satellite communications against commercial jamming
 - Unmanned Aircraft Systems (UAS) against DoD complex GPS and commercial jamming
 - Fixed timing receivers (used in critical infrastructure) against DoD complex GPS and commercial jamming
- **Outcomes:** Understand impact of electronic threats on first responder communications and mission operations; identify training gaps and mitigation strategies; and share lessons learned and best practices with first responders nationwide



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Awareness: Best Practices “Time & Freq Sources”

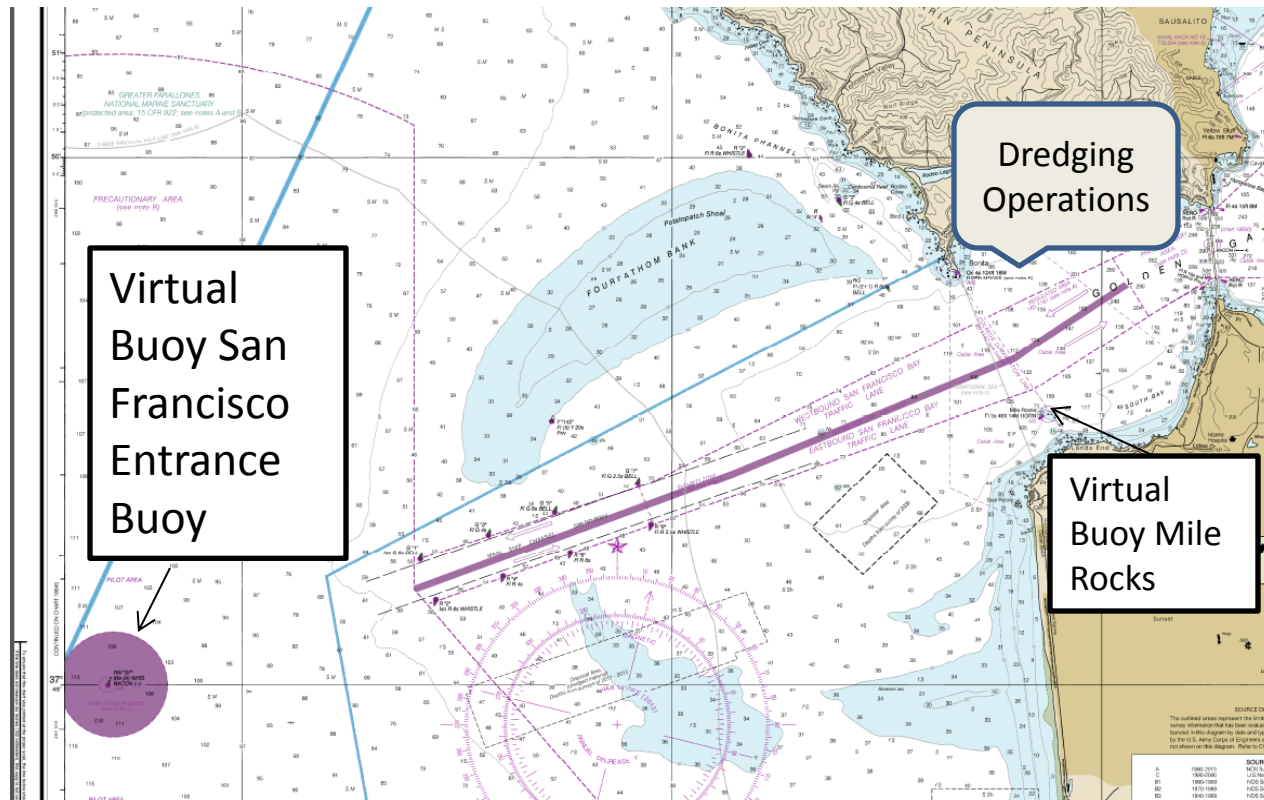
- Receiver Guidance:
 - “If the receiver has the capability, record average signal strength/Automatic Gain Control level once the stabilization is complete as a benchmark to be checked during routine maintenance.”
- Antenna Guidance:
 - “Place the antenna where it cannot be seen from publically accessible locations, or deny view of the antenna from public locations using an RF-transparent material... place the antenna where a roof line or structure blocks direct line of sight to the antenna from publically accessible locations.”



**Homeland
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Modernize Delivery of Marine Safety Information

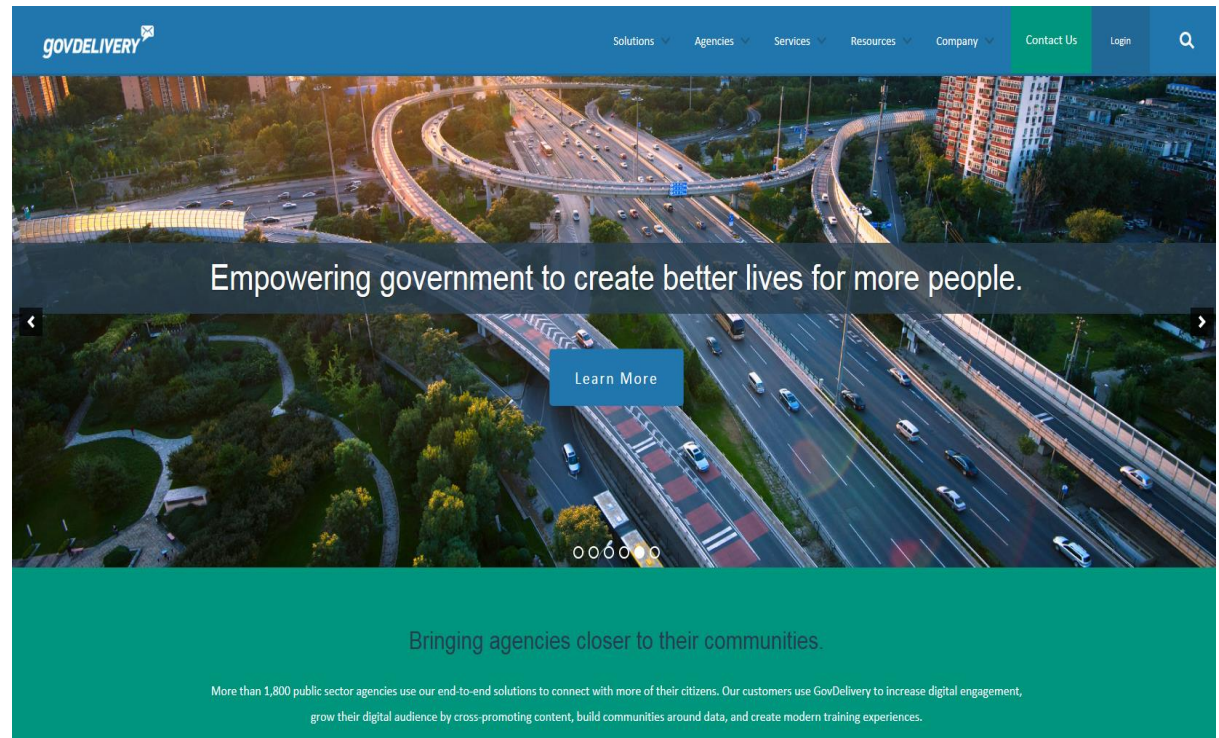


- Digital “virtual” buoy using Automatic Identification System (AIS)
- AIS-A = Required VHF identification broadcast for certain size commercial vessels and all passenger vessels

- Future efforts – Display maritime safety information on electronic chart/radar
 - Marine regatta (i.e. Americas Cup Racing)
 - Bridge operation instructions
 - Dredging operations
 - GPS authorized testing, etc.

List Server Transition to GovDelivery

- Major change in our service center role for GPS program information distribution (i.e.: GPS Almanacs, NANUs, and CGSIC list server messages)
- Our list servers are transitioning to GovDelivery with some new functionality that we are still learning about:
 - Automatic registration
 - Auto delivery
 - Web page tracking, etc.



Civil GPS Service Interface Committee (CGSIC) Contact Information

U.S. Coast Guard Navigation Information Service

<http://www.navcen.uscg.gov>

E-mail: nisws@navcen.uscg.mil

Phone: +1 703 313 5900

Fax: +1 703 313 5920

Executive Secretariat

E-mail: rick.hamilton@uscg.mil

