Presentation Overview

- NAVCEN Mission
- NAVCEN Functions
- LORAN Status
NAVCEN Vision & Mission

Vision: To enhance maritime situational awareness and be the premier navigation and maritime information source.

Mission: Deliver...
- enhanced situational awareness through continuous monitoring and management of vessel movement systems
- quality positioning, navigation and timing signals
- accurate and timely maritime information services
NAVCEN Functions

- Differential Global Positioning System (DGPS)
  - System monitoring & operation
  - Analysis

- GPS
  - Analysis & Prediction
  - Information Services
  - Interference, Detection & Mitigation

- Nationwide Automatic Identification System (NAIS)
  - System monitoring & operation
  - Analysis

- Other Vessel Tracking
  - Inland River Vessel Movement Center (IRVMC)
  - Long Range Identification & Tracking (LRIT) Help Desk

- Electronic Navigation
  - Chart Portfolio Management
  - Aids to Navigation Info System (I-ATONIS) system management

- Website development, maintenance, & support
- Civil GPS Service Interface Committee (CGSIC)
Current DGPS Coverage

Expansion of maritime differential GPS (DGPS) network to cover terrestrial United States
Built to international standard adopted in 50+ countries
GPS – Analysis & Prediction

Contour Legend
Metric: HDOF Max
Production Date: 05/06/2010 18:02:59
Almanac File: 126.A1.3
SOF File: 2010_126_135211_v02
PSF File: N/A

Scenario: NAUS 201008
Latitude Increment: 02° 00'
Start Time: 14 May 2010 00:00:00Z
End Time: 15 May 2010 23:59:00Z
Number of Channels: 4
Mask Angle: 5°
Altitude: 0 ft HAE
Signal Modulation: BPSK

PRN: 1 Outage: 24 Mar 2009 08:34:00 to Until Further Notice
PRN: 22 Outage: 14 May 2010 11:45:00 to 15 May 2010 02:15:00
Number of GPS Outage Reports/Inquiries

(*NOTE: 1997 is JUL-DEC and 2010 is JAN-MAR)
Nationwide Automatic Identification System (NAIS)

- **Increment 1**
  - Feeds from over 179 sites
  - Coverage of 63 critical port & 13 port areas
  - Maritime Domain Awareness info for Coast Guard, DOD and other govt agencies

- **Increment 2**
  - Enable transmit capabilities at 3 CG Sectors (initially)
  - Equipment installations underway
Inland River Vessel Movement Center

- 24/7 Live Watch at NAVCEN
- Covers more than 10,000 miles of D8/D9 inland rivers.
- 94 reporting points throughout the inland river system
- Track more than 36,000 Certain Dangerous Cargo (CDC) movements annually
- Provides Captain of the Port (COTP) with Maritime Domain Awareness
Long Range Identification & Tracking (LRIT)

- LRIT is a cooperative system that provides an added capability to track SOLAS class vessels (subject to the rule) globally.
- Requires Passenger & Cargo Vessels > 300gt on international voyage and mobile offshore drilling units to report identity, position, & time of position.
- Vessel position reports automatically sent to CG OSC in Martinsburg, WV.
eCharting/ATON Information Services

- Electronic Charting Standards and Regulations
  - CG Electronic Chart Manager as designated by the Navigator of the CG
  - Provide electronic charts and assistance to CG cutters and boat forces
  - CG Subject matter experts on e-charting
  - USCG liaison to NOAA, NGA and USACE and various International, National and technical standards bodies.
  - Provides 24X7 live help desk support to afloat assets covering chart data and Navigation System support
- Provide I-ATONIS management and support to USCG, NOAA, USACE, and NGA for near-real-time status of maritime ATON
Navigation Information Service (NIS)

• 24/7 NAVCEN point of contact

• Disseminate Information on GPS, DGPS, Loran-C, AIS, NAIS, LRIT Maritime Safety, Maritime Communications, Maritime Regulations & Local Notice to Mariners

• Over 130,000 Visits Per Month to the NAVCEN website

• 10,000 Email/List Server subscribers for GPS status, GPS advisories, and Local Notice to Mariners (LNM)
Civil GPS Service Interface Committee

- Represent civil interests to DOD GPS operations
- Reports to the DOT Positioning, Navigation, and Timing Executive Committee
- Conduct GPS info exchange & studies
- Meets once a year in plenary session
- Four subcommittees: International, Timing, Surveying & Mapping, U.S. States and Localities
LORAN-C Timeline

28 Oct 09: President signed 2010 DHS Appropriations Act
20 Nov 09: Commandant of the Coast Guard certified that the termination of the LORAN-C signal will not adversely impact the safety of maritime navigation
29 Dec 09: Secretary of Homeland Security certified that the LORAN-C system infrastructure is not needed as a GPS backup or to meet any other Federal navigation requirement
08 Feb 10: Ceased all US LORAN-C transmissions
01 Aug 10: Ceased all Russian-American LORAN-C transmissions
03 Aug 10: Ceased all Canadian-American LORAN-C transmissions
10 Sep 10: Decommissioned final US LORSTA (Nantucket)
LORAN-C Disestablishment Status

Time consuming dis-establishment process.

Real Property:  No property has been divested; all real property agreements remain in place

Towers:  Plan to drop 10 of 24 towers systems (end-of-service life or costly to maintain); dropped 3 tower systems to date (Port Clarence, Attu, Shoal Cove AK)

Frequency:  Retained frequency allocation; allowed temporary use for low-power medical device trial

Cesium Clocks:  Transferred to U.S. Naval Observatory

Transmitters:  Disposed of tube-type transmitters and control systems; solid state transmitters and control systems remain installed but secured