MARITIME DOMAIN AWARENESS

(111–82)

HEARING

BEFORE THE

SUBCOMMITTEE ON
COAST GUARD AND MARITIME TRANSPORTATION

OF THE

COMMITTEE ON
TRANSPORTATION AND
INFRASTRUCTURE
HOUSE OF REPRESENTATIVES

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U.S. House of Representatives
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December 8, 2009

SUMMARY OF SUBJECT MATTER

TO: Members of the Subcommittee on Coast Guard and Maritime Transportation

FROM: Subcommittee on Coast Guard and Maritime Transportation Staff

SUBJECT: Hearing on "Maritime Domain Awareness"

PURPOSE OF THE HEARING

The Subcommittee on Coast Guard and Maritime Transportation will meet on Wednesday, December 9, 2009, at 2:00 p.m., in room 2167 of the Rayburn House Office Building to receive testimony regarding the Coast Guard's ability to identify and preparedness to respond to security threats present in the maritime domain – particularly those associated with small vessels. The hearing will also examine the use of automated tracking systems to track vessels within the maritime domain.

BACKGROUND

I. Overview of the Maritime Domain

The maritime domain is defined as "all areas and things of, on, under, relating to, adjacent to, or bordering on a sea, ocean or other navigable waterway, including all maritime related activities, infrastructure, people cargo and vessels and other conveyances."[1]

The maritime domain includes the global Maritime Transportation System (MTS) – the networks through which international trade moves in the maritime realm. The MTS is defined as an "interconnected system of waterways, ports, vessels, people, support service industries, and users spanning the domestic and international public and private sectors."[2]

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[1] *National Plan to Achieve Maritime Domain Awareness* (October 2005), at 1.
[2] Department of Homeland Security (DHS), *Small Vessel Security Strategy* (April 2008), at 4.

According to the DHS's *Small Vessel Security Strategy*, the MTS contributes in excess of $700 billion to the nation's economy on an annual basis, a figure that constitutes approximately 20 percent of the foreign trade moved on the oceans and that makes the United States "the world's leading maritime trading nation."[3]

According to data compiled by DHS, in and around the U.S. maritime domain, there are:

- More than 95,000 miles of shoreline, 300,000 square miles of waterways, 10,000 miles of navigable waterways, 6,000 bridges, 361 ports of call including eight of the world's 50 highest volume ports, and thousands of marinas;[4]
- Offshore areas that supply 30 percent of the nation's oil and 25 percent of the nation's natural gas;[5]
- Annual port calls from nearly 8,000 foreign-flagged vessels;[6]
- 13 million recreational vessels; and[7]
- More than 110,000 commercial fishing vessels that contribute $35 billion to the nation's economy.[8]

Much of the U.S. critical infrastructure and key economic resources are also located near the maritime domain. According to DHS, nearly 85 percent of Americans live within 100 miles of a coast and U.S. coastal communities are home to more than 60 million jobs; these communities contribute approximately $4.5 trillion to the U.S. economy (nearly half of the nation's gross domestic product).[9] The consequences of a terrorist incident or a transportation security incident[10] launched from the maritime domain against a port, coastal area, or major piece of infrastructure could threaten the lives of millions of Americans and have a devastating impact on the U.S. economy.[11]

The Coast Guard defines maritime domain awareness (MDA) as "an effort to achieve an understanding of anything in the global maritime environment that can affect the security, safety, economy, or environment of the United States."[12] To achieve MDA, pertinent information must be collected, blended together to create a comprehensive picture of the domain, and effectively analyzed to produce timely information that can be used by decision makers to inform the national response to threats.

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[3] *Id.*, at 4.
[4] *Id.* and Government Accountability Office (GAO), *Vessel Tracking Systems Provide Key Information, but the Need for Duplicate Data Should Be Reviewed* (March 2009), at 1 ("GAO report on Vessel Tracking Systems").
[5] DHS, *Small Vessel Security Strategy* (April 2008), at 4.
[6] *Id.*, at 4.
[7] *Id.*, at 9.
[8] *Id.*, at 4.
[9] *Id.*, at 10.
[10] Pursuant to 46 USC § 701, a Transportation Security Incident (TSI) is defined as a security incident resulting in significant loss of life, environmental damage, transportation system disruption, or economic disruption in a particular area.
[11] According to the DHS's *Small Vessel Security Strategy*, the first five days of a lockout of dockworkers along the East Coast in 2002 resulted in a $4.7 billion loss to the U.S. economy.
[12] GAO report on Vessel Tracking Systems, at 13.

The Federal Government has the primary responsibility for achieving and maintaining MDA. Within the Federal Government, the Coast Guard – an agency within DHS – has the lead role in maritime homeland security. Additionally, the Department of Defense is responsible for integrating maritime intelligence to increase MDA, while the Federal Bureau of Investigation has the lead role in investigating maritime terrorist incidents. Other stakeholders involved in ensuring MDA include Customs and Border Protection (CBP), State and local law enforcement agencies, facility and commercial vessel operators and the general public, recreational vessel operators, and marina employees.

II. Vessel Tracking Systems

The United States did not begin actively tracking commercial vessels for security purposes until after the terror attacks of September 11, 2001. Importantly, the tracking efforts initiated in the United States have often built on the vessel tracking requirements promulgated by the United Nations' International Maritime Organization (IMO), particularly the International Convention for the Safety of Life at Sea, 1974 (SOLAS), as amended, which is the document establishing current international vessel tracking requirements. In addition to classified U.S. national vessel tracking systems, the two most widely used vessel tracking systems are the Automatic Identification System (AIS) and the Long Range Identification Tracking (LRIT). While both of these systems were initially developed to accomplish safety objectives – including facilitating search and rescue efforts and helping vessels avoid collisions – both are now widely used to track vessels for security-related purposes.

AIS

AIS is a short-range coastal tracking system that allows the transmission and receipt of a wide range of vessel-related information, including name, position, course, registration and other pertinent navigational information. Vessels equipped with AIS transponders electronically exchange data with other ships, Vessel Traffic Services, and land stations. AIS was developed as a collision avoidance system to supplement radars in Vessel Traffic Service areas in large ports.

There are two types of AIS transponders, Class A and Class B. Class A AIS transponders are high-powered devices capable of transmitting up to approximately 20 nautical miles. Class A transponders are required by the IMO for all vessels 300 tons or more on an international voyage and all passenger vessels regardless of size. Depending on a vessel's speed, Class A transponders transmit data every two to ten seconds while the vessel is underway and every three minutes while the vessel is anchored. Basic data on a vessel is provided with every AIS transmission, including the vessel's maritime mobile service identification (MMSI) number, speed, position, course, and heading. Every six minutes, AIS Class A transponders also transmit more detailed data on a vessel, including such data as vessel dimension, destination, and expected time of arrival.[13] A Class A transponder can cost up to $5,000 to acquire and the installation cost will vary depending on how extensively

[13] U.S. Coast Guard, *What AIS broadcasts* (http://www.navcen.uscg.gov/enav/AIS/what_AIS_broadcasts.htm).

the system is integrated with other existing shipboard systems such as the radar, rate of turn indicator, etc.[14]

Class B AIS transponders are lower-powered devices capable of transmitting from five to ten nautical miles and are intended to be used on recreational and smaller commercial vessels. Every six minutes, Class B transponders transmit vessel information such as the vessel's MMSI, vessel name, type, length, beam, and radio call sign. Additional information such as the vessel's speed, course, and true heading information is transmitted every three minutes if the vessel is traveling less than two knots, and every 30 seconds if the vessel is traveling over two knots.[15] The cost of a Class B transponder ranges from $600 to $1200.

AIS is an open and commercially available system; anyone who possesses the requisite receiving technology can track vessels using AIS. The Maritime Administration (MARDAD) uses AIS technology to support its data program entitled MarView, which allows MARAD to track vessels around the world and informs the agency's development of economic and other analyses of global shipping. Other entities, such as the maritime exchanges located in port communities, track vessels using AIS and provide information to subscribers.

The Coast Guard also utilizes AIS to track vessels. Utilizing commercially available AIS data provided by a contractor, the Coast Guard is developing the National Automatic Identification System (NAIS), which is expected to eventually be capable of tracking vessels located up to 2,000 nautical miles from the U.S. coast using AIS technology. The Coast Guard estimates that the NAIS program, which is being implemented in three stages, will be fully operational in 2014 at a total acquisition cost of $276 million.[16] In the first stage, the Coast Guard installed the equipment necessary to enable it to utilize AIS data to track vessels in 55 ports and nine coastal areas; the coverage developed in the NAIS Increment 1 phase extended approximately 24 miles from the shore and the data is observed by watchstanders in Coast Guard sector command centers.[17] The Coast Guard's NAIS is now operating in 58 U.S. ports and 16 coastal areas, ensuring that each Coast Guard Sector has at least one AIS receiver site.[18] The system receives 50 million AIS messages a day.[19]

The technology implemented in NAIS Increment 1 gives the Coast Guard the capacity to receive AIS data from vessels. Increment 2 will give the NAIS system the ability to receive signals from vessels up to 50 nautical miles from shore and to transmit information to vessels up to approximately 24 nautical miles from shore; Increment 2 will itself be implemented in two phases.[20]

Increment 3 will give the Coast Guard the ability to receive AIS signals from 50 nautical miles out to 2,000 nautical miles from U.S. shores. To achieve this, the program will

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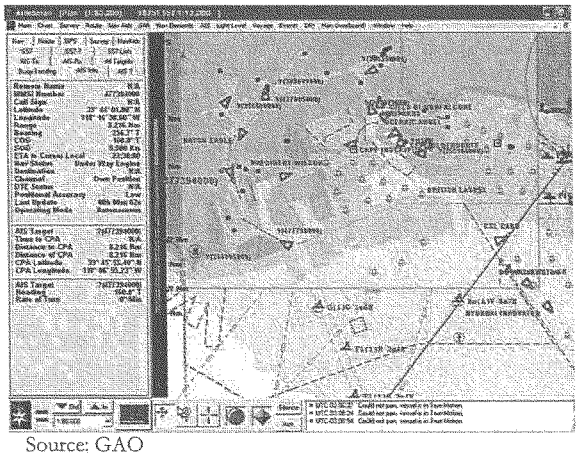
[14] U.S. Coast Guard, *Frequently Asked Questions* (http://www.navcen.uscg.gov/enav/ais/AISFAQ.HTM).
[15] "Breaking down the ABCs of AIS," Frank Kehr, *Soundings* (July 31, 2009) (http://www.soundingsonline.com/boat-shop/tech-talk/237842-breaking-down-the-abcs-of-ais).
[16] GAO report on Vessel Tracking Systems, at 8.
[17] *Id.*, at 26.
[18] U.S. Coast Guard, "Nationwide Automatic Identification System" (September 2009).
[19] *Id.*
[20] GAO report on Vessel Tracking Systems, at 28 and 29.

use technology from satellite communication services, data buoys, and Very High Frequency (VHF) services on offshore platforms.[21]

Vessel Traffic Service Screen View of AIS



Source: GAO

LRIT

LRIT and AIS are two different systems. Unlike AIS, LRIT is intended to be a secure system in which data transmissions are made in secure formats and national data centers ensure that the tracking information is available only to countries that are permitted to have the information. The LRIT and AIS systems have to be operational in order for the vessel information to be transmitted. Both of the systems will report a vessel's name and position, but AIS will provide more extensive information on a vessel's course and cargo.

In 1988, the IMO adopted a requirement mandating that all cargo and passenger vessels of 300 gross tons or more on an international voyage install automatic distress alerting satellite and radio-telephone equipment.[22] By August 1, 1993, vessels were required to carry satellite emergency position indicating radio beacons (EPIRBs) and search and rescue transponders (SARTs). Vessels subject to these requirements were also required to install Global Maritime Distress and Safety System (GMDSS) equipment by February 1, 1999.[23]

In 2006, the IMO amended SOLAS to require the creation of an international long range identification and tracking system that enabled vessels on international voyages to send periodic reports on their position so these vessels could be tracked by authorized

[21] U.S. Coast Guard, *Nationwide Automatic Identification System* (September 2009).
[22] GAO report on Vessel Tracking Systems, at 18.
[23] Safety of Life at Sea, Chapter IV.

governments. The amendment also required countries to create centers capable of receiving LRIT data and exchanging it with countries authorized to receive it.[24] That said, not all countries that are party to SOLAS have developed operational data centers and some are therefore currently incapable of exchanging LRIT data.

The LRIT system primarily uses the GMDSS equipment on vessels to transmit vessel identification and position information to satellite receivers. The satellites then transmit the information to ground stations which route it to a data center in a country where the vessel is registered. Data centers – which can serve single, regional, or a broad collection of countries – receive and transmit vessel information. Importantly, national data centers must be interconnected through an international data exchange to enable the authorized exchange of data to occur; while the IMO "mandated the creation of an international data exchange," it "did not address which country or international organization would be responsible for developing, operating, and maintaining the international data exchange or how it would be funded."[25] To fill this void, the Coast Guard is now operating the data exchange for the two-year period encompassing 2009 to 2010.

Countries authorized to receive LRIT information are those party to IMO's SOLAS (to which the United States is a party); however, authorization also depends on a country's relationship to the transmitting vessel (e.g., whether vessels are registered to that country) and the country's status as a port or coastal state. Flag states may purchase LRIT information on any vessel flying that country's flag, while port states may purchase information on vessels intending to call on their ports, and coastal states may purchase information on vessels that are up to 1,000 nautical miles off the country's shores.[26] The GAO reports that the Coast Guard has estimated that the LRIT program will cost $5.3 million in fiscal year (FY) 2009 and just over $4 million per year every year thereafter.[27]

III. Additional Tracking Systems

In addition to the AIS and LRIT systems, other Federal agencies involved in the regulation of some aspect of the maritime domain are using other systems to track specific types of vessels. For example, the National Oceanic and Atmospheric Administration's (NOAA) Office of Law Enforcement maintains a Vessel Monitoring System (VMS) that tracks nearly 6,000 small vessels engaged in commercial fishing activities.[28] This satellite-based system was created to monitor and track the position of drift-net fishing vessels on the high seas and monitor their compliance within fishing regulatory requirements.[29] The system is not available for public use to maintain the confidentiality of fishing positions but can be accessed by the Coast Guard to aid in the prosecution of search and rescue cases.

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[24] GAO report on Vessel Tracking Systems, at 5-6.
[25] *Id.*, at 23.
[26] *Id.*, at 22.
[27] *Id.*
[28] DHS, *Small Vessel Security Strategy* (April 2008), at 17.
[29] NOAA, *Leveraging Technology and the Vehicle Monitoring System* (http://www.nmfs.noaa.gov/ole/vms.html).

IV. Pleasure Boat Reporting System

Pursuant to 19 U.S.C. § 1433, the Pleasure Boat Reporting System, administered by CBP, requires operators of small pleasure vessels traveling from a foreign country to the United States, including those that visited hovering (loitering) vessels or received merchandise outside of U.S. territorial waters, to self-report their arrival to CBP immediately upon their arrival to the United States.[30] CBP will then direct the vessel to the nearest port of entry for an inspection (face-to-face) or will direct the vessel to the nearest designated reporting location for an inspection. CBP has an alternative inspection system that meets the face-to-face inspection requirement, but the boater is still required to report their arrival. To make boaters aware of the program, CBP personnel visit local yacht clubs and boat shows and post signs at marinas.. Although over 52,000 boats self-reported their arrivals last year, CBP estimates that only 10 to 25 percent of boats originating in foreign countries actually self-report their arrival.[31] The lack of self-reporting can likely be attributed to the lack of awareness among boaters originating in foreign countries of the reporting requirement; long wait and processing times to reach CBP personnel due to the limited number of operators taking the information; and inconsistent enforcement and limited consequences of the failure to report.[32]

V. Vessel Documentation and Registration

Pursuant to 46 U.S.C. § 12102, a vessel "may engage in trade only if the vessel has been issued a certificate of documentation with an endorsement for that trade." Chapter 12103 of title 46 specifies the conditions that a vessel must meet to receive a document; these conditions include ownership by an American citizen or association, partnership, or corporation that is American, and vessel size of at least five tons.

Vessels that are not documented but that have propulsion machinery of any kind must be numbered under 46 U.S.C. § 123. Numbers are issued by State authorities to boats that register with the State; some States also require boats that do not have propulsion machinery (such as canoes and kayaks) to apply for and receive numbers. According to 46 U.S.C. § 12304 (a), boats with propulsion machinery that receive numbers also receive a "pocketsized" certificate, which "shall be at all times available for inspection on the vessel for which issued when the vessel is in operation, and may be valid for not more than 3 years." Pursuant to 46 U.S.C. § 12305, boats that have received a number must have the number "painted on, or attached to, each side of the forward half of the vessel for which it was issued." According to 46 U.S.C. § 12309, willful violators of vessel numbering laws and regulations may be fined not more than $5,000, imprisoned for not more than one year, or both.

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[30] CBP, *Pleasure Boat Reporting Requirements* (April 28, 2007) (http://www.cbp.gov/xp/cgov/travel/pleasure_boats/boats/pleasure_boat_overview.xml).
[31] DHS Office of Inspector General (OIG), *DHS's Strategy and Plans to Counter Small Vessel Threats Need Improvement*, at 12.
[32] *Id.*

Chapter 131 of title 46 establishes a recreational boating safety program and authorizes the issuance of boating safety grants to the states. In accordance with 46 U.S.C. § 13103, to be eligible to receive a grant, a State must have:

1. A vessel numbering system;
2. A cooperative boating safety assistance program with the Coast Guard;
3. Sufficient patrols and other activities to ensure adequate enforcement of applicable State boating safety laws and regulations;
4. An adequate State boating safety education program that includes the dissemination of information concerning the hazards of operating a vessel when under the influence of alcohol or drugs; and
5. A system for reporting marine casualties.

Chapter 125 of title 46 requires the Secretary of Transportation to establish a vessel identification system that is to make available "for use by the public for law enforcement and other purposes" information on documented and numbered vessels, including information on vessel ownership (including the owner's social security number) or, for an owner that is not an individual, the owner's taxpayer identification number, as well as information on the state in which the vessel is titled and numbered. Since the implementation of the system in September 2007, 25 States, five territories, and the District of Columbia have signed Memoranda of Agreement to share their data on registered vessels with the U.S. Coast Guard.

VI. Radio Frequency Identification

Radio-frequency identification (RFID) is another mechanism proposed for the tracking of vessels. This system makes use of an antenna and electronic circuitry to store and transmit tracking information. An RFID transmitter is typically incorporated into an object (for example, small RFID chips are now routinely placed under the skin of cats to track them) in order to identify and track the object using radio waves; electronic toll collection systems such as EZ-Pass are also examples of the use of RFID technology.

VII. Laws Governing MDA

Following the terrorist attacks of September 11, 2001, Congress enacted three statutes to strengthen maritime security and maritime domain awareness.

The Maritime Transportation Safety Act of 2002 (MTSA) (P.L. 107-295) was the first Federal statute to require the tracking of vessels to improve safety in the U.S. maritime domain. The requirements of MTSA applied as specified below:

- On and after January 1, 2003 for the following vessels built after that date:
  - Self-propelled commercial vessels at least 65 feet in length;
  - Vessels carrying a certain number of passengers for hire as determined by the Secretary of Transportation;
  - Towing vessels more than 26 feet in length and 600 horsepower; and

- Any other vessel the Secretary of Transportation deemed appropriate to carry AIS for safe navigation.

➢ On and after July 1, 2003, for any vessel built before January 1, 2003 for:
- Passenger vessels carrying SOLAS certificates;
- Tankers; and
- Towing vessels engaged in moving a tank vessel.

➢ On and after December 31, 2004, for the following vessels built before January 1, 2003:
- Self-propelled commercial vessels at least 65 feet in length;
- Vessels carrying a certain number of passengers for hire as determined by the Secretary of Transportation;
- Towing vessels more than 26 feet in length and 600 horsepower; and
- Any other vessel the Secretary of Transportation deemed appropriate to carry AIS for safe navigation.

In October 2003, the Coast Guard issued its final rule implementing the AIS carriage requirements mandated by MTSA and SOLAS entitled "Automatic Identification System; Vessel Carriage Requirement;" importantly, there are specific carriage requirements for vessels on an international voyage and for vessels operating in an area covered by a U.S. Vessel Traffic Service or Vessel Movement Reporting Source area. The vessel types identified below were required to implement the AIS carriage requirements by the specified dates:

➢ Self-propelled vessels 65 feet or more in length (other than self-propelled commercial service passenger and self-propelled commercial fishing vessels) by December 31, 2004;
➢ Passenger vessels 150 gross tons or more by July 1, 2003;
➢ Vessels, other than passenger vessels or tankers, 50,000 gross tons or more by July 1, 2004;
➢ Tankers, regardless of gross tonnage, no later than the first safety survey for safety equipment on or after July 1, 2003; and
➢ Vessels, other than passenger vessels or tankers, 300 gross tons or more, but less than 50,000 gross tons not less than the first safety survey for safety equipment on or after July 1, 2004, but not later than December 31, 2004.[33]

In contrast to MTSA, the Coast Guard only required the following vessels operating in a Vessel Traffic Service or Vessel Movement Reporting Service area to carry and operate AIS by December 31, 2004:

➢ Every power-driven vessel of 40 meters (approximately 131 feet) or more in length, while navigating;
➢ Every towing vessel of eight meters (approximately 26 feet) or more in length, while navigating; and

[33] 33 C.F.R. Part 164.46.

- Every vessel certificated to carry 50 or more passengers for hire, when engaged in trade. [34]

MTSA authorized, but did not require, the Secretary of Transportation to develop and implement a long range automated vessel tracking system to track all vessels in U.S. waters that were equipped the IMO-required GMDSS or equivalent satellite technology. MTSA specified the long range automated vessel tracking system was to be capable of receiving intermittent information on a vessel's position to deter security incidents. MTSA authorized the Secretary of Transportation to use existing maritime organizations, such as IMO, to collect and monitor the tracking information. In implementing MTSA, the Secretary of Transportation delegated this authority to the Coast Guard, which then worked with IMO to implement the system internationally.

In 2006, the IMO amended SOLAS to require that certain vessels on international voyages report their identity, position, and time and date of the report using an LRIT system. Those vessels required by the IMO to report such data include passenger vessels carrying more than 12 passengers, cargo vessels of 300 gross tons or more, and self-propelled mobile offshore drilling units. The SOLAS requirement for LRIT entered into force on January 1, 2009.[35] SOLAS contracting governments were given a year to establish and test the LRIT system and vessel operators were given a year to install or upgrade equipment on their vessels to enable them to transmit the required information.

The Coast Guard and Maritime Transportation Act of 2004 (P.L. 108-293) amended MTSA to require the Secretary of Homeland Security to develop and implement a long range automated vessel tracking system for all vessels in U.S. waters. The Security and Accountability for Every Port Act of 2006 (SAFE Port Act) (P.L. 109-347) amended MTSA again to set a deadline of April 1, 2007, for development of the long-range tracking system.

The Coast Guard issued a rule on April 29, 2008 that established the LRIT carriage requirements for U.S. vessels and implemented the legal requirements pertaining to LRIT created by MTSA, the Coast Guard and Maritime Transportation Act of 2004, and the SAFE Port Act; this rule also implemented the LRIT requirements specified by SOLAS. The rule phased in specific carriage requirements beginning on December 31, 2008.[36] Under this rule, certain U.S. vessels are required to transmit their position and identification every six hours using an LRIT system. Foreign-flagged vessels are required to transmit their position and identification 96 hours prior to arrival at a U.S. port or if the vessel is within 1,000 nautical miles of the U.S. even if it is not stopping at a U.S. port. This requirement is applicable to passenger vessels, including high speed passenger craft; cargo vessels, including high speed craft of 300 gross tons or more; and mobile offshore drilling units while underway and not engaged in drilling operations.[37] Pursuit to 33 C.F.R. Part 169, the vessels to which the LRIT carriage requirements applied were to implement these requirements by the following dates:

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[34] 33 C.F.R. Part 161.16.
[35] SOLAS Chapter V, Regulation 19-1.
[36] GAO report on Vessel Tracking Systems, at 23.
[37] 33 C.F.R. Part 169.220.

- Before getting underway, if the ship is constructed on or after December 31, 2008.

- By the first survey of the radio installation after December 31, 2008, if the ship is:
  - Constructed before December 31, 2008, and
  - Operates within:
    - One hundred (100) nautical miles of the United States baseline, or
    - Range of an Inmarsat geostationary satellite, or other Application Service Provider recognized by the Administration, with which continuous alerting is available.

- Moreover, by the first survey of the radio installation after July 1, 2009, if the ship is:
  - Constructed before December 31, 2008, and
  - Operates within the area or range specified in paragraph (b)(2) of this section as well as outside the range of an Inmarsat geostationary satellite with which continuous alerting is available. While operating in the area or range specified in paragraph (b)(2) of this section, however, a ship must install LRIT equipment by the first survey of the radio installation after December 31, 2008.

In December 2008, the Coast Guard issued a Notice of Proposed Rulemaking that would amend the requirements of the October 2003 final rule on the AIS Vessel Carriage Requirement. Under the proposed rule, additional vessels will be required to carry and operate AIS equipment in all navigable waters in the United States. The additional vessels to which the carriage requirement would apply include:

- Self-propelled vessels 65 feet or more in commercial service – including those previously exempt (see above);
- Towing vessels 26 feet or more in length engaged in commercial service regardless of engine horsepower;
- Self-propelled vessels carrying 50 or more passengers in commercial service;
- Vessels for hire carrying more than 12 passengers if capable of speeds greater than 30 knots;
- Certain dredges and floating plants; and
- Self-propelled vessels carrying certain dangerous cargos.[38]

Importantly, although extensive and specific requirements for the carriage of LRIT and AIS technology are now applied by U.S. law as well as by international requirements, such equipment can easily be turned off if the vessel operator does not want the vessel to be tracked. The IMO even allows the equipment to be turned off in certain situations, including when the master of the vessel believes the equipment will compromise the vessel's safety or security (an issue that has been raised for vessels transiting the pirate-infested waters in the Horn of Africa region). The accuracy of AIS information also depends on the willingness (and ability) of the vessel operator to program accurate information into the system.

[38] 33 C.F.R. Part 164.46.

VIII. Interagency Operations Centers

The SAFE Port Act directed the Secretary of Homeland Security to establish interagency operational centers (IOCs) for port security at all high-priority ports. These IOCs are directed to utilize characteristics of existing centers, organize to fit the security needs of individual port areas, and to provide for participation by: CBP; U.S. Immigration and Customs Enforcement; Transportation Security Administration; Department of Justice; Department of Defense; other Federal agencies; State and local law enforcement; and Port security personnel, members of Area Maritime Security Committees, and other private and public sector stakeholders who might be adversely affected by a transportation security incident or disruption.

The IOCs are also to be incorporated into the: implementation and administration of maritime transportation security plans; maritime intelligence activities; short- and long-range vessel tracking; supply chain security; and transportation security incident response plans.

The "existing centers" to which the SAFE Port Act referred were those operating in Miami, Norfolk, Charleston, and San Diego and the virtual Operations Centers in New York and New Jersey. The deadline for the establishment of the IOCs was three years following the enactment of the SAFE Port Act or October 13, 2009. To fund the creation of the IOCs, Congress authorized $60 million for each FY from 2007 to 2012. The deadline for implementing the IOCs has not been met.

In October 2007, Captain Francis Sturm of the U.S. Coast Guard testified before the House Committee on Homeland Security's Subcommittee on Border, Maritime and Global Counterterrorism that the establishment of IOCs had not been funded, but in cooperation with the Navy, Department of Justice, and the DHS Office of Science and Technology, five prototype centers had been established in Charleston, Hampton Roads, San Diego, Jacksonville, and Seattle. Seven other ports had been identified for short- and medium-term projects to evaluate operations design models between the Coast Guard and CBP.[39]

H.R. 2892, the Department of Homeland Security Appropriations Act of 2010 (Public Law 111-83) provided $10,000,000 to support the acquisition and construction of interagency operations centers. The Coast Guard has indicated that this funding will be used to install a system called WatchKeeper into IOCs and Coast Guard Sector Command Centers. WatchKeeper is an information technology tool intended to integrate vessel-related data and national tracking technologies and facility information sharing among relevant agencies.

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[39] Written testimony of Captain Francis J. Sturm, Acting Director for Prevention Policy under the Assistant Commandant for Marine Safety, Security and Stewardship, before the House Committee on Homeland Security, Subcommittee on Border, Maritime and Global Counterterrorism, Security and Accountability for Every Port Act (October 30, 2007), at 6.

IX. Small Vessel Security Strategy

In April 2008, DHS released a *Small Vessel Security Strategy* intended to "address the risk that small vessels might be used to smuggle terrorists or weapons of mass destruction into the United States or might be used as either a stand-off weapons platform or as a means of a direct attack with a waterborne improvised explosive device (WBIED)."[40]

The *Small Vessel Security Strategy* indicates that it is intended to achieve security goals in the maritime domain while ensuring that the domain remains "a secure environment, where small vessel operators are able to safely earn a living, travel, and recreate freely, without unduly burdensome government regulations and with the freedom to sail upon the navigable waters of the United States."[41]

Within the context of its efforts to enhance MDA, DHS defines a small vessel as "any watercraft – regardless of method of propulsion – less than 300 gross tons and used for recreational or commercial purposes."[42] DHS specified that such vessels "can include commercial fishing vessels, recreational boats and yachts, towing vessels, uninspected passenger vessels, and any other personal or commercial vessels involved in U.S. or foreign voyages."[43]

Among the challenges that DHS identified in the *Small Vessel Security Strategy* that complicate the effort to protect the United States from threats arising from small vessels are "the large number of small vessels and the dearth of information regarding the use, owner, or operating patterns of those vessels," and the fact that such vessels "routinely operate within close proximity of high-profile targets such as passenger craft, large commercial or cargo vessels, military warships, major bridges, critical waterfront industries, and other maritime infrastructure."[44] DHS notes that the size of the maritime domain and the large number of small vessels operating within the maritime domain make it "virtually impossible for any single government entity at any level to have sufficient information, resources, expertise or statutory authority to address the spectrum of potential risks related to small vessels."[45]

Given the examples of previous terrorist attacks, DHS identified four scenarios of gravest concern involving the potential use of small vessels in terrorist-related activities:

- Use of a small vessel as a waterborne improvised explosive device;
- Use of a small vessel to smuggle weapons (including weapons of mass destruction) into the U.S.;
- Use of a small vessel to smuggle terrorists into the U.S.; and,
- Use of a small vessel as a waterborne platform from which to conduct other attacks.[46]

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[40] DHS, *Small Vessel Security Strategy* (April 2008), at iv.
[41] *Id.*, at 16.
[42] *Id.*, at 2.
[43] *Id.*
[44] *Id.*, at 8 and 10.
[45] *Id.*, at 20.
[46] *Id.*, at 11.

The *Small Vessel Security Strategy* reviews several incidents of maritime-based terrorism that have occurred around the world. For example, in October 2000, the *USS Cole* was attacked by terrorists who sailed a small vessel loaded with explosives into the side of the destroyer while it was refueling in the port of Aden in Yemen. Seventeen U.S. sailors were killed in the resultant explosion.

In November 2008, terrorists hijacked a Pakistani fishing vessel and killed the vessel's captain and crew. The terrorists used the vessel to sail to Mumbai, India, where they then deployed small, inflatable boats to go ashore and attack the Taj Mahal Hotel and other sites; 170 people were killed in the attack.

The strategy indicates that its specific goals are to:

- "Enhance maritime security and safety based on a coherent framework with a layered, innovative approach;
- Develop and leverage a strong partnership with the small vessel community and public and private sectors in order to enhance maritime domain awareness;
- Leverage technology to enhance the ability to detect, infer intent, and when necessary, interdict small vessels that pose a maritime security threat; and
- Enhance cooperation among international, Federal, state, local, and Tribal partners and the private sector."[47]

Within each goal, the *Small Vessel Security Strategy* identifies a number of "specific objectives" that will accomplish each goal. "Specific objectives" cited by the strategy include:

- "Provide opportunities and adequate venues for an ongoing dialogue with the small vessel community to encourage the free flow of information and ideas between the private sector, the Federal Government, and State, local, Tribal, and territorial authorities;
- Increase public awareness of how to report suspected terrorist activity via America's Waterway Watch (AWW);
- Improve detection and tracking capabilities to better identify small vessels operating in or near U.S. waters;
- Assess, develop, and improve layered security for critical infrastructure and key resources;
- Expand research into and invest in anomaly detection instruments and other decision aids such as automated scene understanding tools;
- Improve coordinated small vessel interdiction capabilities and operations; and
- Where appropriate, establish programs where law enforcement authorities from different nations combine efforts in cooperative patrol and enforcement."[48]

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[47] *Id.*, at iv and v.
[48] *Id.*, at 17, 18, 20, and 21.

Given the very limited information available to Federal and State authorities on recreational boats, the *Small Vessel Security Strategy* concludes that one aspect of risk management may include, "[a]ssess[ing] the benefits and costs of legislative and regulatory options pertaining to enhance registration and reporting of small vessels."[49]

One of the *Small Vessel Security Strategy's* key goals is to develop and leverage a strong partnership with the small vessel community and public and private sectors to enhance MDA. In the *Small Vessel Security Strategy*, DHS stated "the single largest asset in the efforts to mitigate small vessel related security risks is the small vessel community."[50] A number of specific programs have been established to formalize such partnerships.

The AWW was started by the Coast Guard in 2004 to compliment existing waterfront watch programs and ease reporting procedures by establishing a centralized national phone number. If a suspicious activity is recognized, citizens engaged in recreational boating are asked to report the incident by calling 911 or the America's Waterway Watch 24 hour national toll-free phone number (1-877-24-WATCH). The information will be sent to the National Response Center located at Coast Guard Headquarters to be evaluated and dispersed to local Coast Guard responders.

The Coast Guard Auxiliary is taking a leading role in implementing the AWW. The Coast Guard Auxiliary is the uniformed, civilian component of the Coast Guard, and is primarily responsible for the program's outreach to the recreational boating community as part of their extensive boating safety programs.

The Citizens Action Network (CAN) is a Coast Guard program that allows residents that have a view of the water from their home to assist the Coast Guard in prosecuting rescue missions and controlling pollution incidents. Currently, the program is operating in the Seattle, Puget Sound, Oregon Coast, and Columbia River areas. The CAN program is different from the AWW program since the personnel reporting the information are vetted and trained members in addition to the general public. As of December 2007, the Citizens Action Network had over 500 members including 250 members of the Royal Canadian Mounted Police, who have their own CAN program.

The Coast Guard and other Federal, State, and local agencies conduct waterborne security patrols on a daily basis. The security patrols focus on but are not limited to critical infrastructure and key resources. Although state and local agencies do not solely enforce CG imposed security zones, they act as additional assets and resources due to the limited number of Coast Guard resources.

X. Assessments of the Small Vessel Security Strategy

In September 2009, the DHS's OIG published an assessment of the DHS *Small Vessel Security Strategy* entitled "DHS' Strategy and Plans to Counter Small Vessel Threats Need Improvement."

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[49] *Id.*, at 22.
[50] *Id.*, at 16.

Comparing the *Small Vessel Security Strategy* to guidance issued by the GAO detailing the "six desirable characteristics of an effective national strategy for combating terrorism," the DHS OIG found that the *Small Vessel Security Strategy* lacks several of the desirable characteristics.[51] Specifically, the DHS OIG found that the *Small Vessel Security Strategy* "does not address priorities, milestones, performance measures, or progress indicators" and "does not sufficiently address detailed information regarding strategic costs, human capital, resources, or economic principles."[52] Further, the DHS OIG found that the *Small Vessel Security Strategy* "does not address any accountability or oversight framework" and "does not address and provide implementation guidance for State, local, or private strategies and plans."[53]

DHS also indicated that some of the programs intended to implement the *Small Vessel Security Strategy* are not working as effectively as possible to ensure achievement of the *Small Vessel Security Strategy's* "specific objectives." Thus, the DHS OIG found that likely only about 1.4 million recreational boaters had received informational packets on AWW (either through their vessel documentation package or through the state registration process); as a result, the DHS OIG estimates that more than 90 percent of those individuals associated with the 13 million recreational vessels on America's waterways have not received information on the program.[54]

Other assessments of the *Small Vessel Security Strategy* – and of DHS' approach to MDA – developed by a variety of sources have raised criticisms regarding the principles underlying the current approach to MDA as well as the implementation of missions intended to strengthen MDA.

A key principle of MDA cited by the U.S. Coast Guard is the detection of so-called "anomalies."[55] The assumption underlying this principle is that the passive detection of anomalies will provide timely, actionable intelligence and sufficient warning to prevent a terrorist attack.[56]

Maritime stakeholders have expressed the view that this assumption may be of little real value toward the development of actionable and timely intelligence. In its 2006 report entitled "Maritime Security – Risk and Liability," the Rand Center for Terrorism Risk Management Policy warned that many perceptions regarding maritime terrorism do not align with the reality of the threats and vulnerabilities.[57] The Rand Center for Terrorism Risk Management Policy also commented that waterborne improvised explosive devices may not be among the most pressing risks and that there may be a relatively low risk of cargo ships

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[51] DHS OIG, *DHS's Strategy and Plans to Counter Small Vessel Threats Need Improvement*, at 6.
[52] *Id.*, at 8.
[53] *Id.*, at 9.
[54] *Id.*, at 10.
[55] GAO report on Vessel Tracking Systems, at 11.
[56] Lieutenant Mark Munson, "Looking for Anomalies in All the Wrong Places," *United States Naval Institute Proceedings* (July 2009) (http://www.usni.org/magazines/proceedings/archive/story.asp?STORY_ID=1953).
[57] Michael Greenberg, Peter Chalk, Henry H. Willis, [et al.], "Maritime terrorism – Risk and Liability", *Rand Center for Terrorism Risk Management Policy*, at 140.

being sunk to block strategic waterways because such attacks are inconsistent with terrorists' goals to maximize public attention and loss of life.[58]

In addition, Rand noted that any attempt to sink a large ship would have to overcome ship designs in place to prevent hull failures.[59] While the Rand report identifies a *USS Cole*-style attack as a significant risk to cruise ships and ferries, considerable skepticism remains among maritime stakeholders that tracking small vessels would provide enough actionable intelligence in sufficient time to prevent this type of attack. For example, the boats that attacked the Al Basra and Khor al Amaya oil terminals in the Persian Gulf in 2004 revealed nothing unusual until they turned to approach the facilities.[60]

A recent report by the GAO entitled "DHS's Progress and Challenges in Key Areas of Maritime, Aviation, and Cybersecurity" notes that "[e]ven with systems in place to track small vessels, there is widespread agreement among maritime stakeholders that it is very difficult to detect threatening activity by small vessels without prior knowledge of a planned attack."[61]

The GAO noted that "… even if multiple systems are in place for tracking vessels in U.S. coastal areas, inland waterways and ports, tracking small vessels such as potential suicide attack boats is difficult."[62] The GAO further highlighted the limits of the strategy's emphasis on tracking small vessels by stating that, "given the number of potential threats in many areas and a short time in which to respond to a threat, thwarting an attack by a smaller vessel without advance knowledge of the threat may prove challenging even with available systems and other equipment that track smaller and noncommercial vessels in coastal areas, inland waterways, and ports."[63]

Others have criticized efforts to combat maritime domain threats by identifying anomalies among those on the water noting that those involved in past terrorist activity in the maritime domain involving vessels did not necessarily engage in activities that would have been identifiable as anomalous prior to conducting their attacks.[64] For example:

- The boat used to attack the *USS Cole* in 2000 was not hijacked or stolen. It was legally purchased in a port in Saudi Arabia.[65]

- The bombing of *Superferry 14* in the Philippines in 2004 was not conducted by terrorists using a water-borne improvised explosive device but by a passenger who brought the explosives aboard in a television.[66]

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[58] *Id.*
[59] *Id.*
[60] Terence B. Moran, "Port of Umm Qasr: Challenges and Opportunities," *United States Naval Proceedings* (July, 2006).
[61] GAO report on Vessel Tracking Systems, at 13.
[62] Id., at 30.
[63] *Id.*, at 9.
[64] Lieutenant Mark Munson, "Looking for Anomalies in All the Wrong Places," *United States Naval Institute Proceedings* (July 2009) (http://www.usni.org/magazines/proceedings/archive/story.asp?STORY_ID=1953).
[65] James Risen and Raymond Bonner, "A Nation Challenged: Fatal Attack; Officials Say Bomber of the Cole was in Yemeni Custody Earlier," *The New York Times* (December 7, 2001).

- In 2005, Turkish authorities arrested a terrorist who was planning to attack Israeli cruise ships. The arrest was possible because of an explosion and fire in the apartment used to prepare for the attacks, not the detection of unusual maritime behavior.[67]

- Accounts of the interrogations of the surviving gunman behind the November 2008 attacks in Mumbai indicate that the attackers traveled from Pakistan to Mumbai on board at least two vessels. At least one of the vessels was hijacked.[68] However, some maritime security stakeholders have expressed the opinion that it is not clear that a focus on anomalous behavior would have resulted in the kind of actionable intelligence required to intercept the attack.

Maritime security professionals have expressed the view that rather than attempting to track the millions of small vessels present in the maritime domain, it may be preferable and a better use of available resources to determine what facilities, structures, and vessels should be designated as critical infrastructure or key resources and to develop ways to protect them.

XI. Challenges of MDA

Information and intelligence collection and sharing amongst a number of stakeholder agencies are vital to MDA. Trust is key to the successful sharing of information. Information providers, users of the information, policy makers, and the public should be confident that the information collected and shared is consistent with the law and will protect the civil liberties and the privacy of individuals.[69] Obstacles that preclude effective sharing of information to achieve MDA include the lack of data sharing between stakeholder agencies; various databases that are not connected to identify information gaps and redundancies; and the inability to consistently monitor critical areas and associate applicable data to the detected targets.[70]

PREVIOUS COMMITTEE ACTION

The Subcommittee on Coast Guard and Maritime Transportation has not previously held a hearing on MDA.

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[66] Peter Chalk, "The Maritime Dimension of International Security: Terrorism, Piracy, and Challenges for the United States," *Rand Corporation* (2008), at 51.
[67] Amberin Zaman, "Syrian Charged in Plot to Attack Israeli Ships; The suspected Al Qaeda militant planned to use a speedboat filled with explosives, a Turkish court alleges. The Jewish state will lift travel alert," *Los Angeles Times* (August 12, 2005).
[68] Geeta Anand, Matthew Rosenberg, Yaroslav Trofimov, and Zahid Hussain, "India Names Mumbai Mastermind," *The Wall Street Journal* (December 3, 2008).
[69] National Concept of Operations for Maritime Domain Awareness (December 2007), at 4.
[70] *Id.*, at 4.

WITNESSES

PANEL I

Rear Admiral Brian M. Salerno
Assistant Commandant for
Marine Safety, Security and Stewardship
United States Coast Guard

PANEL II

Margaret Podlich
Vice President of Government Affairs
Boat Owners Association of the United States

HEARING ON MARITIME DOMAIN AWARENESS

Wednesday, December 9, 2009,

HOUSE OF REPRESENTATIVES,
COMMITTEE ON COAST GUARD AND MARITIME TRANSPORTATION,
SUBCOMMITTEE ON WATER RESOURCES AND ENVIRONMENT,
Washington, DC.

The Subcommittee met, pursuant to notice, at 2:04 p.m. in room 2167, Rayburn House Office Building, Honorable Elijah E. Cummings [Chairman of the Subcommittee] presiding.

Mr. CUMMINGS. The Committee will come to order.

We convene today to consider the issue of maritime domain awareness, which is defined broadly to mean our awareness of and ability to respond to all things in the maritime domain that may potentially pose a threat to the United States.

According to the Department of Homeland Security, nearly 85 percent of Americans live within 100 miles of a coast, and the economic activities and jobs located in coastal areas comprise nearly half of the Nation's gross domestic product.

Many critical natural resources are also located on or near our Nation's 95,000 miles of coastline, including more than 360 ports, which are visited by nearly 8,000 foreign-flagged vessels on an annual basis.

While there are many possible threats to the United States mainland arising in the maritime domain, significant steps have been taken since 9/11 to identify and mitigate some of these threats. Most commercial vessels and foreign recreational vessels coming to the United States are now required to notify the Coast Guard of their destination at least 96 hours prior to their arrival. Commercial vessels are also required to submit to the Coast Guard significant amounts of data on their vessels, including cargo type, registry, and updates on course and heading at frequent intervals using two different electronic tracking systems.

However, one of the elements in the maritime domain that is now considered to be among the most significant threats is the presence of millions of small boats, most of which are recreational pleasure craft. Responding to the perceived threats associated with small boats is now a key focus of maritime security initiatives being undertaken by the Coast Guard and DHS.

In April, 2008, the Department of Homeland Security released its small vessel security strategy, which is intended to address the risks that a small vessel might be used to smuggle a weapon of mass destruction into the United States or be used in some other type of terror attack.

The strategy lays out four broad goals, including the following: using a layered approach to enhance security and safety; developing strong partnerships with the small vessel community; leveraging technology to enhance the ability to detect and, when necessary, interdict small vessels; and enhancing cooperation between Federal officials and State, local, tribal and private sector authorities.

For each goal, the small vessel security strategy identifies a number of specific objectives intended to support achievement of a goal. In September of this year, the Department of Homeland Security's Inspector General issued a critical assessment of the small vessel security strategy. The assessment concludes that the strategy is, frankly, not comprehensive and is missing important elements, including performance measures, details on associated costs, and human capital needs, accountability and oversight frameworks, and implementation guidance for State, local and private sector partners.

That said, I think the key is not necessarily whether the April, 2008 strategy can counter the small-boat threat. Examining this issue more broadly, we need to understand what is the true nature of the small-boat threat and whether any strategy can effectively counter this threat, given the millions of small boats that move in very loosely regulated fashion across the waterways in plain view of countless pieces of sensitive infrastructure.

Most small vessels are not subject to the tracking requirements applied to larger vessels. And while all vessels with mechanical propulsion systems are required to register with the State and display a number on their hulls, the States have varying registration requirements, have not ensured the consistency of their data, and have not even ensured that all State-issued identification numbers are unique.

I also note that the Coast Guard was instructed by Chapter 123 of Title 46 to develop a national vessel identification system capability capable of making available to law enforcement officials information on the ownership and registration of State-registered small boats. The Coast Guard has concluded agreements with 25 States, the District of Columbia and a number of territories to collect such data, but half of the States are not providing any data on registered vessels.

As such, the Federal Government and the States are not even able to draw on all of the data that already exists on small vessels, despite the fact that all of the data that is available on registered small boats is not currently compiled into a system that can be used on a nationwide basis in different forms.

The Commandant of the Coast Guard, Admiral Allen, has proposed the possibility of creating boating licenses similar to motor vehicle driver's licenses. Others have proposed creating and mandating the use of new or expanded systems to track small vessels.

That said, it is not all clear from the small vessel security strategy and from the assessments of ongoing maritime domain awareness efforts developed by groups such as the GAO, the DHS Office of Inspector General and the RAND Corporation that vessel tracking data alone would enable us to identify threats in the maritime domain.

Further, it is not clear that the volume of data that the current tracking of commercial vessels generates or that would be generated through the tracking of small vessels is even manageable using available information technology systems.

Additionally, some have criticized current maritime domain awareness efforts by pointing out that it would be difficult, if not impossible, to develop actionable intelligence by seeking anomalies among the small boat community, and further, that it would be difficult, if not impossible, to interdict a determined small boat attack that is already underway, given that available response time might be measured in seconds.

The DHS small vessel security strategy does highlight the importance of the development of partnerships between the Federal Government and the small boating community, particularly as those who recreate on the water on a regular basis are far more likely than Federal officials to be able to quickly identify boats out of place and situations that may present danger.

Unfortunately, the DHS Inspector General has found that only a small percentage of the small boating community is even aware of America's Waterway Watch Program or of the desire of the Coast Guard to receive reports of suspicious activity from recreational boaters. Today's hearing is intended to provide an overview of current maritime domain awareness efforts, particularly regarding the small boat threat.

As we examine this complex issue, we look forward to the testimony of Rear Admiral Brian Salerno, the Assistant Commandant for Marine Safety, Security and Stewardship, and Margaret Podlich, Vice President of Governmental Affairs with BoatU.S.

With that, I recognize the distinguished Ranking Member, Mr. LoBiondo.

Mr. LOBIONDO. Thank you, Chairman Cummings, for calling this very important meeting. You have articulated many of the important things to be considered.

I think the Coast Guard operates a broad array of systems and sensors to gather data to enhance the service's awareness of activities in the maritime domain. These systems are used to direct Coast Guard operations across mission areas, even though each individual system was originally developed to address a narrow range of mission needs.

And at a time when Coast Guard assets and personnel are stretched to a critical limit, maritime domain awareness programs act as a critical force multiplier, but only if information is integrated and distributed for action at all levels of the Coast Guard.

I am concerned that the Coast Guard lacks the resources and infrastructure to sufficiently tie these disparate systems into one common operating picture. Earlier this year, Coast Guard personnel were unable to access information from the vessel monitoring system to assist in the location of a fishing vessel which was the focus of a search and rescue mission.

The Subcommittee has also examined the lack of standardization in procedures governing the use of maritime domain awareness information across Coast Guard districts and units. I support the Coast Guard's efforts to construct a comprehensive common oper-

ational picture, but we need to examine whether the service has the capabilities to operate a robust system.

Further, I am concerned by the apparent lack of strategy to develop systems best suited to provide the types of information needed for enhanced maritime domain awareness. The Coast Guard has proposed to require fishing vessels to carry automatic identification system transponders to provide position data. This would be in addition to the vessel monitoring system that fishing vessels are already required to carry, which provides very similar information.

Other vessels are required to carry different transponders to meet the needs of long-range identification and tracking systems, in addition to AIS transponders. Yet, I do not know if the Coast Guard has ever looked into these systems in totality to determine whether they are providing the data necessary to assist in all Coast Guard mission areas. Several systems provide duplicative information and all of the data streams were designed for various and often unrelated mission-specific goals.

I would be interested to hear our witnesses' opinions on whether all of these programs are needed and how we can best focus future MDA efforts to provide the most useful information and intelligence.

Maritime domain awareness is a critical tool to maximize the Coast Guard's capabilities to safeguard American interests in U.S. waters on the high seas, but we need to balance the need to obtain information with the impacts that the system imposes on the flow of commerce through U.S. ports.

We also need to continually oversee this program as it matures to ensure we are making the best investment for the taxpayers.

Once again, Mr. Chairman, I thank you for calling the hearing and I thank our witnesses for being here today.

Mr. CUMMINGS. Mr. Young?

Mr. YOUNG. Mr. Chairman, I have questions to ask after the witnesses testify. That is it.

Mr. CUMMINGS. Thank you very much.

We now welcome our first panelist, Rear Admiral Brian M. Salerno, who is the Assistant Commandant for Marine Safety, Security and Stewardship for the United States Coast Guard.

Rear Admiral Salerno, welcome.

TESTIMONY OF REAR ADMIRAL BRIAN M. SALERNO, ASSISTANT COMMANDANT FOR MARINE SAFETY, SECURITY AND STEWARDSHIP, UNITED STATES COAST GUARD; MARGARET PODLICH, VICE PRESIDENT, GOVERNMENT RELATIONS, BOATU.S.

Admiral SALERNO. Thank you and good afternoon, Mr. Chairman, Ranking Member LoBiondo and distinguished Members of the Committee.

I am very pleased to be here this afternoon to update you on the Coast Guard's efforts to leverage maritime domain awareness, or MDA.

As this Committee is well aware, MDA is critical to the Coast Guard's missions of ensuring the safety, security and the efficiency of our Nation's maritime activities, and to protecting our fragile

maritime environment. So I thank this Committee for placing emphasis on this very important topic.

The sea has always been a source of great opportunity and danger, yet our lack of understanding of the sea, and in particular what others are doing upon it, has throughout history cost thousands of lives and done great harm. Storms, criminals, hostile navies, polluters, terrorists, all have caused untold damage to coastal nations and mariners.

While we have made great strides in predicting and mitigating the threats associated with weather, we have yet to make equal progress in seeing and understanding other maritime threats and then sharing the resulting information with those who need it. Improving our awareness will create a safer transportation system, a cleaner environment, and a maritime space in which it is much more difficult to pursue malicious intent.

The Coast Guard is the lead Federal agency for maritime transportation safety, law enforcement and environmental stewardship. That has a broad set of responsibilities and authorities. This gives us a unique leadership role in helping to coordinate maritime governance across a very broad set of government, commercial and private stakeholders, both domestically and internationally.

The key ingredient to a governance regime is maritime domain awareness through which we maintain an understanding of maritime space with all of its natural and manmade complexities. MDA activities can be easily characterized as enabling us to see, to understand, and then to share information as displayed overhead on the graphic.

For an organization with as broad a set of responsibilities as the Coast Guard, a good understanding of what is going on in our ports and waterways, coastal approaches and far out to sea is essential to effective and efficient mission performance. Whether it is pursuing polluters that have illegally discharged into the environment, protecting dwindling fish stocks, intercepting drug smugglers, human traffickers or potential terrorists, we must first know where they are.

Our ultimate goal is to prevent harm to the public and the environment. Maritime domain awareness optimizes our mission effectiveness. And it does so by providing transparency. When people know we are looking, it keeps them honest, just as in the case of polluters. It improves our awareness of what is occurring so that we can better target our limited resources to greater effect, especially in time-critical intervention and response missions.

And most importantly, greater awareness can often let us anticipate a looming threat and intervene early. And this is true regardless of the nature of the threat. Just a few weeks ago, when severe weather was closing in on New England, the Coast Guard used data from NOAA's vessel monitoring system to seek out and warn fishing vessels which were operating offshore and at high risk, and urged them to seek shelter. Through awareness and information sharing, lives were saved, even though no rescues were recorded.

The Coast Guard has been a leader in advocating for and coordinating efforts among a myriad of maritime stakeholders to improve MDA. And I stress the word coordinating, because there is no single solution, nor can MDA be the effort of a single agency or even

a single government. Rather, improved awareness must be developed across the broad maritime community with a wide range of participants.

While much remains to be done, we have also accomplished much in the last several years. We have improved sensors on our aircraft, which have allowed us to detect smugglers who previously would have gone undetected. Our participation in the intelligence community and our relationships with other governments has enabled us to identify and intercept potential threats far at sea.

We have improved information-sharing and coordination at the national level and also in our courts. Partial implementation of the nationwide automatic identification system has improved overall understanding of maritime activity, contributed to safe navigation, assisted in search and rescue, and improved our ability to investigate accidents.

And we played a leading role in bringing online the international long-range identification and tracking system, or LRIT. This system will give us visibility on major commercial vessels that are within 1,000 miles of any U.S. coast and will allow us to track U.S.-flag vessels worldwide.

This latter feature was required ahead of schedule for U.S.-flag vessels operating off the Horn of Africa where we continue to be concerned about the risks of piracy. It now enables the Coast Guard to monitor their presence in the region and to share that information with DOD and with MARAD.

Nevertheless, we recognize that more needs to be done. The policy and the procedural changes associated with information-sharing are significant. We have found that the relationships for and between the elements of our own government and with other friendly governments and with the private sector remain the most important factor in enabling the sharing of existing sensor information and available data.

Thank you again, Mr. Chairman, for the opportunity to be here today, and I would be happy to take your questions.

Mr. CUMMINGS. Thank you very much, Admiral.

Admiral, in 1988, Congress required the Coast Guard to establish a vessel identification system which was to be basically a compilation of all boating registration numbers and ownership information gathered by the States.

Using this system, a Coast Guard security patrol could obtain the ownership information for a vessel from the vessel's hull number before they ever stopped it, much as a police officer can obtain information regarding the ownership of a car from its license plate before the car is even pulled over.

It is my understanding that 25 States, five territories and the District of Columbia have signed agreements with the Coast Guard under which they will provide data on registered vessels to the Coast Guard's vessel identification database.

Let me ask you this. Are all of the States that have signed agreements to participate in the vessel identification system providing all of their available data on registered vehicles? Or are they providing only a select piece of data or select pieces?

Also, does the Coast Guard collect the data directly or is it collected by a third party? And if so, who is the third party?

Admiral SALERNO. Sir, you are correct. The system is in place. It is a Coast Guard-managed program. We do have a contractor who does that on our behalf. There are 25 States, as you mentioned, five territories and the District of Columbia, currently participating. The information that is shared is boat registration information, ownership information associated with each individual boat.

Mr. CUMMINGS. Who is the contractor?

Admiral SALERNO. Sir, let me check on the identity of the contractor and see if I have that here, and I can get back to you.

[Information follows:]

Insert for the Record, Page 17, Following Line 359:

RESPONSE: The Coast Guard Operations Systems Center's onsite support contractor, QSS/Perot Systems, hired InfoLink to provide data for the Vessel Identification System via monthly updates.

The Vessel Identification System is maintained by QSS/Perot Systems in Martinsburg, WV. Under the terms of its contract, the USCG authorized QSS/Perot to purchase the required data services. QSS/Perot identified two potential sources for the data services; Infolink and R.L. Polk. Infolink was selected through a best value analysis considering cost and technical factors. QSS/Perot executed the licensing agreement with InfoLink to provide the required data on 9 January 2007. The agreement has been renewed annually

Mr. CUMMINGS. Do you know whether that is something that is put out to bid, or what? I mean, how does that work?

Admiral SALERNO. Sir, I don't have that contractor identity with me presently, so I would like to get back to you on the record.

Mr. CUMMINGS. And I want to know more about how that contract comes about. In other words, is it bid? I would just like to know exactly how you do it.

Admiral SALERNO. Yes, sir. I will get you the contact in detail, sir.

Mr. CUMMINGS. Okay. Continue.

Admiral SALERNO. One of the concerns that many of the States have raised with this system is the privacy of the information and how it is shared. In fact, the enabling legislation for the vessel identification system is relatively broad in what could be shared and who would have access to it.

So for example, a bank may seek to get access to that information because of loan purposes or there may be tax issues involved. And for that reason, some of the States are concerned because of their own internal legislation which addresses privacy concerns. So they have been unwilling to enter into an agreement with us to share that information or enter it into our database.

So in that sense, the legislation is almost—is too open. If it were to be a little bit more restricted, limited only to law enforcement or to security purposes, some additional States may be more willing to participate.

Mr. CUMMINGS. Well, can't that happen? Can we do that? Can that happen? I mean, in other words, limiting it to law enforcement?

Admiral SALERNO. My understanding, the way the statute is structured, it is broader than that. So I think that would require a legislative change if we wanted to limit it.

Cost considerations have also been cited because there is some cost in terms of just setting up the mechanisms by which the information can be shared. We operate the system at no cost to the States. Essentially what the States do is they provide data on a monthly basis to update the database, and then any State that provides data has the ability to get data from any other State that is participating in the system, to achieve the effect you describe, so that a law enforcement officer in one State can access registration data from another State.

Mr. CUMMINGS. So right now, we get it from 25 States. Is that right?

Admiral SALERNO. That is correct. Yes, sir.

Mr. CUMMINGS. And so we have basically half of the Country that does not provide it.

Admiral SALERNO. That is correct. Yes, sir.

Mr. CUMMINGS. And what kind of efforts are being made to try to get the other 25, because that is a lot of folks, and I would imagine if you have these breaks in the information, that is, you have one jurisdiction and then you skip and they maybe close to each other or adjacent, one giving information, the other not. And if somebody's trying to do something that is illegal, knowing that one jurisdiction doesn't collect the information and the other does, you know, it seems like that would be a pure nightmare.

Admiral SALERNO. Sir, we have made direct outreach to all of the States, primarily through the National Association of State Boating Law Administrators, or NASBLA, to work with the individual State governments and encourage them to enter into an agreement with us. And there is an agreement between the Coast Guard and each individual State. It is a memorandum of agreement that we sign.

And so we have worked with them, but essentially this is the feedback we have received. We are continuing to make that outreach, but we are running into some brick walls in some cases.

Mr. CUMMINGS. Okay. And can you provide us with a list of the States?

Admiral SALERNO. Yes, sir. I can provide that to you for the record.

[Information follows:]

Insert for the Record, Page 20, Following Line 434
As of December 16, 2009, the Coast Guard does not have a memorandum of agreement with the following states:

Arkansas
California
Colorado
Connecticut
Hawaii
Idaho
Illinois
Indiana
Iowa
Kentucky
Louisiana
Maine
Michigan
Minnesota
Montana
Nebraska
New Hampshire
New Jersey
New York
North Dakota
Oklahoma
Pennsylvania
South Carolina
Vermont
West Virginia

Mr. CUMMINGS. Do you know whether Maryland is one of the States?

Admiral SALERNO. I believe Maryland is a participating State, sir.

Mr. CUMMINGS. All right. Okay.

The small vessel security strategy suggests that the benefits and costs of legislative and regulatory options pertaining to an AIS registration and reporting of small vessels, and what are the enhanced registration and reporting? What does that mean, requirements that should be considered for small vessels? In other words, do you need additional information?

Admiral SALERNO. No, I don't believe there is a requirement for enhanced registration information, sir. Because the registration system actually is operated through——

Mr. CUMMINGS. It says "assessing the benefits and costs of legislative and regulatory options"—this is a quote—"pertaining to an AIS registration and reporting of small vessels."

Admiral SALERNO. I believe that may be related to your previous question, sir, expanding the number of States that will participate in the VIS Program.

Mr. CUMMINGS. Yes. Okay.

Admiral SALERNO. And so perhaps when I respond to you for the record with the States and the background on that system, I can provide you additional information along those lines as well.

[Information follows:]

Insert for the Record, Page 21, Following Line 460

By enhanced registration information, the Coast Guard means that registration reflects participation by all 50 states in the Vessel Identification System (VIS). VIS is currently voluntary (no federally mandated requirement) and some States believe that their laws prevent them from participating in VIS and restrict the sharing of information to State-specific purposes. If federal legislation mandates States participation, there may be a cost associated with compliance incurred by the States requiring a cost benefit analysis.

Mr. CUMMINGS. Okay. Do you see that having half of the States not cooperating as a problem?

Admiral SALERNO. Yes, sir. It represents a gap in our awareness of what is occurring on the water and our ability to identify vessels on the water that may be involved in activity that could be questionable.

Mr. CUMMINGS. And do you know of situations where because you did not have the cooperation of a State it caused problems for the Coast Guard? I mean, do you have any specific cases that you know of? I am sure you must have talked to some folks before you came here today to kind of figure out the most obvious problems that you might be confronted with.

Admiral SALERNO. Well, I don't have a specific case where it has led to a particular law enforcement problem other than to say there are situations where it is difficult to run numbers by a State law enforcement officer for an out of State vessel.

There is also no Federal requirement for the operator of the vessel to have a license, as you mentioned, or even a form of identification. So that it can become very problematic in a law enforcement situation to establish identity of an individual on the water.

Mr. CUMMINGS. Is there something that the Congress can do to help you out?

Admiral SALERNO. Sir, I think maybe taking a look at that legislation on the information-sharing through the vessel identification system would be very helpful. And we would be very interested in working with your staff on maybe offering some language.

Mr. CUMMINGS. Mr. LoBiondo?

Mr. LOBIONDO. Thank you, Mr. Chairman.

I would like to yield my time to Mr. Young.

Mr. YOUNG. Thank you, Mr. Chairman.

Thank you, Mr. LoBiondo.

My questions are really questions about Alaska, Admiral. The Coast Guard is currently implementing Rescue 21 Program in the Lower 48. This improved system of radio receivers can better determine the location of vessels making the emergency calls. This reduces the number of hoax calls and greatly reduces time spent searching for, rather than rescuing vessels and mariners in distress.

Obviously, given the distances that are needed to be covered in Alaska waters, any reduction in the time spent searching prior to beginning rescue work would be greatly improved.

Now, what is the time line for the Coast Guard plan to get Rescue 21 in operation in Alaska?

Admiral SALERNO. Sir, Alaska, as you know, poses some unique challenges in terms of geography, weather, and even the remoteness of many of the locations where we envision placing Rescue 21 towers. The remoteness makes it more difficult for logistical support.

We anticipate beginning the process of establishing Rescue 21 in Alaska in this present fiscal year, 2010. But it is a multi-year process. It will be several years before Rescue 21 is fully established in Alaska.

We will concentrate initially in the port areas, the major port areas. The staff has identified over 50 sites where Rescue 21 tow-

ers would need to be established. But again, this is a multi-year process.

I would also add, sir, that Coast Guard is very aware of the unique hazards in operating off Alaska for mariners, and it is also very much not only in their interest, but in the Coast Guard's interest to have a system in place that improves our ability to identify a vessel in distress and its location as rapidly as possible, and to get our assets on-scene as rapidly as possible. So we share that interest in making this happen quickly.

Mr. YOUNG. Well, Admiral, I hope we pursue this more rapidly because there is a difference in distances and line sight works maybe in the Lower 48. It is not practical in Alaska, so we are going to have to come up with a better mousetrap to make sure it works because this is crucially important, because we do have hoax calls. We do have things that occur that impeded the rescue of those who are truly endangered, so I hope you do that.

Second question, as you know, there is currently virtually no maritime domain awareness infrastructure in the Arctic. This point was highlighted in the Arctic Council's Arctic Marine Shipping Assessment that was released early this year. And the House has passed legislation based on legislation I introduced to begin addressing this issue.

The Coast Guard has alleged for several years now to being conducting an Arctic mission needs analysis. When will that mission needs analysis be completed and available for review?

Admiral SALERNO. Sir, we are conducting what we call a High Latitude Study, which will support the mission needs analysis. That is ongoing. We anticipate that that will be completed late spring, early summer of 2010.

Mr. YOUNG. Would the requirement of the use of Alaska State pilots and vessels working the U.S. Arctic provide an additional layer of protection for the Arctic environment and the mariners working there?

Admiral SALERNO. Sir, I would like to get back to you on the record for that one. I think there are some issues associated with proposed pilotage legislation in Alaska that have been somewhat problematic, and I would like to give you a more very carefully thought-out response.

[Information follows:]

Insert for the Record, Page 25, Following Line 560

No, a legislative requirement for the use of Alaska state pilots is not necessary because a federal and state pilotage regime already exists for vessels coming into and out of Alaskan ports in the Arctic, depending on whether those vessels are foreign, engaged in foreign trade or engaged in coastwise voyages.

International law forbids the United States, as a coastal State, from subjecting foreign vessels navigating in the waters of the U.S. Arctic whose voyages do not take them to or from a U.S. port or place, to those pilotage requirements.

Mr. YOUNG. I appreciate it. I didn't want to try to put you on the spot, but I am quite interested in this issue. I am in cross-hairs with some people that are going to be working up there, but I do believe that the additional pilotage would be good for the safety of the area and it is relatively inexpensive. And the State would also be responsible, then, if something was to occur whereby if they are not, the companies may be responsible. That doesn't relieve the possibility of an accident.

The rationale for a bigger, more expensive naval security cutters was that the SCSs would use ship-based unmanned aerial vehicles. The use of UAVs would dramatically increase the number of squared nautical miles that the NSC can effectively patrol. This expanded range is of great concern in the Bering Sea for fisheries enforcement against foreign fishing incursions, search and rescue, and environmental protection.

In other parts of the Coast Guard's mission area, this expanded coverage is important to drug and migrant interdiction. The Coast Guard has wisely decided that it lacks the resources to develop its own UAV system, but is looking at a land-and ship-based being developed by other entities.

What is the status of the Coast Guard UAV program?

Admiral SALERNO. Yes, sir. There are essentially two programs being considered. There is a land-based UAV Program that we are looking at with actually Customs and Border Protection is in the lead and we are cooperating with them. And we anticipate having the first prototype testing beginning after the first of the year. This is essentially a Predator B platform that is marinized with sensors that can look down and detect vessels on the surface. That will begin very shortly.

The second program is a ship-based program, and we are working, quite honestly, with the Navy and trying to leverage their technology and the work that they have done, particularly in their Fire Scout is one of the options that we have considered. And that is ongoing as part of the Deepwater Recapitalization Program.

Mr. YOUNG. The Coast Guard has a contract for the Sitka-based firm to conduct cold weather training for the Coast Guard personnel. Unfortunately, the Coast Guard is only exercising its option for eight of the possible 16 training courses this year. And why isn't the Coast Guard fulfilling its obligation, I think, to train those people in the cold water system in Alaska? That is crucially important. You cut back in half, is what you have done.

Admiral SALERNO. Sir, I confess I am not familiar with that particular program, so if you would permit me, I will get back to you on the record for that.

[Information follows:]

Insert for the Record, Page 27, Following Line 610

The Coast Guard provides cold weather survival training to its members using two mechanisms, one of which is the contracted "Cold Weather Survival Training" course. The other mechanism is through internal training delivered by Coast Guard personnel. The cold weather survival training is provided to those personnel whose jobs place them at the highest risk of being in a cold weather survival situation (e.g., Aids to Navigation team members, air crews, boat crews, etc.). Although the cold weather survival training is not mandatory training, it is useful and also provides the added benefit of protecting members during off-duty recreational activities.

As the contract courses are relatively expensive, the Coast Guard elects to provide the cold weather survival training using both mechanisms as a more efficient use of government funds. The combination of Coast Guard and contractor training is considered an effective delivery method and is sufficient to meet requirements.

In accordance with the contract, the Coast Guard is providing eight (of 15 maximum) courses, 20 students in each class, of "Cold Weather Survival Training" in FY10, fulfilling the contractual minimum number of courses specified in the contract. The Coast Guard has used only the contractual minimum number of courses each year for the past two years.

Mr. YOUNG. I thank you.

Mr. Chairman, I have one other question. Do I have time to do this?

Mr. CUMMINGS. Go ahead.

Mr. YOUNG. Like Rescue 21, tracking vessels use an automatic identification system. It requires a line of sight coverage which is very expensive in Alaska. How does the Coast Guard intend to implement AIS coverage in Alaska?

Admiral SALERNO. Sir, there will be AIS coverage. It will be more focused around the major port areas such as Anchorage, Juneau, Valdez, and also in the Unimak Passage. There will be some considerable gaps in that coverage.

In the interim, we are exploring the possible use of satellite-based AIS technology and we are evaluating its usefulness. So there is some coverage. It is not as frequent as you would have with a land-based system, but we are looking at that as a potential solution in the future.

Mr. YOUNG. Admiral, has the Coast Guard made a plan for disposition of the LORAN-C sites once the program is discontinued next year?

Admiral SALERNO. Sir, that is still pending. As I am sure you are aware, the LORAN-C system we believe has largely outlived its usefulness as a signal. Most mariners have moved beyond that to a GPS technology.

As far as the disposition of the sites, that decision still pends, sir.

Mr. CUMMINGS. The gentleman's time has expired.

Mr. YOUNG. I thank the gentleman. I would like to get, if I could, get that back to me because that is important, that disposition of those sites.

Admiral SALERNO. Yes, sir.

Mr. YOUNG. Thank you.

[Information follows:]

Insert for the Record, Page 28, Following Line 636
The cessation of the LORAN-C signal should not be construed to indicate that DHS will dismantle the system's infrastructure, however, the Department will instead place in caretaker status the economically reusable portions of the infrastructure until such time that a decision is made on its best future use or ultimate disposition.

Mr. CUMMINGS. Mr. Larsen?

Mr. LARSEN. Thank you, Mr. Chairman.

Admiral, good to see you again and welcome to the Committee again.

With regard to LRIT, the effective implementation of the mandated LRIT depends on the operation of a data center. Because we were concerned that the international data exchange would not be operational when the rule went into effect, I understand the Coast Guard agreed to set that up and is operating the data exchange during this year and next year.

What plans are in place for the operation of the data center after the end of 2010?

Admiral SALERNO. Sir, there are a number of potential operators of a NOAA-LRIT exchange as opposed to the data center, the international data exchange, which is essentially the router which communicates between all the data centers. We are doing that, the U.S. is doing that until the end of 2011.

It is not determined yet who will take that over from us. We agreed to do that on an interim basis, and not to do that indefinitely.

We will continue to operate our own data center, which is where we collect information on U.S.-flag ships, and we will do that into the future. That would be operated by the Coast Guard. It is physically located in Martinsburg, West Virginia and that is where we collect the data on U.S. ships.

Mr. LARSEN. So do you anticipate, then, being out of the exchange business then at the end of you said 2011?

Admiral SALERNO. At this stage, we do anticipate that. It is not a hard deadline, but that was the agreement we gave to the international community that we would do it at least until then. I am personally aware of at least one other entity that is interested in approaching IMO, the International Maritime Organization, as a successor to our effort. But that has not yet been approved yet, or accepted by the international community. It is still in the formation phase.

Mr. LARSEN. Are all the signatories to SOLAS able to provide data to the exchange?

Admiral SALERNO. The best information we have now, sir, is that there are about 70 countries that do participate in a data center and have their ships equipped to provide the data. That compares to about 160 countries that are part of the International Maritime Organization, so roughly half of the countries.

The good news is that most of the major flag states in the world are in that 70 that are already complying. So the vast majority of the world's tonnage we anticipate will be in compliance with this requirement.

Mr. LARSEN. You say the vast majority of the tonnage. Do you have a——

Admiral SALERNO. Sorry, a little term of art, basically, the numbers of ships that are operating in the world commercially in international service. The vast majority of them we—especially those that call on the United States we expect will be in compliance.

Mr. LARSEN. Yes. Sure. Well, according to the 2009 earlier GAO report, the Coast Guard had planned to allow individual captains

of the port to determine how to deal with vessels not in compliance with the requirement. Has the Coast Guard given any baseline guidance to captains of the ports on how to handle vessels not in compliance?

Admiral SALERNO. There was guidance issued earlier this year. It was interim guidance during the pre-enforcement phase. As you probably know, sir, the actual mandatory compliance date will commence at the end of this month, the end of December. And so January 1st, we are in an enforcement mode.

We are currently developing follow-on guidance on what to do in various situations when a ship either does not comply or their flag state is not complying, and we do have various enforcement options.

I envision at this point that we will have a phase-in of our enforcement strategy the first couple months of the next calendar year.

Mr. LARSEN. Thank you.

Thank you, Mr. Chairman.

Mr. CUMMINGS. Mr. LoBiondo?

Mr. LOBIONDO. Thank you, Mr. Chairman.

Admiral, does the United States maritime community need a backup navigation system in addition to GPS, in your view?

Admiral SALERNO. Sir, that is a question that is actively being pursued at the Department of Homeland Security, the question of a backup for GPS. They are currently holding all of the users of position navigation and timing information to gather that and then to make that assessment. So that is very much an open question.

Mr. LOBIONDO. So is eLORAN being considered for that?

Admiral SALERNO. That has been mentioned as a possible backup for GPS should it be determined that a backup is needed, but there may in fact be other options as well.

Mr. LOBIONDO. I talked a little bit in my opening remarks about the duplication of information that is received. The Coast Guard receives information from a variety of different source, the AIS, long-range identification and tracking, vessel monitoring, et cetera, et cetera.

I understand these systems were established by law, but is maintaining these redundant systems the most cost-effective and efficient way to collect information?

Admiral SALERNO. Well, sir, they all do feed the common operating picture. And there is value in various systems, even though they were designed for different purposes, all going into a single common operating picture. You have layers of information where data can be correlated. And from an awareness standpoint, if something doesn't add up, an anomaly exists, you now have a trigger point to look a little bit deeper.

So there is value to all of these systems. They all serve somewhat different purposes. AIS, for example, is not the same thing as LRIT, although to the layman it may look like they are. They are in fact very different.

There are differences between VMS and AIS. One critical difference is that VMS only applies to a very small percentage of the total number of fishing vessels. It is less than 10 percent of fishing vessels are required to use the VMS system. It is really driven by

the regional fisheries management plans, closed fishing areas, and so forth. So it is a very small percentage of the population.

Mr. LOBIONDO. Well, another example is Rescue 21. We are spending millions to install Rescue 21 and it has proved to be an extremely valuable tool for search and rescue, but I understand it is not being used to support other missions. Is the Coast Guard looking for ways to use Rescue 21 to support other missions that possibly could integrate it into a common operational picture?

Admiral SALERNO. Yes, sir. Particularly the infrastructure that is being built out for Rescue 21, the towers and so forth is also useful for the national AIS system. So there is dual use for a lot of the capabilities that are there.

Mr. LOBIONDO. And the Coast Guard has proposed to expand the AIS carriage requirements to fishing vessels and other small vessels. If this mandate were put in place, can you give us an idea of what the cost per vessel would be to purchase and maintain an AIS system?

Admiral SALERNO. Sir, first of all, let me differentiate between small vessels. There are commercial small vessels and recreational small vessels. And we do have a notice of proposed rulemaking which will expand the carriage requirements on commercial small vessels. And by that, I mean vessels that are less than 300 gross tons. There is no requirement contemplated that would apply AIS for recreational vessels.

When the requirements are pushed to smaller commercial vessels, yes, there is a large number of vessels that will be affected, probably in the neighborhood of 17,000 vessels, but 7,000 of them are fishing vessels. There is also small passenger vessels, towing vessels and so forth, that would be captured by that.

There is the potential to use a AIS-B transmitter which is less expensive than the international.

Mr. LOBIONDO. Do you have any estimate of cost?

Admiral SALERNO. I believe in the neighborhood of somewhere between $500 and $1,500 if my memory serves me correctly, for the AIS-B, which is a domestic version of the AIS. It operates at reduced power. It does not meet the international requirements, but for many of these vessels, they won't need to do that.

Mr. LOBIONDO. And as you mentioned, the thousands and thousands of additional ships that come into this-- does the Coast Guard have a system in place to manage and process this huge increase in information? Can you deal with it?

Admiral SALERNO. Sir, that information does go into the COP and what we are also building out right now is a system call Watchkeeper, which will be, it is designed to be present in all of our Coast Guard sectors. It is being evaluated right now in Charleston at the Integrated Operations Center there, but its purpose is to synthesize all of this information and to make use of tools that can help differentiate between all the information to pick out the thing that you are looking for. So it has that ability to sort, to analyze and to share.

Mr. LOBIONDO. Thank you, Mr. Chairman.

Mr. CUMMINGS. Thank you.

Mr. Ehlers?

Mr. EHLERS. Thank you, Mr. Chairman.

I would like to address the Great Lakes issue. As you know, we have many small vessels on the Great Lakes. The State of Michigan alone has over 900,000 registered boats of various sizes.

How would this proposal impact the boats on the Great Lakes? Do you have some sort of minimum size that doesn't have to get these devices?

Admiral SALERNO. Yes, sir, there is a minimum size, and it is 65 feet. So in a general category, commercial vessels 65 feet and greater would be required to have the AIS once the rule goes into effect. It is not yet in effect.

There are some exceptions to that. Towing vessels, for example, as small as 26 feet would be required to have AIS, and vessels that are transporting dangerous cargoes. So there are a few exceptions to the length.

But again, recreational vessels would not be captured by the rule.

Mr. EHLERS. Okay. So you see this primarily as a defensive mechanism, and not necessarily to assist in search and rescue. Is that correct?

Admiral SALERNO. The primary purpose for AIS as designed is really a safety system to avoid collisions so that ships can see each other. In the past, if you were looking at a radar screen and you would see a blip, you would have to go through a process of calling and hopefully identify the right blip on your screen and establish communication so that you could avoid hitting each other.

AIS provides you that immediate information as to the identity of the other vessel. So it is really a collision-avoidance tool. It does have other benefits. Security is one of them. The ability to help identify the location of a vessel in a search and rescue case is also a potential benefit.

So there are ancillary benefits to the system, yes, sir.

Mr. EHLERS. Fine. Thank you very much.

Mr. CUMMINGS. Admiral Allen's report entitled DHS: Strategy and Plans to Counter Small Vessel Threats Need Improvement, The DHS Office of Inspector General has criticized the April, 2008 small vessel security strategy, stating that among other things, the strategy does not address priorities, milestones, performance measures, progress indicators, strategic costs and human capital needs; does not address accountability or include an oversight framework; and does not address or provide implementation guidance for State, local or private strategies and plans.

What is your response to these criticisms and do you intend to update the plan to address these shortcomings?

Admiral SALERNO. Yes, sir. As you know, it is a DHS plan that includes not only Coast Guard input, but other DHS components.

Mr. CUMMINGS. Right.

Admiral SALERNO. DHS partially concurred with the recommendations of the I.G. and agreed that there were elements of the plan that were not fully fleshed out and that do need further development. But these things can be addressed in follow-on implementation of the security strategy.

And from a component perspective, as we look at the items that are contained in the plan that pertain to us, we recognize we need to do a very detailed look at how we will pursue this, the funding

mechanisms and so forth, and whatever authorities might be needed.

So yes, much more detail will need to be done at the component level.

Mr. CUMMINGS. And as I mentioned, one of the DHS Inspector General's criticisms is that the small vessel security strategy does not identify costs and human capital needs. How much will it cost?

Admiral SALERNO. Well, as you know, sir, there is a wide range of initiatives captured in the plan. And the DHS view is the plan was not meant to do an up front analysis of the program; that that was really going to be after the strategy was put in place, then we would look at individual ways to achieve the strategy and then make that benefit analysis at that point.

Mr. CUMMINGS. So if I were to ask you do you have the resources, you couldn't answer that question could you.

Admiral SALERNO. Not comprehensively, no, sir. We have the resources for some things, maybe not for others, but I think we almost have to go through item by item.

Mr. CUMMINGS. Mr. Larsen, did you have anything else?

One last question then.

The Inspector General also criticizes the strategy's lack of guidance for State and local partners. What assessments have been made of the capabilities of State and local partners, either to implement the strategy or to participate in maritime domain awareness and security efforts? And what are the specific resources that the State and local governments are lacking?

Admiral SALERNO. I can't speak to a specific assessment of where the assets and resources are. But I can tell you that we have a very vibrant relationship with NASBLA and have cooperated with them on establishing the common framework, a common lexicon for homeland security and law enforcement purposes so that we can be interoperable.

So we would know, for example, a State of Maryland law enforcement boat, what its capabilities are, what the training of the officer onboard are, and how we can integrate them into a comprehensive security regime in a port area.

This is going on around the Country. NASBLA has a training program that we are participating in to help train law enforcement so that we can be interoperable.

Mr. CUMMINGS. Ladies and gentleman, we have three votes and we are going to break now until, we are going to break until 3:30 and thereabouts. As soon as we finish the vote, we will be back. Thank you very much.

Admiral, I think we are finished with you, so thank you, thank you again.

I will have some follow-up questions for you. Thanks.

[Recess.]

Mr. CUMMINGS. Now, we welcome our second panelist, Ms. Margaret Podlich, who is the Vice President of Government Affairs for BoatU.S.

Thank you very much.

Ms. PODLICH. Thank you so much for having me.

Mr. Chairman, Ranking Member LoBiondo, I appreciate being here on behalf of our 600,000 boat owner members.

For many, boating is the quintessential expression of the freedoms we enjoy in this Nation. I want to clarify at the start that the average boat in this Country is 16 feet long and it is parked in someone's driveway; 75 percent of the Nation's boat owners have an annual household income of $100,000 or less. There are an estimated 12.6 million registered boats in the Country.

For the most part, boats less than 16 feet without engines do not have to be registered at the state level. Reaching these boats with any new Federal requirement would be extremely difficult and expensive. The boating industry is having a very hard time weathering the current economic storm. This industry has historically supported 337,000 jobs and generated $37.5 billion in annual retail sales.

The National Marine Manufacturers Association estimates that over 50 percent of the people employed in U.S. marine manufacturing and sales have temporarily or permanently lost their jobs.

BoatU.S. is aware of the unique challenges facing the Coast Guard with regard to the variety and number of vessels on our Nation's waterways. We understand there is a tenuous balance between security and freedom of navigation.

My comments today are focused on the potential future requirement of Class B AIS for recreational boats. BoatU.S. is strongly opposed to this for the following reasons:

Class B AIS systems would require constant and reliable electric power on the boat. The systems could be turned on and off at will by either a good guy or a bad guy, and it could also be turned off by intermittent power issues. Anyone that has been on a boat and struggled to own a boat that has running lights that work all the time will understand what I mean by that.

There are millions of small boats that don't have electrical systems at all. They would be incapable of operating an AIS, and just the installation of an AIS on a boat would not provide a high level of assurance that the equipment actually works after you install it.

Data transmitted by an AIS unit can be deliberately spoofed. Terrorists intent on doing something bad on the waterfront would have no problem spoofing an AIS transponder, forcing it to report erroneous positions, speeds or course over ground. Because AIS units rely on accurate data from GPS, jamming GPS signals would be a spectacular way to incapacitate an entire harbor's AIS signals.

A 2008 report from the U.K and Ireland shows that a 1.5 watt GPS spoofing transmitter, which is about the same size as a shoe box, including the battery, could make every AIS in an area report totally inaccurate data.

In high traffic areas, the more AIS transponders there are, the less effective the tool can be. We believe that adding millions of recreational boats to the Nation's AIS system would overwhelm the Coast Guard's ability to effectively monitor the entire system.

Even with the Class B AIS unit on board, terrorists on small craft could have plenty of time to successfully achieve an attack from a boat. Class B AIS units transmit every 30 seconds, and a small boat that is capable of 30 knots can move 1,500 feet in 30 seconds between those transmissions.

Class B AIS systems and the necessary antenna cost $600 for the equipment, to answer your question, sir, plus installation fees. And

if a requirement came down to register boats, even half the registered boats in this country, say 6 million, the economic impact of that could easily reach $3.6 billion, which is a significant amount for this community.

We continue to support Coast Guard's America's Waterway Watch Program which relies on the Neighborhood Watch concept. In our opinion, this type of program is more likely to succeed for two reasons. It treats boaters as part of the solution, rather than part of the problem, and it relies on boaters to know what doesn't look right on the water.

We support giving AWW more sturdy legs in terms of infrastructure and funding, and we recommend an analysis be conducted to ensure that AWW evolves to include the lessons learned from our Neighborhood Watch groups.

BoatU.S. is concerned that any potential future requirement for Class B AIS on recreational boats would be window dressing for a potential homeland security problem that will not be reduced despite the outlay of billions of dollars by our Country's boaters.

On behalf of our 600,000 members owning more than 1 million boats, BoatU.S. opposes any future requirement for AIS on recreational boats.

We do appreciate the opportunity to be here and would be happy to take your questions.

Mr. CUMMINGS. Thank you very much.

Tell me about BoatU.S.

Ms. PODLICH. BoatU.S. is the Country's largest association of recreational boat owners. We have about 600,000 members around this Country. About 30,000 of those are in Maryland and another 30,000 in New Jersey.

Mr. CUMMINGS. And the Coast Guard has suggested the idea of creating a system of licensing for recreational boaters, somewhat similar to the system used for drivers. What is your reaction to that proposal?

Ms. PODLICH. The Coast Guard has been proposing that for several years. We have also heard that from Admiral Allen. We have no problem if the Coast Guard wants to be able to identify who is operating a boat with current identification cards. Those, for example, that TSA already accepts, a driver's license, a passport would be fine.

We have significant concerns over any additional new licensing system.

Mr. CUMMINGS. So when it comes to numbers on a boat, things of that nature, where do you fall there? I mean like for small boats, is there a problem with having a number on a boat?

Ms. PODLICH. Right now, boats with engines have to be registered at the State level. So are you saying, sir, the possibility of registering smaller craft?

Mr. CUMMINGS. Yes.

Ms. PODLICH. In terms of today's discussion, I wonder what registration of small non-motorized craft, canoes and kayaks for example, would do for homeland security. I am not sure that putting a number on a windsurfer does homeland security much good.

That being said, when it comes to whether small boats should be registered at the State level, there are definitely some pros to that

because those people are using launch ramps, rescue services, parking lots, that right now the motor boat owners are paying for through the Wallop-Breaus Trust fund. So right now, the small non-motorized craft are not putting money into the fund, but they are receiving services from it. And certainly, they want to be rescued just along with everyone else.

Mr. CUMMINGS. You heard the testimony of the Coast Guard, Admiral Salerno, when he said that they have had cooperation, that is the Coast Guard, from half the States.

Do you understand why they would want cooperation from all the States? And how do you feel about that?

Ms. PODLICH. Well, we certainly believe that Coast Guard should have access to that State registration data and we share your concern that only about half the States are participating. My understanding is that about half the registered boats in the Country are now known to the Coast Guard through that system.

My understanding from working with the Coast Guard on this topic, and working through their Boating Safety Advisory Council, is that for some of the States that are slower to react to this request by the Federal Government, it is due to privacy concerns and perhaps their own State privacy laws prohibiting them from sharing personal data with other agencies. But we certainly understand that Coast Guard needs that data.

Mr. CUMMINGS. Now, do you all, does BoatU.S., I take it that you take official positions?

Ms. PODLICH. Yes, sir, we do.

Mr. CUMMINGS. Did you take a position on that issue?

Ms. PODLICH. On the information issue?

Mr. CUMMINGS. Let me tell you, show you where I am going.

Ms. PODLICH. Yes, sir.

Mr. CUMMINGS. Clearly, the Coast Guard needs all the cooperation it can get to get these other 25 States. We have an organization as large as yours that sounds—I mean, I don't know whether you are just speaking for yourself on this particular point, but that is at least empathetic to the problem that the Coast Guard is experiencing with regard to getting the other 25 States.

And I am just wondering if you all have taken any kind of official position, your organization, with regard to that issue? Do you follow me?

Ms. PODLICH. Yes, sir.

Mr. CUMMINGS. Okay.

Ms. PODLICH. On this particular issue, we have not taken a position, but we also haven't been asked to. I guess I haven't seen a place to put an official position if we were to develop one.

BoatU.S. and its members are incredibly supportive of the Coast Guard and the men and women who do such a remarkable job every day and every night, and frankly come and rescue us no matter what the weather is whenever we need them. They are an amazing service and we certainly want to support them.

On this particular issue, we have supported the Coast Guard and their requests for VIS informally through our participation on the National Boating Safety Advisory Council of Coast Guard, on which I sit. So we have taken an informal position of support. We have not seen the opportunity to have a formal position of support.

Mr. CUMMINGS. I understand. And can you see a way? I am sure an initiative has come up before. Apparently, the Coast Guard—I didn't see you back there, Admiral. I thought you had gone. It makes my question all the more appropriate.

Do you see what, can you think of anything that the Coast Guard might be able to do to get that cooperation? Because like I said to Admiral Salerno, when you have these holes, 25 of them out of 50, that is a problem. And I was just wondering if you, since you have so much access to so many people who are out there on the waterways and who care about the issue, I mean, is there anything that you might suggest or have suggested as a part of the Board?

Ms. PODLICH. Yes, sir. Actually, the Admiral and I were speaking to this specific topic during the break. And recognizing that the Coast Guard has I believe some of those States almost ready to come on board. You know, they are coming along in terms of joining the VIS system. And then there are some States—in my head, California is one of them—who says no; we have statewide privacy laws; we are not going to disclose name and address information about individual citizens and we are not sharing it with you.

And I don't know how to break through that brick wall. If there is something that the boat owners could do to help the Coast Guard, we stand ready to do that because it is incredibly important to have that data.

Mr. CUMMINGS. Mr. LoBiondo?

Mr. LOBIONDO. Thank you, Mr. Chairman.

Thank you very much for being here today.

Can you tell us, the Committee, how your organization feels the closure of LORAN-C will impact the recreational boating community?

Ms. PODLICH. Great question. And as you know, LORAN has been the historic method that mariners have used and anglers have used to find where they are going. Many of our members have historically been very concerned about losing LORAN-C. Many of our members have evolved to GPS navigation.

As I pointed out today, GPS can be spoofed, and using GPS as our sole way to know where we are on the water without a backup is of significant concern to us organizationally, as well as to many of our members.

And so with the thought that LORAN-C is going away, based on things we have heard today and we know are happening, we do have concerns about leaving our boat owners, as well as commercial fishermen and other mariners, with solely GPS capability.

Mr. LOBIONDO. That having been said, would you support or suggest a backup system that you think your members would want to see, eLORAN or something else? Is there anything you can share with us there?

Ms. PODLICH. E-LORAN has generated a great deal of interest within our membership in terms of that backup system. I can't speak to exactly how many of our members are using that and relying on and would like to use LORAN, continue to use LORAN. But just the fact that GPS is so easy to take off-line is a big concern navigationally for recreational, and I would say commercial craft as well.

Mr. LOBIONDO. Well, the Department of Homeland Security released the small vessel security strategy in April of 2008 to address the risks associated with potential use of small recreational vessels to stage an attack on the United States or our interests.

You talked a little bit about Boat Watch as being one of the ideas that you and your organizations could propose that would help the general public enhance safety and security in coastal waters. Is there anything else besides Boat Watch that you believe you, BoatU.S., can work with the Coast Guard to better publicize actions to the general public or enhance safety and security measures?

Ms. PODLICH. Yes, sir. As the background document pointed out, the GAO suggests that 10 percent of the Nation's boaters are aware of America's Waterway Watch, or perhaps that they have been exposed to it through their registration letters they get in the mail.

BoatU.S. has publicized America's Waterway Watch on numerous different venues, websites, posted the Admiral's video on our website, and editorial. We will continue to do that.

I think that we need to do more diverse education of the boaters about how to tap AWW, what to look for. I am not sure the average boater is aware that they have this opportunity to report, and if they see something strange, where to go to.

In terms of other capabilities with Coast Guard, one of the things that has come to my attention in the last year or so is that Coast Guard does not currently, and the Admiral can correct me if I am wrong, have the ability to require you as they board your boat to produce an identification card. They can ask nicely and they can imply that it is a law, but if you said no, I am not sure that there is a consequence to that.

From where we sit, and the homeland security threats that we are aware of, we certainly understand that law enforcement agencies would want to identify that boat owner as they board and ask, who are you, sir and could you please produce a piece of identification to show us who you are. We certainly back that need as long as it is a TSA, already in existence TSA-type identification, whether it is a driver's license or passport or something already in existence. We do not support the idea of an additional form of identification just for boaters.

But perhaps that is something that would help the Coast Guard in this realm and something that we could pursue through legislation, regulation, I am not sure what it takes to give them that ability.

Mr. LOBIONDO. Thank you, Mr. Chairman.

Mr. CUMMINGS. Thank you.

Let me ask you, on this waterway, the Watch program, you said that it might be helpful for them to know what they are watching for, and that makes a lot of sense. The information that you put out now, does it contain that kind of information, or are you just kind of, it contains it, but you are not getting it out to, you would like to get it out to more people? Or what is the deal there?

I just seems like you want to get the most, if you are putting information out about what to look for, it seems like you want to get the most bang for your effort.

Ms. PODLICH. Yes, sir.

Mr. CUMMINGS. I was wondering.

Ms. PODLICH. Yes, sir. Two answers on that. First, the Coast Guard has had America's Waterway Watch for several years and, forgive me, I don't have the details on the years for that, and I think it is a fabulous effort. My concern about AWW is that it has been a bit of a stepchild within Coast Guard in terms of staffing and funding and creation of a significant program.

They have done all they can with what they have been given for America's Waterway Watch. The boating community is resting heavily on America's Waterway Watch working when we need it to work, as is the entire Nation in terms of the waterfront threat to homeland security.

So I would like to make sure that Coast Guard has the resources that it needs to prop up that infrastructure, make sure that if a boater calls, that that call is processed the way it is supposed to be processed, that we get the bad guy in time, that the whole system is working. And I think the Coast Guard has done a tremendous job of working with what they have been given. I question whether they have been given enough. And actually in the House version of the reauthorization bill that has moved forward, there is a stronger provision for AWW.

So they have printed brochures. They have information on the web. They have produced the information about what to look for.

From the BoatU.S. perspective, we have advertised that there is an America's Waterway Watch. Here is the phone number you call if you see something suspicious. And we have given general information about what to look for. But rather than reinvent that, we have referred people to the Coast Guard's printed and web materials.

So I think it is two-pronged. From the boating community, we are looking to America's Waterway Watch to be highly successful. In a former life, I was a volunteer coordinator. I think there is a lot that can be done to bolster the volunteerism in this Country, and frankly the patriotism of our Nation's boaters to help America's Waterway Watch be really successful when we need it to be.

Mr. CUMMINGS. Now, so do you, tell me what kind of material do you all give out? In other words, say for example, do you give your boaters information as to how to contact the Coast Guard? And I am sure the Coast Guard probably has something, too. But I am just trying to figure out what you all do with regard to, what you put out to your constituency members to help you meet the ends that you are trying to meet to get to where, in other words, whatever your objectives are.

Ms. PODLICH. Are you talking about in terms of America's Waterway Watch specifically?

Mr. CUMMINGS. Yes.

Ms. PODLICH. BoatU.S. has a magazine that goes out six times a year to all our members. It has one of the largest circulations of boating magazines in the Country. We have written about AWW in the editorial of that, on page three. We have also had small articles about America's Waterway Watch. This is our number one way to reach all of our members.

We have also put it on our website which is open to the general boating public. It is open to anyone. It is not members only. And we have put information in there if someone is looking for it.

We have also put it, every other month we have an email that goes out to about 68 percent of our members that we have emails for and we have included it in there.

Mr. CUMMINGS. And are there other organizations, I mean like yours, that compete against you all? I am just curious.

Ms. PODLICH. Not really, sir. There are many other organizations that represent other parts of the marine industry, for example National Marine Manufacturers Association. They have a representative here. They represent the manufacturer. We represent the consumer, the boat owner.

Mr. CUMMINGS. I see.

Ms. PODLICH. And we work alongside with Coast Guard Auxiliary, Power Squadron, many other groups, but we do a wide range of services very similar to AAA and what they do for cars. We try to do anything you need to have a better boating experience.

Mr. CUMMINGS. I note that your testimony on page nine you say that recreational vessel registrations have been relatively flat over the past decade and have even dipped over the past year. We realize that the economy is going through some difficulties. But have you all come to any conclusions as to why that might be, that is, the dip in registrations?

Ms. PODLICH. Some of that is cyclical in terms of, for example, California. Every two years, it has a two-year registration cycle and every two years it goes up and every other year is goes down. So it may be part of that.

One of the things we are seeing in the last several years is that people may have the boat in their driveway. They may still own it. Hopefully, they still insure it. But they may not register it. You know, if they are cutting back and they are not going to go boating this year. Maybe they don't have that disposable income or time, or gasoline might be more than $4 a gallon like last summer, they may not use it and so they may not register it. And that would affect this number.

In Ohio in particular, I know their numbers, their total number of registered boats in the last several years has remained fairly steady. However, the segment that is a powered boat has gone down substantially, and the number of canoes and kayaks that they have registered has gone up. Ohio is one of those States that registers those small non-powered boats.

And their philosophy or the thought process with it is that it is the part of boating that people can easily obtain. If you want a boat, there is an entry-level boat. You can buy it at Wal-Mart. You can keep it under the porch, even if you don't have room for a trailer. It is an easy way to get into boating, and that is why they think that part of the boating industry is holding steady.

Mr. CUMMINGS. One of the evening news shows had not long ago a feature about how people were abandoning their boats because they could not afford to take care of them, which I found really pretty sad. Do you hear a lot of cases about those kind of cases?

Ms. PODLICH. I certainly saw a lot of press on this about six months ago, and there was a New York Times article that made

a lot of waves on this topic. We see abandoned boats, particularly after big storm events, like big hurricanes, where people go back to their baby, their boat, and it is just demolished. Or they might not even be able to find it, it has moved so much.

And so after that kind of storm activity, particularly in the Florida area, there is a rather significant abandoned boat problem.

Our members tend to be a little bit older. They tend to have been in boating a while. They have an average of 1.8 boats each. And they have been in boating a long time. They are not abandoning their boats. They are taking care of them or they are passing them to their kids. They are selling them to the neighbors.

The idea of proper disposal of your boat when you are done with it is one that BoatU.S. is pushing. Your disposal of your boat when you were done with it should not become society's problem of recycling or trash.

Mr. CUMMINGS. Mr. LoBiondo?

Well, I thank you very much. Your testimony was excellent. Thank you. And I will have some additional questions for you, but we really do appreciate your testimony.

This hearing is adjourned.

[Whereupon, at 4:05 p.m., the Subcommittee was adjourned.]

Government Affairs
880 South Pickett Street, Alexandria, VA 22304
147 Old Solomons Island Road, Suite 508
Annapolis, MD 21401
Phone: (703) 461-2878 x8363 Fax: (410) 224-3807
Website: www.BoatUS.com/gov
Email: govtaffairs@BoatUS.com

Statement of Margaret Podlich

Vice President of Government Affairs
Boat Owners Association of The United States

BoatU.S.
880 S. Pickett Street
Alexandria, VA 22304
703-823-9550 x8355

Before the

Coast Guard and Maritime Transportation Subcommittee
of the Committee on Transportation and Infrastructure

United States House of Representatives

- regarding Maritime Domain Awareness -

December 9, 2009

With 600,000 members, the nation's leading advocate for recreational boaters.

Mr. Chairman and members of the Subcommittee, I am Margaret Podlich, Vice President of Government Affairs for the Boat Owners Association of The United States (BoatU.S.) I am pleased to be here today representing nearly 600,000 members who are recreational boat owners, including about 30,000 members each in Maryland and New Jersey.

Our members enjoy this family friendly activity on all types of water around the country, using a wide range of sizes and types of boats. For many, boating is the quintessential expression of the freedoms we enjoy in this Nation.

Types and sizes of boats:

While Hollywood has portrayed the average boat as a yacht owned by only the wealthy, nothing could be further from the truth. The average boat in this country is 16' and is parked in the owner's yard or driveway. Seventy-five percent of the nation's boat owners have an annual household income of less than $100,000. There are an estimated 12.6 million registered boats in the U.S., a number that has only changed +/- 300,000 since 1997. (See attached charts.)

For the most part, boats less than 16' without engines do not have to be registered at the state level. As a result, these boats are not currently counted by, or even known to, state or federal agencies. Last year, California estimated more than 1.5 million unregistered craft are within its borders. Reaching these boats with any new federal requirement would be extremely difficult and expensive.

These smaller boats, for example canoes and kayaks, are one of the most resilient segments of boating, since both entering the sport and staying in it are relatively easy and inexpensive. However, that's not to imply that the boating industry is riding out the current economic storm. Coupled with the goods and services needed by every boat owner, the U.S. boating industry has historically supported 337,000 jobs, with a labor income of $10.4 billion, selling more than 841,000 new boats and generating $37.5 billion in retail sales (2007 annual numbers). The National Marine Manufacturers Association (NMMA) estimates that, during the recession, over 50% of the people employed in the U.S. marine manufacturing and sales sector have lost their jobs, or have been placed on lengthy furloughs.

Background on Class B AIS:

Today's hearing is to discuss the small boat threat to maritime security, and the potential for Class B Automatic Identification Systems (AIS) to help reduce that threat.

About a year ago, the Federal Communications Commission (FCC) approved Class B AIS transponders for recreational boats. These units will tell nearby vessels your position, course, and speed, as well as give you similar information on other nearby vessels. Since AIS can help the boat operator know what ship may be around the next corner, and facilitate better communication with that ship, some coastal cruisers are voluntarily adding Class B AIS to their existing boat electronics. Chuck Husick, one of our technical editors for BoatU.S. Magazine, has written that AIS equipment is "one of the most important navigation safety improvements since the development of radar."

However, Class B AIS is not a foolproof method of identifying recreational boats and providing movement or ownership data to the U.S. Coast Guard.

BoatU.S. Position:

BoatU.S. is strongly opposed to the idea of requiring millions of recreational boaters to equip their vessels with some form of electronic Automatic Identification System (AIS).

While we understand the Department of Homeland Security's goal of knowing who is on the water, we question the strategy involving the requirement for AIS on recreational boats. We have several concerns about whether this potential new requirement, specifically Class B AIS systems, can actually provide that information:

Class B AIS systems would require constant and reliable electric power on the boat. The systems could be turned on and off by the boat operator or by intermittent power issues.

- There are millions of small boats that do not have electrical systems at all and would be incapable of operating an AIS device. These include small motorboats, with up to a 40 hp outboard engine aboard. These engines are capable of pushing a runabout at least 25 mph.
- The installation of AIS on a recreational boat would not provide a high level of assurance that the equipment would be working at any time

after the installation was completed. A fault in the DC power or the antenna would take the unit off the air. A wire corroded by salt water could do the same. Even if a would-be terrorist would go to the trouble of complying with an AIS requirement, they would merely have to pull the AIS electrical plug moments before an attack. *Will a boat without operational AIS be presumed to be a terrorist?*

- The range of the 2 watt signal from a Class B AIS installed on a small power boat would not likely extend for more than about 5 miles for reception by another vessel.
- There is nothing to prevent the operator (boat owner or terrorist) from turning the unit on and off at will.

Data transmitted by the AIS unit could be wrong or deliberately "spoofed."

Stolen Boats:

- Many boat owners are lucky to visit their boat at the marina once every week or two during the boating season. Should a boat be stolen and used in a terrorist effort, the AIS unit would still transmit the owner's information. If the boat is not yet reported as stolen there is no chance any authorities would understand the transmitted information is incorrect.
- If a stolen boat is reported to the state police, the U.S. Coast Guard does not necessarily receive that information in a timely manner. The current Vessel Identification System now shares registration data from 31 states with the U.S. Coast Guard. This data is only for half of all registered boats in the U.S. The ability for law enforcement to pull this data is inconsistent, and is dependent on onboard communications and computer equipment.
- It is unlikely that incorrect data could be resolved by enforcement authorities in the limited time available to deter a would-be terrorist activity.
- *If the boat is stolen but not yet reported, and used in a terrorist activity, how will the U.S. Coast Guard react thinking this boat was being operated by the owner?*

Spoofing:

- Terrorists intent on doing something bad on the waterfront would have no problem "spoofing" an AIS transponder, forcing it to report erroneous positions, speeds, or course over ground.
- Because AIS units rely on accurate data from their GPS (Global Positioning Service), jamming GPS signals would be a spectacular way to incapacitate an entire harbor's AIS signals. A 2008 report from the

General Lighthouse Authorities of the United Kingdom and Ireland ("Impact of GPS Jamming on the Safety of Navigation") shows that a 1.5 watt GPS spoofing transmitter (about the size of a shoebox including a battery) could make every AIS in the area report totally inaccurate data.

- In high traffic areas, the more AIS transponders there are, the less effective the tool can be. A BoatU.S. Member who is a merchant mariner has shared "I routinely see our chart plotter screen clogged up with AIS target names and/or MMSI numbers in or near port cities. This renders the tool nearly useless..." **We believe that adding millions of recreational boats to the nation's AIS system would overwhelm the U.S. Coast Guard's ability to effectively monitor the entire system.**

Even with a Class B AIS unit onboard, terrorists on small craft could have plenty of time to successfully achieve an attack from watercraft.

- Terrorists would be careful to operate in a manner that would not attract attention, until in range of their intended target. Class B AIS units transmit data every 30 seconds. A small boat capable of a modest speed of only 30 knots, and equipped with a Class B AIS would be able to traverse a distance of 1520 feet in the interval between AIS transmissions.
- If the signals from the AIS transponder were being tracked and the unit was intentionally turned off, the absence of the signal would not likely be noticed in a timely manner. In addition, the regular cyclic transmission of a Class B AIS can be inhibited by the presence of other AIS transmissions, something not at all unusual in a busy port area.

Class B AIS systems and the necessary antenna cost $600 for the equipment plus installation fees.

- At an estimated cost of $600 per device, for only half the registered boats (6,000,000) the economic impact could be $3.6 billion – a significant amount for the recreational boating community to absorb given the unproven and likely negligible security impact of the requirement. In the current economic environment, substantial additional costs would push some boaters out of boating, with trickle down effects into the marine industry and related U.S. jobs.

BoatU.S. is concerned that potential requirements for Class B AIS on recreational boats are window dressing for a potential homeland security problem that will not be reduced, despite the outlay of billions of dollars by U.S. boaters.

- In March, the GAO Report on "Vessel Tracking Systems Provide Key Information" summarized as follows:

  > "In studies GAO reviewed and discussions with maritime stakeholders, there was widespread agreement that vessel tracking systems and equipment will be challenged to provide a warning if a small vessel is moving in a threatening manner."

- The U.S. Coast Guard already juggles dozens of jobs on the water. We are concerned about how they can inspect for a new equipment requirement and an operational requirement. *Who will be on the water to approach vessels considered suspicious because of the absence of an AIS signal?* (The U.S. Coast Guard Auxiliarists probably won't volunteer for that job.)
- It is already extremely difficult to get boaters to install and use VHF radios properly on their boats – and these are not required by federal law. *What would the consequences be if a vessel isn't transmitting their AIS signal because of an innocent malfunction - a broken wire, a failure in the device?*
- The FCC currently allows commercial aircraft to continue on their route even if a transponder fails. We are concerned how authorities would handle a boat with a broken transponder, whether this would be a federal violation, and if enforcement officials would be required to escort that boat immediately back to the dock.

We continue to support the U.S. Coast Guard's America's Waterway Watch program, which relies on the "neighborhood watch" concept on our local waterfronts and waterways.

BoatU.S. has been a strong supporter of the America's Waterway Watch (AWW) program, publicizing it, asking our members to participate, and asking Congress for additional funding for this program. Most recently, AWW funding was included in section 1101 of the U.S. Coast Guard Reauthorization Bill H.R. 3619.

In our opinion, this type of program is more likely to succeed for two reasons: it treats boaters as part of the solution, rather than part of the problem; and it relies on boaters to know what doesn't look right on the water. There are already several success stories affiliated with this program,

as recreational boaters have reported suspicious activity to enforcement agencies at the federal and state level.

We support giving AWW more sturdy legs, in terms of infrastructure and funding. We also recommend with any bolstering of this program, that an analysis be conducted to insure that AWW evolves to include the lessons learned through successful neighborhood and volunteer based watch groups. With all due respect, with an inconsistent budget, AWW is currently little more than a pamphlet campaign geared to getting boaters to call a phone number if they see something strange. Many boaters are still unaware of the program; do not know what they are supposed to look for, nor what number to call so they can report suspicious or unusual behavior.

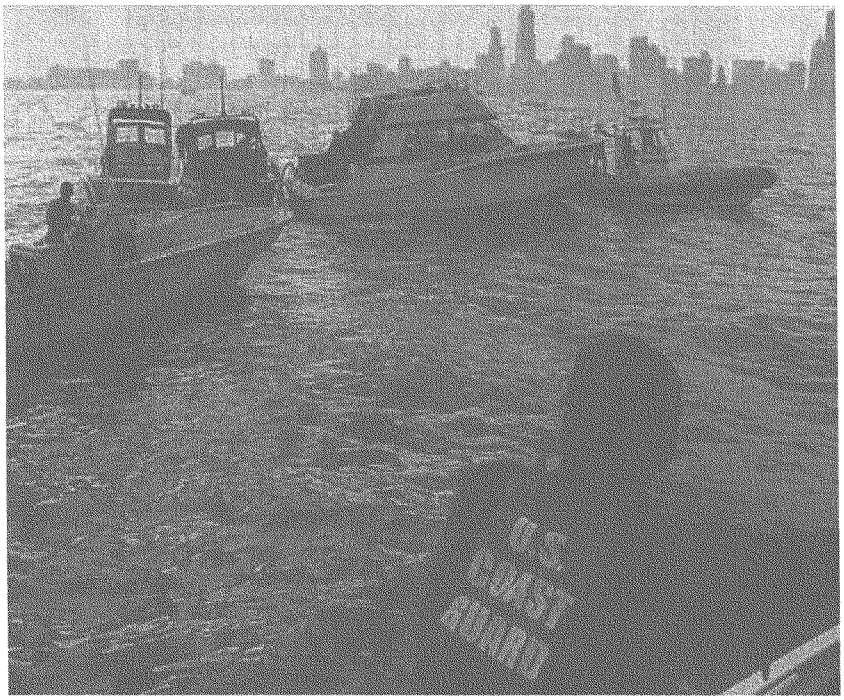
Conclusion:

On behalf of our 600,000 Members, owning more than a million boats, BoatU.S. opposes any future requirement for AIS on recreational boats.

BoatU.S. believes that requiring that AIS transponders be installed and operational on recreational vessels would not produce any significant benefit for maritime security. It would come at a substantial cost to the taxpayer, and to the marine industry as a whole.

BoatU.S. appreciates the opportunity to comment on Maritime Domain Awareness as it applies to recreational boats. We ask that our comments be placed into the record, and would be happy to answer any questions the Committee may have.

RECREATIONAL BOATING STATISTICS 2008



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U.S. Department of Homeland Security
U.S. Coast Guard
Office of Auxiliary and Boating Safety

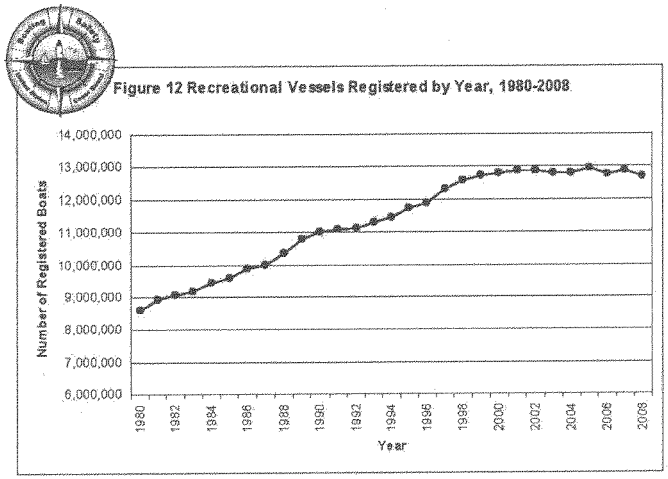

Table 36 - RECREATIONAL VESSELS REGISTERED BY YEAR, 1980-2008

Year	Registered
1980	8,577,857
1981	8,905,097
1982	9,073,972
1983	9,165,094
1984	9,420,011
1985	9,589,483
1986	9,876,197
1987	9,963,696
1988	10,362,613
1989	10,777,370
1990	10,996,253
1991	11,068,440
1992	11,132,386
1993	11,282,736
1994	11,429,585
1995	11,734,710
1996	11,877,938
1997	12,312,982
1998	12,565,930
1999	12,738,271
2000	12,782,143
2001	12,876,346
2002	12,854,054
2003	12,794,816
2004	12,781,476
2005	12,942,414
2006	12,746,126
2007	12,873,091
2008	12,692,892

Table 37 - RECREATIONAL VESSEL REGISTRATION BY LENGTH AND MEANS OF PROPULSION 2008

Mechanically Propelled	Not Mechanically Propelled	Total
11,841,281	851,611	12,692,892

STATE REGISTERED BOATS THAT ARE MECHANICALLY PROPELLED

	Means of Mechanical Propulsion			Auxiliary Sail		
	Inboard	Outboard	Sterndrive	Inboard	Outboard	Total
Under 16 feet	1,363,596	3,424,355	179,860	9,672	12,406	4,989,889
16 to less than 26 feet	734,433	4,197,363	1,278,980	16,190	40,514	6,267,480
26 to less than 40 feet	173,974	113,352	162,540	40,381	11,332	501,579
40 to 65 feet	43,898	7,368	12,958	5,804	791	70,819
Over 65 feet	6,037	2,458	2,897	99	23	11,514
Total	2,321,938	7,744,896	1,637,235	72,146	65,066	11,841,281

STATE REGISTERED BOATS NOT MECHANICALLY PROPELLED

Rowboats	Sailboats	Canoes/Kayaks	Other Boats	Total
105,790	127,869	384,770	233,182	851,611

Registration Data

Table 38 - RECREATIONAL VESSEL REGISTRATION DATA BY STATE 2007-2008

	Rank	2008	2007	Scope of Current Boat Registration System
Nationally		**12,692,892**	**12,875,568**	
AL	16	272,558	274,176	All motorboats, sailboats and rental boats
AK	45	47,534	47,548	All undocumented powerboats
AS	56	27	106	All watercraft
AZ	30	140,291	144,570	All watercraft, except inflatables 12 feet in length or less
AR	22	199,104	206,195	All motorboats and sailboats
CA	3	858,853	964,881	All motorboats; sailboats over 8 feet in length
CO	34	95,330	98,055	All watercraft powered by motor or sail - sailboards exempt
CT**	31	110,650	108,539	All motorboats; sailboats 19.5 feet or more in length
DE	42	56,669	61,569	All motorboats
DC	54	2,922	2,866	All watercraft
FL	1	974,553	991,680	All motorboats
GA	12	350,479	344,597	All motorboats; sailboats 12 feet or more in length
GU	53	3,277	3,278	All watercraft (estimated)
HI	51	15,404	15,094	All motorboats; sailboats over 8 feet in length
ID	36	89,026	91,612	All motorboats and sailboats
IL	10	378,208	379,454	All watercraft, except non-profit org. owned canoes and kayaks
IN	17	271,532	241,474	All motorboats
IA	21	231,333	213,757	All watercraft with exceptions (a)
KS	35	91,067	93,900	All motorboats and sailboats
KY	28	173,981	176,716	All motorboats, except electric motors 1 hp or less
LA	15	302,753	301,249	All motorboats; sailboats more than 12 feet in length
ME	32	109,657	112,818	All motorboats
MD	23	199,087	202,892	All motorboats
MA	29	145,113	145,496	All motorboats
MI	4	816,752	830,743	All watercraft with exceptions (b)
MN	2	867,446	866,496	All motorboats with exceptions (c)
MS	25	191,312	180,356	All motorboats and sailboats
MO	14	322,253	321,782	All motorboats; sailboats over 12 feet in length
MT	37	84,988	79,651	All motorboats; sailboats 12 feet or more in length
NE	38	83,280	83,722	All motorboats
NV	41	57,519	59,895	All motorboats, sailboats, rowboats
NH	33	96,205	100,261	All motorboats; sailboats 20 feet or more in length
NJ	26	185,359	183,147	All watercraft with exceptions (d)
NM	48	33,304	38,100	All motorboats and sailboats
NY	7	485,541	494,020	All motorboats
NC	11	371,879	375,815	All motorboats; sailboats more than 14 feet in length
ND	46	46,067	53,519	All watercraft
CNMI	55	330	380	All motorboats
OH*	9	416,586	415,228	All watercraft; *5576 livery vessels included in '08; 5522 livery vessels not included in '07
OK	24	196,052	223,758	All watercraft
OR	27	180,063	184,147	All motorboats; sailboats 12 feet or more in length
PA	13	338,316	342,427	All motorboats and certain non-powered craft (e)
PR	40	59,580	62,360	All motorboats; vessels adapted to hold a motor
RI	47	42,524	43,665	All watercraft except canoes, kayaks & rowboats < 12 feet
SC	8	436,844	442,040	All watercraft
SD	43	56,604	53,570	All motorboats; all other boats over 12 feet in length
TN	18	271,475	274,914	All motorboats and sailboats
TX	6	597,428	599,567	All motorboats and sailboats 14 feet or more in length
UT	39	73,009	76,921	All motorboats and sailboats
VT	49	30,429	31,482	All motorboats
VI	52	6,915	5,455	All watercraft
VA	20	249,312	251,440	All motorboats
WA	19	264,393	270,789	All motorboats with exceptions (f); sailboats >16 ft in length
WV	44	49,930	63,064	All motorboats
WI	5	634,546	617,366	All motorboats; sailboats over 12 feet in length
WY	50	27,243	26,956	All motorboats and sailboats

(a) Iowa excludes inflatables under 7 feet in length and canoes/kayaks under 13 feet in length. (b) Michigan excludes manually propelled boats 18 feet or less in length, and nonmotorized rafts, canoes, and kayaks. (c) Minnesota excludes nonmotorized boats nine feet or less in length, duckboats during duckhunting season, and riceboats during harvest season and seaplanes. (d) New Jersey excludes non-motorized boats 12 feet or less in length and canoes, kayaks, racing shells and rowing sculls. (e) Pennsylvania registers non-powered craft using lakes or access areas owned by the State Fish & Boat Commission. (f) Washington excludes motorboats < 16 feet with motors 10 horsepower or less used solely on exclusive state waters. *OH included 5576 livery vessels in their 2008 figures; they did not include 5522 livery vessels in their 2007 figure. **CT reported that their 2007 number should have been 112,163. Totals for 2007 have not been updated to reflect this revision.

U. S. Department of Homeland Security

United States Coast Guard

Commandant
United States Coast Guard

2100 Second Street, S.W.
Washington, DC 20593-0001
Staff Symbol: CG-0921
Phone: (202) 372-3500
FAX: (202) 372-2311

Testimony of Rear Admiral Brian M. Salerno
Assistant Commandant for Marine Safety, Security and Stewardship

"U.S. Coast Guard's Maritime Domain Awareness Efforts"

Before the House Transportation and Infrastructure Subcommittee on Coast Guard & Maritime Transportation

December 9, 2009

Good afternoon Mr. Chairman and distinguished Members of the Subcommittee. I am Rear Admiral Brian Salerno, Assistant Commandant for Marine Safety, Security, and Stewardship. It is a pleasure to be here today to update you on the Coast Guard's efforts to enhance our nation's maritime security through Maritime Domain Awareness.

Maritime Domain Awareness

In Alexander Hamilton's 1791 letter of instructions to commanding officers of the Revenue Cutters he noted that "[t]he provisions of these sections admonish you to keep a careful eye upon the motions of coasting vessels, without, however, interrupting or embarrassing them unless where some strong ground of suspicion requires that they should be visited and examined." This, in essence, was the birth of Maritime Domain Awareness (MDA). Throughout the nearly 220 years since, Coast Guard assets, including its cutters, aircraft, stations, boats, sensors, and people, have provided the nation with MDA. Today, as the lead federal agency for marine safety, security and stewardship, the Coast Guard has the primary responsibility within the Department of Homeland Security (DHS) to protect the U.S. maritime domain and our marine transportation system. A key element of the Coast Guard's Maritime Strategy for Homeland Security is to increase MDA. Awareness is essential to everything we do. We cannot hold polluters accountable unless we can match them to their spills; we cannot keep vessels from colliding if we don't know where they are; we can't rescue survivors unless we find them; and we cannot intercept those who would do us harm if they are able to blend in with the millions of recreational boaters who lawfully enjoy our ports and coastal waters.

Before proceeding, I would like to clarify what precisely is meant by the term Maritime Domain Awareness, or MDA. MDA is the effective understanding of anything associated with the global maritime environment that could impact the security, safety, economy or environment of the United States. MDA requires gathering and synthesizing large amounts of intelligence and other information from disparate sources in a timely and comprehensive manner. This information is then evaluated, analyzed, and converted into actionable and reliable intelligence and information and disseminated to our federal, state, and local partners, as well as to private industry. This ensures our country's ports are not vulnerable to a surprise attack or to a disruption of critical commercial

operations or infrastructure. The Coast Guard is a member of the intelligence and law enforcement communities, a component within DHS, and at all times a military service. It is through our various authorities and responsibilities we endeavor, every day, to protect U.S. ports, waterways, and coastal approaches from any assessed maritime threat.

MDA represents a continuum of maritime knowledge from situational awareness through current and predictive intelligence that supports decision making across all mission areas. It is developed through a process of: (1) collection ["see"], (2) fusion and analysis ["understand"], and (3) dissemination ["share"] of information and intelligence on vessels, cargo, people, infrastructure, and the environment. This continuum of processes is present in systems and initiatives that increase our MDA. For example, collection is facilitated by the Automatic Identification System (AIS) and the Long Range Identification and Tracking (LRIT) system. Regular Coast Guard operations both in port and at sea are robust sources of data collection for MDA. Fusion and analysis occurs at various Coast Guard command levels, through interagency partnerships, and via public-private industry workgroups. Dissemination occurs within Area Maritime Security Committees (AMSC) and by the Office of Global Maritime Situational Awareness (OGMSA).

A critical element of MDA is our ability to share information with our port partners, enabling collaborative planning and coordinated operations. Through deployment of the WatchKeeper system, the centerpiece of DHS's Interagency Operations Center (IOC) project, the Coast Guard is drastically improving collection, fusion, and dissemination of actionable information in the interagency environment by leveraging each agencies' authorities, jurisdictions and capabililties. This leads to more efficient and effective use of limited tactical assets by targeting risk areas and reducing interagency overlaps and mission conflict.

Enhanced MDA is attained by leveraging diverse sets of capabilities and authorities employed by MDA stakeholders across the Global Maritime Community of Interest (GMCOI) consisting of partners from federal, state, local and tribal agencies with maritime responsibilities, as well as public, private sector, and international stakeholders. These capabilities, and future projects, will be used to facilitate the gathering and sharing of data, information, and intelligence. Many of these capabilities reside in the disciplines of Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR) and are discussed below.

Collection ("See")

Automatic Identification System (AIS): AIS is an internationally adopted communication system to automatically exchange vessel positions and other navigation safety related information on a continuous basis. This tool is used by ships, Vessel Traffic Services (VTS), and maritime authorities to identify and locate vessels. AIS provides a means for ships to electronically exchange ship data, including identification, position, course, and speed, with other nearby ships, VTS stations, and shore-based AIS receivers used for maritime situational awareness.

As early as 1997, Congress recognized the value of AIS and directed AIS and the Differential Global Positioning System (DGPS) to be the foundation of the Coast Guard's VTS system. After 9/11, the world's maritime nations expedited the implementation of AIS as a means to enhance maritime security.

AIS Regulation: In October 2005, the Coast Guard announced its intent to extend AIS carriage to all U.S. navigable waters. In December 2008, a Notice of Proposed Rulemaking was published that proposed extending AIS carriage requirements to cover all commercial vessels equal to or greater than 65 feet in length, all towing vessels equal to or greater than 26 feet in length or greater than 600 horsepower, all vessels carrying 50 or more passengers for hire, all high-speed vessels carrying 12 or more passengers, certain dredges and floating plants, and all vessels moving Certain Dangerous Cargoes (CDC). These proposals will more than double the number of vessels that the Coast Guard currently tracks via AIS.

The Coast Guard is studying an extension of AIS carriage requirements to other vessels, but we have no plans to do so in the near future. Implementation of any regulation will be based on a thorough analysis of its impact on the public.

Nationwide AIS: NAIS is a multi-year project to enhance maritime safety, security, and MDA capabilities. NAIS will help improve navigation safety by using a series of shore-based transceivers to exchange AIS navigational data, to assist investigations of maritime incidents, and facilitate commercial and blue force vessel tracking within the U.S. maritime domain. NAIS will be an integrated network of AIS receivers, transmitters, and data processing and storage centers. The NAIS network will collect, integrate, analyze, and connect to user interfaces to display information concerning AIS equipped vessels, share this information with other authorized partners, and provide a means for data exchange between shore and AIS-equipped vessels.

As part of the NAIS project, the Coast Guard leveraged existing research and development efforts to rapidly deploy receive-only AIS capability in 58 ports and major coastal areas. To date, all continental U.S. high priority coastal port areas have NAIS coverage.

On December 22, 2008, the Coast Guard awarded a $12 million contract to Northrop Grumman Space & Mission Systems Corp. (Northrop Grumman) to deliver the "core" NAIS data exchange capability. The core consists of all the system components and functionality, including AIS receive and transmit messaging, data processing, data storage and retrieval, and system monitoring, on a limited geographic scale. Under the contract, Northrop Grumman will provide the necessary shore-side communications, network, and processing capability to ensure the effective exchange of AIS information between AIS-equipped vessels, aircraft, aids to navigation, and shore stations, as well as receipt of this information from AIS-equipped vessels bound to the U.S. The Coast Guard intends to leverage the capability delivered through this effort to enhance and standardize the entire NAIS.

The Coast Guard is also developing Long Range AIS Receive, which is intended to provide receive capability of AIS signals out to a range of 2,000 nautical miles. A commercial concept demonstration satellite was successfully launched in June 2008 to test and evaluate the feasibility of spaced-based AIS reception. The evaluation of the performance of the commercial satellite service is ongoing and is expected to continue through fiscal year 2010.

Long Range Identification and Tracking (LRIT): LRIT is a designated International Maritime Organization (IMO) worldwide automated tracking system utilizing satellite technology, primarily through currently installed communications suites to collect and disseminate position information of all vessels subject to Safety of Life at Sea (SOLAS) regulations worldwide. In May 2006, the Maritime Safety Committee (MSC) adopted amendments to the International Convention for SOLAS through Resolution MSC.202(81), establishing a global multilateral regime to meet the maritime safety, security, marine environmental protection, and search and rescue concerns of SOLAS Contracting Governments, including the United States. The worldwide LRIT system became operational on December 31, 2008.

This system is designed to allow SOLAS Contracting Governments access to flag, port, and coastal state LRIT information as necessary. For example, the United States will receive worldwide tracking information from all vessels subject to the regulation to include: all U.S. flagged SOLAS vessels worldwide, foreign SOLAS class vessels inbound to U.S. ports, and foreign vessels transiting within 1,000 nautical miles of the U.S. coast.

As a Contracting Government to SOLAS, the United States is bound by this international mandate. The Coast Guard has developed a National Data Center (NDC) to collect, request, receive, and distribute data within the LRIT system. The NDC achieved initial operational capability in December 2008. The NDC will achieve full operational capability by December 31, 2009, when all applicable U.S. flagged vessels will be required to be integrated into the LRIT system. Also, the IMO designated the United States to build and temporarily operate the International Data Exchange (IDE) through December 31, 2011. The IDE routes vessel positioning data between all participating LRIT Data Centers.

LRIT will complement existing classified and unclassified tracking systems to enhance MDA. The Coast Guard's unclassified Common Operational Picture (COP) is now receiving LRIT information, and the tracks are available to all classified COP managers to distribute to their users. LRIT and NAIS are separate but complimentary systems that collectively enhance our awareness of vessel movement through our waters.

Notice of Arrival and Departure (NOAD): A notice of proposed rulemaking published in December 2008 proposed expanding the applicability of NOAD requirements to all commercial foreign vessels departing to or coming from a port or place in the United States and all U.S. commercial vessels coming to a U.S. port or place from a foreign port or place. Further, a separate notice of proposed rulemaking, published in July 2009, would implement provisions of the Security and Accountability for Every Port Act of 2006 and increase overall MDA by requiring owners or operators of U.S. and foreign flag floating facilities, mobile offshore drilling units, and vessels to submit notice of arrival information to the National Vessel Movement Center prior to engaging in outer continental shelf activities.

Small Vessel Security: Historically, maritime security efforts have primarily focused on large commercial vessels, their cargoes, and crew. Efforts to address the small vessel environment have largely been limited to traditional safety and law enforcement concerns. Small vessels are, however, vulnerable to potential exploitation by terrorists, smugglers of people, weapons of mass destruction, narcotics and other contraband, as well as other criminal actions. Small vessels have also been successfully employed overseas by terrorists to deliver Waterborne Improvised Explosive Devices

(e.g., USS COLE; T/V LIMBURG), complete armed raids (Mumbai, India), and employed by pirates to hijack international cargo vessels in troubled areas, such as Somalia and the Strait of Malacca.

A small vessel is generally characterized as any watercraft less than 300 gross tons. Small vessels include commercial fishing vessels, recreational boats and yachts, towing vessels, uninspected passenger vessels,, or any other small commercial vessels involved in foreign or U.S. voyages. This distinguishes small vessels from large commercial vessels (generally 300 gross tons and over) that are regulated by security standards mandated by the Maritime Transportation Security Act (MTSA) of 2002 and the International Ship and Port Facility Security (ISPS) Code (Chapter XI-2 of SOLAS).

The U.S. small vessel population includes federally documented and individually state-registered vessels. There are approximately:

- 12.7 million registered recreational boats;
- 80,000 fishing boats;
- 7,000 towing vessels (tugs);
- 30,000 small passenger vessels and charter boat vessels engaged in the tourist and ferry businesses within U.S. ports, coastal and inland waterways; and
- An unknown number of unregistered and nondescript service and construction small watercraft in the neighborhood of 18 to 20 million.

DHS held a National Small Vessel Security Summit (NSVSS) in June 2007. Approximately 260 attendees discussed concerns and measures to deal with small vessel security. An after-action report was released on January 15, 2008 by the Secretary of Homeland Security to provide a documented view of industry and the public's concerns on security solutions for small vessel operations in the U.S. maritime domain.

The Coast Guard led the development and presentation of an information paper regarding small vessel security to IMO's Maritime Safety Committee's (MSC) 84th session in the spring of 2008. The paper provided the DHS SVS Summit report to the 140 countries associated with IMO. The MSC also established a correspondence group on small vessel security to develop a draft of international guidelines for security of small vessels that are not subject to the ISPS Code. These guidelines were discussed and worked on at the MSC 85 meeting; an MSC Resolution was adopted on the final day of MSC 85 (Dec. 5, 2008) titled, "Guidelines on security aspects of the operation of Vessels which do not fall within the scope of SOLAS Chapter XI-2 and the ISPS Code." Even though these are voluntary guidelines, many of the contracting governments at IMO felt that these could be used as the baseline for national, domestic standards for the development of their own security programs for small vessels.

In addition, the DHS interagency Small Vessel Security (SVS) Working Group was established in August 2007 to develop a strategy for SVS. The group included representatives from all DHS components, as well as the FBI and partners from state and local governments and the private sector. The Secretary released the DHS SVS Strategy (SVSS) to the public on April 28, 2008 (available at http://www.dhs.gov/xlibrary/assets/small-vessel-security-strategy.pdf). The strategy's four goals are:

- Develop and leverage a strong partnership with the small vessel community, as well as the public and private sectors, to enhance maritime domain awareness.
- Enhance maritime security and safety based on a coherent plan with a layered, innovative approach.
- Leverage technology to enhance the ability to detect, determine intent, and, when necessary, interdict small vessels.
- Enhance coordination, cooperation, and communications between federal, state, local, tribal, and territorial agencies, the private sector, and non-governmental organizations, as well as international partners.

The diversity of small vessels precludes any single, one-size-fits-all solution and instead requires a range of actions that can be undertaken to minimize risk. A layered defense system is necessary to achieve an overall reduction in small vessel risk.

To ensure new security measures are successful, we will need to build support for security enhancements among the affected stakeholder groups – in fact, it was one of the many recommendations stakeholders provided at the National SVS Summit and resounded at every regional summit.. DHS has taken numerous steps to ensure that its first step in implementing any actions is getting these stakeholders into the process. It is imperative that the government work with the maritime community to include them as part of the solution. Accurate maritime domain awareness that allows us to separate the overwhelming majority of law-abiding mariners from the few who may harbor ill intent is critical.

It is helpful to highlight a success story that illustrates recent progress towards greater sharing of information among marine stakeholders. The Vessel Identification System (VIS) now allows participating states to access individual boat registration data and documented vessel data from our Marine Information for Safety and Law Enforcement (MISLE) database at any time without requiring contact with state dispatch or registration offices. This information is used for law enforcement, security, notification and recovery of stolen vessels, and in the prosecution of search and rescue cases. Access is gained through existing systems such as the National Law Enforcement Telecommunications System (NLETS) as well as direct access through VIS. Memoranda of Agreement to provide this information have been signed by 25 states, the District of Columbia, and the 5 U.S. territories; and we hope to have one to two more states signed by theend of FY 2010. Approximately 20 states are currently supplying data, with others expected to come online shortly. Further, in addition to improving our methods to track vessels through VIS, we are continuing to explore other means to improve our awareness of all people who are operating vessels in waters under our jurisdiction.

The Coast Guard is doing more to open conversations with small vessel stakeholders, not only domestically, but also internationally. Some small vessel owners sail on international voyages, so we are directly coordinating, communicating, and educating governing agencies in Canada, Mexico and Caribbean countries. We will continue striving to fuse data and complete risk-based decision actions before a threat can ever reach the U.S.

The DHS SVSS Implementation Plan (IP) has been drafted and is currently under review. As it relates to MDA, the draft SVSS IP includes most of what is discussed in this testimony, especially those areas that delineate the methods by which we collaborate and share information among our

federal, state, tribal and terriotorial, local, private sector, and where appropriate, international partners.

Coast Guard Operations:
In General: Coast Guard assets and people provide MDA in executing all of our 11 statutory missions. Whether it is an icebreaker operating within the U.S. Exclusive Economic Zone (EEZ) in the Arctic, a buoy tender working in the Mississippi River, or a patrol boat conducting a law enforcement mission in the Straits of Florida, the physical presence of a Coast Guard vessel supplies MDA to the nation. Similarly, the Coast Guard's fleet of maritime patrol aircraft provide medium- and long-range surveillance capabilities to detect drug smugglers, illegal migrants, and fisheries violations from the high latitudes to the transit zones of the eastern Pacific. Such combined efforts to attain MDA enhance our ability to rescue those in distress, enforce laws, and protect our environment and national interests. As the Coast Guard proceeds with its major cutter and aircraft recapitalization projects, including development of unmanned aerial systems, enhancement of operational capabilities and sensor packages on our assets will expand MDA capability.

Operation Neptune Shield: The Coast Guard conducts a diverse suite of maritime security and response operations nationwide in accordance with the Coast Guard's Operation Neptune Shield operation order. Operational activities include, but are not limited to: patrols; presence and response (focused near maritime critical infrastructure/key resources); security boardings; escorts; fixed security zone enforcement; surveillance and tracking; intelligence; surge operations and National Special Security Event (NSSE) support; deployable specialized mission units and capabilities; and support of military outloads. These activities are conducted by cutters, boats, and aircraft, as well as shoreside personnel. Several of these activities contribute directly to MDA. For example:

- Pre-entry security boardings of selected vessels,
- Waterborne, shoreside, and aerial surveillance patrols of ports and coastal approaches, and
- Offshore presence of cutters.

Arctic Domain Awareness: The United States is an Arctic Nation. The recent presidential directive on Arctic Region Policy, NSPD-66/HSPD-25, provides that the Arctic region is primarily a maritime domain in which the United States has broad and fundamental national and homeland security interests. The United States must exercise its rights and jurisdiction in the Arctic region, including sovereignty within its 12-mile territorial sea, 24-mile contiguous zone, 200-mile EEZ, and on its continental shelf, which can potentially extend hundreds of miles beyond. The U.S. Arctic Region Policy reaffirms the freedom of the seas: global mobility of the U.S. military and merchant vessels are top national priorities. Awareness of the Arctic maritime domain will be critical to promoting our nation's security and other critical objectives.

The opening of the Arctic region to additional shipping, oil and gas exploration, eco-tourism, and other economic activity as a result of the declining permanent ice cover presents many potential challenges along with the opportunities. In most places, the Coast Guard knows the culture, the infrastructure, and the operational parameters of maritime activity. In the Arctic, MDA requires developing an understanding of the affected human, social, cultural, economic, environmental, and physical factors in the region. It includes working closely with our neighbors in Canada and Russia on issues of shared interest, but also with the indigenous peoples and communites throughout the region.

Until recently, demand for the Coast Guard to execute its statutory missions in the Arctic has been limited due to minimal human activity in the region. However, this is changing and the Coast Guard is working diligently to identify and prepare for future mission demands. To that end, we have contracted for an independent mission analysis to address the mission needs and the role of the Coast Guard in the high latitude regions. The analysis will report on current and projected mission requirements and the capabilities needed by the Coast Guard to support national interests and Coast Guard mission execution in the high latitude regions. The report is to be completed in June 2010.

Fusion and Analysis ("Understand")

Maritime Intelligence Fusion at the National and Regional Level: As a member of the national Intelligence Community (IC), the Coast Guard benefits from access to the collective foreign intelligence collection, analysis, production, and dissemination capabilities of the IC's 16 member agencies. As the Coast Guard's primary interface with the IC, the Intelligence Coordination Center (ICC) coordinates and integrates the collection, analysis, production, and dissemination of Coast Guard intelligence. The ICC provides all-source, tailored, and integrated intelligence and intelligence services to the Coast Guard Commandant, senior decision makers, and field commanders; DHS; the IC; Combatant Commanders; and other military services and civilian agencies. The Maritime Intelligence Fusion Centers (MIFCs) serve as regional maritime intelligence nodes that provide Coast Guard and other maritime partners with intelligence production and analysis to support a wide range of maritime missions. They fuse real-time information fed from Coast Guard field units with other intelligence to produce a complete tactical intelligence picture for operational customers.

Maritime Intelligence Fusion and Outreach at the Port Level: The MIFCs, the Sector Intelligence staff, and special agents of the Coast Guard Investigations Service (CGIS) exchange information with state and local fusion centers to ensure awareness of suspicious activities that may threaten the safety or security of U.S. ports and waterways within the fusion centers' respective city, state or regional purview. The MIFCs, the Sector Intelligence staff and CGIS special agents are all participants in the joint DHS/DOJ Suspicious Activity Reporting process.

The Sector Intelligence Staff serves as the key intelligence support element for all operations within the Coast Guard Sector. They are the primary intelligence advisor to the Sector Commander and are responsible for helping to define and meet the commander's information needs.

The Sector Intelligence Staff's primary responsibilities are to manage, coordinate, and oversee Coast Guard port-level intelligence activities and training within the Sector in support of Coast Guard and homeland security missions. They also support and perform first-order analysis and provide the Sector with national and field level intelligence reporting tailored to meet Sector needs. They also help to improve port-level intelligence collection, analysis, information sharing, threat assessments and maritime domain awareness through collaboration with federal, state and local agencies via participation with local level workgroups such as Joint Terrorism Task Forces, Antiterrorism Advisory Committees, Law Enforcement Coordinating Committees, and Regional Domestic Security Task Forces.

Dissemination ("Share")

Area Maritime Security Committees (AMSC): Each Sector conducts MDA outreach primarily through oversight of their Area Maritime Security Committees. AMSCs are comprised of members selected from federal, state and local law enforcement agencies, and maritime industry who address local maritime security issues, assist the development, review, and update of the Area Maritime Security Plans, and determine mitigation strategies and implementation methods for their ports. Through these committees, the Coast Guard Sector builds and maintains relationships and actively shares information.

Each AMSC has developed an Area Maritime Security Plan with the primary purpose of providing a framework for communication and coordination among port stakeholders and law enforcement officials, and to identify and reduce the vulnerabilities, risks and security threats in and near the maritime transportation system. This plan is updated and exercised regularly and is not static. The AMSCs, prompted by updates to Maritime Security Risk Assessment Model assessments or growing national, regional, or local threats, refocus their efforts accordingly. An example of this responsiveness has been the increased emphasis on the small vessel threat.

MDA is enhanced in various ways such as coordinating patrol schedules and information pertaining to high risk port areas, identifying and addressing uncharacteristic vessel operations, and conducting joint training exercises. The Committee also serves as a link for communicating threats and changes in MARSEC levels and disseminating appropriate security information to port stakeholders.

Participation in Interagency Approach to MDA

The Coast Guard has played a major role in interagency efforts that are making a difference in the nation's MDA. Among these are:

National Maritime Intelligence Center (NMIC): Intelligence Community Directive 902, signed January 14, 2009, directed that a "national intelligence center for the integration of strategic maritime information" be established and NMIC was stood up as a result. The primary functions of the center are policy coordination for the integration of maritime information and intelligence collection and analysis in support of national policy and decision makers, MDA objectives, and interagency operations, at all levels.

The NMIC vision is to dynamically integrate the global maritime community for decision-making advantage. The Coast Guard is a participating service, and the Coast Guard's ICC is a supporting organization in a federated community effort to improve information sharing and collaborative analysis in support of national and maritime security objectives. The NMIC integrates maritime intelligence across the IC and the GMCOI through analytical and collection gap analysis and the facilitation of information sharing. The NMIC coordinates IC/GMCOI production in support of, or in response to, national decision makers.

Support to the Office of Global Maritime Situational Awareness (OGMSA): The Coast Guard, along with the Departments of Defense and Transportation, is providing critical support to OGMSA

by contributing staff and space. We also provide senior leadership representation as a member of the MDA Executive Steering Committee.

OGMSA has a very active outreach program with federal, state, industry, and international MDA partners, and is facilitating U.S. Government outreach to the maritime industry through events such as last month's Global Maritime Information Sharing Symposium. They are also presenting interagency information sharing workshops, through which U.S. government agencies with maritime missions collaborate on overarching information sharing policy guidelines and barrier resolution procedures.

Further, the Coast Guard is assisting OGMSA in synchronizing global efforts to improve AIS data sharing in support of MDA – particularly important to global distress and safety missions. Through Coast Guard and OGMSA efforts, the International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA) has agreed to explore a global government-to-government AIS data-sharing network, called IALA-Net, and to collaborate to establish standards for a broader network of AIS sharing. The Coast Guard also is working with the interagency and the international communities to develop standards and applications of collection of AIS data received from commercial satellites.

Information Enterprise Hubs: The Coast Guard is an active participant in the National MDA Stakeholder Board, an interagency group comprised of department and agency-level maritime stakeholders. The Stakeholder Board, which functions under the purview of the Maritime Security Interagency Policy Committee led by the National Security Staff, collaborates on MDA issues of national interest and works toward resolving gaps in our national system. The Stakeholder Board has established a system of MDA information hubs that were called for in the National MDA Concept of Operations. These information hubs – cargo, people, infrastructure, and vessel – facilitate the flow of information to maritime decision makers and serve as national clearing houses for information required to deal effectively with a wide variety of maritime issues. The Stakeholder Board has also established an architecture hub, which has begun work on developing interagency standards for information sharing and designing an architecture to allow for efficient sharing and collaboration.

Interagency Investment Strategy: The Coast Guard is actively participating in an interagency working group, led by the Department of Defense Executive Agent for MDA, which is developing an interagency solutions analysis that takes a whole-of-government approach to resolving critical gaps in the nation's MDA identified in the Interagency Investment Strategy. The solutions analysis will recommend material and non-material solutions, assign specific departmental responsibilities, and estimate investment requirements.

Interagency Operations Centers ("See – Understand – Share")

With dozens of federal agencies and a wealth of state and local authorities involved in maritime safety, security and stewardship missions, safeguarding our port and coastal waters is necessarily a collaborative effort. The Coast Guard has led and facilitated Harbor Safety Committees and AMSCs for years. Translating this cooperation at the policy level into tactical, day to day operations is challenging due to: disparate and stove-piped surveillance systems; the lack of tools to combine and analyze sensor and data streams; and difficulties in sharing data and information.

The DHS Interagency Operations Center (IOC) project tackles these issues by providing interagency command, control, and communications operability at high priority ports nationwide. Mandated by the Security and Accountability for Every (SAFE) Port Act of 2006, the IOC project focuses on improving information sharing across federal, state, and local partners and the situational awareness, unity of effort, efficiency, and mission execution of all port partners. Ultimately, IOCs will enhance coordinated contingency and response planning and collaborative operations by developing and deploying to major ports the Watchkeeper system. Watchkeeper is designed to be a robust information management tool that will integrate information from a multitude of port partner databases to ensure all have ready access to each other's information, which will improve interagency coordination, enhance situational awareness, and automate anomaly detection, WatchKeeper will also leverage existing Coast Guard and port partner systems and sensors to deliver an integrated sensor network to actively monitor critical port and coastal infrastructure and waterways.

The Coast Guard's Command and Control Engineering Center has begun the development of the initial segment of WatchKeeper and delivered it to SeaHawk at Sector Charleston, S.C., for testing. Once the testing is complete, we anticipate providing this initial capability to all sector command centers beginning in 2010.

The IOC project also includes a limited amount of facility construction where physical collocation of port partners is optimal. For example, construction has begun on a new IOC at Sector San Francisco, CA. Sectors Houston-Galveston and New Orleans will also have IOCs built during reconstruction of their facilities that were damaged by hurricanes Ike and Katrina.

Conclusion

Enhancing MDA reduces risk and facilitates collaboration. The aforementioned initiatives bring our partners together and integrate the collection, fusion, and sharing of functions. We are developing a comprehensive network of sensors and public outreach programs that advance MDA beyond our maritime borders. Through a whole-of-government approach we continue to improve MDA to meet the challenging security, safety, economic, and environmental needs of the United States.

Thank you for the opportunity to testify before you today. I will be happy to address any questions you may have.

Question#:	1
Topic:	Rescue 21
Hearing:	Maritime Domain Awareness
Primary:	The Honorable Don Young
Committee:	TRANSPORTATION (HOUSE)

Question: The Coast Guard is currently implementing the RESCUE 21 program in the lower 48. This improved system of radio receivers can better determine the location of the vessel making the emergency calls. This reduces the number of hoax calls, and greatly reduces the time spent searching for, rather than rescuing, vessels and mariners in distress. Obviously, given the distances that need to be covered in Alaska waters, any reduction in the time spent searching prior to beginning rescue work would greatly improve maritime safety.

a) What is the timeline for the Coast Guard plan to get RESCUE 21 operational in Alaska?

b) Since the line of sight system used in the lower 48 is not practicable given the vast distances that need to be covered in AK, how does the Coast Guard plan to implement this program in America's last frontier?

Response:

a) The Rescue 21 project has completed initial site surveys of all existing legacy Alaska sites and many of the proposed new sites. The Rescue 21 project is also testing alternative power generation via wind turbines, designing and testing the console and control system, and has commenced the NEPA (National Environmental Policy Act) compliance process for the initial systems below.

Per the current project plan, the timeline is listed below:

FY	Qtr	Rescue 21 Alaska Event / Activity	
2010	Q3	Wind generator testing complete	
2010	Q4	Standard baseline electronics and infrastructure configuration testing & design completed	
2011	Q1	Sector Command Center Console and Control System (CCS) deployed & operational	
2011	Q2	Begin deployment of Rescue 21 Alaska communication system	
		New Sites: Middle Cape	*Existing Sites:* Pillar Mountain

Question#:	1
Topic:	Rescue 21
Hearing:	Maritime Domain Awareness
Primary:	The Honorable Don Young
Committee:	TRANSPORTATION (HOUSE)

FY	**Qtr**	**Rescue 21 Alaska Event / Activity**	
		Homer Spit Fairweather Banks Glacier Bay Peril Strait	Cordova
2012-2017		Complete deployment of approximately 59 sites	

b) In Alaska, the Coast Guard has identified and prioritized 59 sites for the deployment of the new communications system. The priorities were determined based upon actual Search and Rescue case data and meetings with operational stakeholders in Alaska.

Rescue 21 Alaska will differ from the system currently being deployed by General Dynamics C4 Systems due to the unique geographic, operational, and environmental challenges present. The Coast Guard will tailor the capabilities at each site to mitigate these unique challenges.

Question#:	2
Topic:	Arctic
Hearing:	Maritime Domain Awareness
Primary:	The Honorable Don Young
Committee:	TRANSPORTATION (HOUSE)

Question: As you know there is currently virtually no maritime domain awareness infrastructure in the Arctic. This point was highlighted in the Arctic Council's Arctic Maritime Shipping Assessment that was released earlier this year, and the House has passed legislation based on legislation I introduced to begin addressing this issue. The Coast Guard has alleged for several years now to be conducting an Arctic Mission Needs Analysis.

a) When will that Mission Needs analysis be complete, and available for review?

b) Would a requirement for the use of Alaska state pilots on vessels working the U.S. Arctic provide an additional layer of protection for the Arctic environment and the mariners working there?

Response:

a) The Arctic mission needs analysis will be completed as part of the High Latitude Mission Analysis Report. We expect to complete the report by June 2010.

b) A federal and state pilotage regime already exists for vessels coming into and out of Alaskan ports in the Arctic, depending on whether those vessels are foreign, engaged in foreign trade or engaged in coastwise voyages.

Moreover, international law forbids the United States, as a coastal State, from subjecting foreign vessels navigating in the waters of the U.S. Arctic whose voyages do not take them to or from a U.S. port or place to those pilotage requirements.

Question#:	3
Topic:	NSC
Hearing:	Maritime Domain Awareness
Primary:	The Honorable Don Young
Committee:	TRANSPORTATION (HOUSE)

Question: The rationale for the bigger more expensive National Security Cutters (NSCs) was that the NSCs would use ship-based unmanned aerial vehicles. The use of UAVs would dramatically increase the number of square nautical miles that an NSC can effectively patrol. This expanded range is of great concern in the Bering Sea for fishery enforcement against foreign fishing incursions, search and rescue and environmental protection. In other parts of the Coast Guard¿s mission area this expanded coverage is important for drug and migrant interdiction. The Coast Guard has wisely decided that it lacks the resources to develop its own UAV system, but is looking at land and ship based being developed by other entities.

a) What is the status of the Coast Guard UAV program?

b) Do you intend to use a land- or ship-based system or a combination of both?

c) If you use a land based system, are there locations in Alaska from which you could launch UAVs to cover the Bering Sea and the U.S. Arctic?

Response:

a) On February 10, 2009, the Department of Homeland Security (DHS) approved the Coast Guard's unmanned aircraft system (UAS) strategy to acquire mid-altitude long-range and low-altitude cutter-based tactical UASs to meet mission requirements, while emphasizing (1) commonality with existing DHS and Department of Defense (DOD) programs, (2) project maturity in terms of technology and production, (3) using studies and analyses to mitigate risk using Advanced Concept Technology Demonstration (ACTD) and Low-Rate Initial Production (LRIP), and (4) leveraging UAS development in other organizations. Accordingly, the Coast Guard established formal partnerships with Customs and Border Protection to collaborate with their maritime land-based UAS program and the Navy's Vertical Takeoff and Landing Tactical Unmanned Air Vehicle program office. In March 2010 the Coast Guard's Research and Development Center plans to complete its Congressional directed study regarding UAS alternatives for the National Security Cutter. The Coast Guard's land and cutter-based UAS projects are in the pre-acquisition phase with Mission Needs Statements, Concept of Operations, and preliminary Operational Requirements documents under development.

Question#:	3
Topic:	NSC
Hearing:	Maritime Domain Awareness
Primary:	The Honorable Don Young
Committee:	TRANSPORTATION (HOUSE)

b) As approved by the Department of Homeland Security (DHS) on February 10, 2009, the Coast Guard's Unmanned Aircraft System (UAS) strategy is to use both land-based, mid-altitude, long-range UASs and low-altitude, cutter-based tactical UASs to meet mission requirements. Outfitted with maritime-capable sensors, land-based UASs will augment surveillance efforts currently provided via various maritime patrol aircraft to provide greater persistence in a cost-effective manner. Similarly, cutter-based UAS will augment surveillance efforts currently provided via embarked helicopters.

c) Due to current technological constraints (e.g., over the horizon satellite control) and environmental constraints (particularly aircraft icing) the Coast Guard's initial land-based Unmanned Aircraft System (UAS) concept of operations currently does not include operating in far northern environments. As land-based, long endurance UAS technology matures, the opportunity to cost-effectively operate land-based UASs to cover the Bering Sea and U.S. Arctic will be considered. The cutter-based UAS concept of operations currently under development includes operating UASs from the National Security Cutters, including those operating on patrols in the Bering Sea and Alaskan region.

Question#:	4
Topic:	AIS
Hearing:	Maritime Domain Awareness
Primary:	The Honorable Don Young
Committee:	TRANSPORTATION (HOUSE)

Question: Like RESCUE 21, tracking vessels using Automatic Identification Systems (AIS) requires line of sight coverage which is very expensive in Alaska.

a) How does the Coast Guard intend to implement AIS coverage in Alaska?

b) Does the Coast Guard use data provided from the Maritime Exchange of Alaska for long range vessel tracking? Can the use of that data be expended?

Response:

a) The Coast Guard currently obtains AIS coverage for Alaska by purchasing shore-based AIS data from the Port Graham Development Corporation (PGDC) via their Alaska Secure Passive Automatic Identification System (SPAIS) from eleven key regions of Alaska. These include Anchorage, Nikiski (Central Cook Inlet), Homer, Kodiak, Scotch Cap (Unimak Pass), Seward, Haines, Juneau, Lena Cove (North Juneau), Ketchikan and Sitka. PGDC subcontracts with the Marine Exchange of Alaska (MXAK) to obtain this data. The equipment used to collect the data is Coast Guard-owned, but operated and maintained by the contractor.

Additionally, the Coast Guard contracts directly with MXAK to purchase AIS data from ten additional shore-based sites from Southeast Alaska, Kodiak Island, the Aleutians, the Pribilof Islands and Prudhoe Bay.

The Coast Guard also receives coverage from government-owned AIS base stations installed as part of Vessel Traffic Service Prince William Sound (Valdez).

b) The Coast Guard uses Marine Exchange of Alaska (MXAK) vessel tracking data when appropriate to supplement the surface picture supplied by the government-operated Global Command and Control System (GCCS)-based Common Operational Picture. The Coast Guard purchases shore-based AIS data from the Port Graham Development Corporation (PGDC) via their Alaska Secure Passive Automatic Identification System covering 11 key regions of Alaska. PGDC subcontracts with MXAK to obtain this data. Additionally, Coast Guard District 17 contracts directly with MXAK to purchase AIS data from 10 additional shore-based sites scattered from SE Alaska, Kodiak Island, the Aleutians, the Pribilof Islands, and Prudhoe Bay.

Question#:	4
Topic:	AIS
Hearing:	Maritime Domain Awareness
Primary:	The Honorable Don Young
Committee:	TRANSPORTATION (HOUSE)

MXAK also grants the Coast Guard access to its satellite tracking system used for tracking Trans Alaska Pipeline System tankers, cruise ships, and some fishing vessels. This service is offered to the Coast Guard free of charge, but only for vessels desiring the Coast Guard to be aware of their location.

Question#:	5
Topic:	LORAN - C
Hearing:	Maritime Domain Awareness
Primary:	The Honorable Don Young
Committee:	TRANSPORTATION (HOUSE)

Question: Is there a plan for the disposition of LORAN-C sites once the program is discontinued next year?

Response: The cessation of the LORAN-C signal should not be construed to indicate that DHS will dismantle the system's infrastructure, however, the Department will instead place in caretaker status the economically reusable portions of the infrastructure until such time that a decision is made on its best future use or ultimate disposition.

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