Federal Technology Coordination in Support of Navigation Safety
The National Strategy recommended the following actions:

- Coordinate existing Federal navigation technology services and programs to ensure collaboration, reduce duplication and standardize terminology and presentation;

- Deliver timely, relevant, accurate navigation safety information to mariners, including real time information systems such as the Physical Oceanographic Real Time Systems (PORTS), e-navigation, under keel clearance, High Frequency Radar, air gap technology, real-time current velocity systems at locks, and those associated with development of the Integrated Ocean Observing System to improve navigation safety and efficiency and reduce the risk of accidents;
Previous MTS Reports

• Have identified the need for **better coordination between Federal agencies**.

• **Supported combining technologies** like VTS, DGPS, ECDIS, radar and voice communications.

• Encouraged collaboration between federal agencies to share information to improve navigation safety.

• Identified **benefits** to be derived from providing accurate, real-time environmental information.
Navigation Technology IAT

• CMTS Coordinating Board established the Navigation Technology IAT October 2006.

• Coordination between CMTS Agencies for the integration of their technologies, data, and services to enhance navigational safety and efficiency.
Navigation Technology IAT – Focus

• Improved Delivery of Information

• Enhanced Safety - Improved Accuracy of Navigational Products

• Improved Efficiency – Data Sharing
Other Safety-Related Work Items

• Extension of the Physical Oceanographic Real Time Systems

• Federal strategy in support of E-Navigation

• Federal collaboration to create navigation “fairways” in the Arctic
CMTS - Navigation Technology IAT

- **Improved Delivery of Information**
  - USCG and NOAA collaborating on distribution of PORTS data through AIS
  - USCG and USACE collaborating on distribution of lock current meter information via AIS
  - USACE in collaboration with other Federal Agencies to develop CRIS (Coastal and River Information System)

- **Enhanced Safety - Improved Accuracy of Navigational Products**
  - USCG and NOAA collaborating on development of database of precise positions for aids to navigation
  - USACE and NOAA collaborating on the development and charting of precise channel limits and controlling depths

- **Improved Efficiency – Data Sharing**
  - USACE to provide NOAA digital depth survey data in standard data exchange format to update nautical charts
  - USACE and NOAA adopted a common standard for water level datums
  - USACE and NOAA collaborating on making wave data available to mariners via PORTS displays
  - NOAA/USACE/ and USGS to adopt common standards for the measurement of tides and currents
  - NOAA and USACE to collaborate on the development of VDatum (datum transformation tool).
  - USACE/NOAA/and Navy to develop and implement standards for bathymetric and topographic data collected with LIDAR technology.
Accuracy of Channel Depths
Improved

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INFORMATION IN THIS TABULATION HAS BEEN PROVIDED TO NOAA BY THE U.S. ARMY CORPS OF ENGINEERS. DEPTHS ARE REFERENCED TO A LOCAL DREDGING REFERENCE CALLED MEAN LOW TIDE. FOR AN APPROXIMATE CONVERSION TO MEAN LOWER LOW WATER, ADD 1 FOOT TO EACH DEPTH IN THE TABULATION.

NOTE - CONSULT THE CORPS OF ENGINEERS FOR CHANGES SUBSEQUENT TO THE ABOVE INFORMATION.
PORTS - Real-Time Navigational Information
AIS Transmission of PORTS Data
E-Navigation Task Team

Implementation of e-Navigation concepts.

- With the availability of large number of products and data sets to assist mariners in navigation safety the potential for user overload has increased.

- The goal of e-Navigation is to integrate existing and new navigational tools, in particular electronic tools, in a system that will contribute to enhanced navigational safety while simultaneously reducing the burden on the navigator.

- Task Team led by USCG will work with Federal partners to address overall strategy for developing e-Navigation
Arctic Navigation Fairways

Navigational Information for the waters of the U.S. in the Arctic Ocean and Bering Sea.

• Likelihood of significant increases to maritime traffic in the Arctic Ocean and Bering Sea

• The Navigation Technology IAT began investigating the development of shipping lanes to enable agencies to focus their scarce resources in those very short operating seasons to develop navigational products for safe transit.

• Project turned over to the CMTS Arctic IAT
Complementary Work

Research and Development Integrated Action Team

• Receive feedback from agency members and other CMTS teams to prioritize R & D needs of the marine transportation system. [http://www.cmts.gov/about.htm]
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