Office of Global Maritime Situational Awareness

Open Maritime Data Sharing
Briefing Points

- Office of Global Maritime Situational Awareness (GMSA).
- Concept of Open Maritime Data Sharing.
- Navy / Commercial Shipping Observations.
- Annual Global Maritime Information Sharing Symposium.
- Questions.
Mission

Create a collaborative, global, maritime information sharing environment through a unity of effort across entities with maritime interests.

Objectives

➢ Maximize transparency of vessels in the maritime domain
  • Increase Maritime Data Sharing
  • Find Regional Solutions.
  • Build new relationships.

➢ Enhance Maritime Awareness through Economic Market Drivers.
GMSA Area of Focus

Observables:
- Vessels
- People
- Facilities
- Cargo
- Infrastructure
- Sea lanes
- Threats
- Friendly forces
- Environment/Weather
- Economic

Open Data Sharing

Decide/Act:
- Strategic
- Operational
- Tactical
- Financial

GMSA Strategic Area of Focus

Mission Task Sequence

International Maritime Awareness Strategy
Global Maritime Non-Classified Data sharing

Maritime Awareness = Situational Awareness + Sense Making
Guiding Principle = Open Maritime Data Sharing

- Data exchange is to be open, un-altered, transparent, shareable.
- You share, you receive.
- Shared through open systems, internet based, easily interfaced.
- Implemented via a global view, regional approach, locally applied.
- Diversified participation, not just traditional partners.
- Towards both efficiency and anomalies (commercial & government).
- Creating a new global standard in shipping efficiency & awareness.

GMSA Maritime Awareness Approach
Maritime Awareness

90,000+ vessels over 100 Gross tons.
Common Maritime Challenges

- Organized crime
- Piracy
- Drug smuggling
- Human smuggling and slavery
- Illegal weapons movement/proliferation
- Terrorism

- Exclusive Economic Zone (resource) exploitation
- Illegal fishing
- Trade disruption
- Illegal migration
- Search and Rescue
- Environmental issues

Nations find their well-being challenged by these common maritime issues.
Benefits of Open Maritime Data Sharing

- Enables nations to better control their maritime domain and its issues.
- Enables Nations to focus usage of their limited resources.
- Nations share data as equal partners regardless of size & and benefit to the extent of their own nation’s needs. You share, you receive.
- Information is shared widely, building a culture of trust, confidence and mutual support with a common focus – safety, security, commerce and environmental protection.

Awaiting Transit off Panama

AIS?

Fishing?
Automatic Identification System (AIS)

- Mandated by IMO

“to improve the maritime safety and efficiency of navigation, safety of life at sea and the protection of the marine environment”

Current Open Data Sharing Examples

Utilizing AIS (Automatic Identification Systems) as source data.

- IMO Electronic Marine Highway (Malacca Straits).
- HELCOM Helsinki Commission’s AIS Sharing Safety-based system.
- IALA.NET IALA International Association of Marine Aids to navigation and Lighthouse Authorities (under consideration).

AIS based systems fostering cooperation among nations.
Maritime Safety & Security Information System

- A system by which to openly share, non-classified AIS data globally between nations to enhance safety, security, commerce and environmental protection.

- Created by U.S. Department of Transportation’s Volpe Systems Center, based in Volpe’s work in maritime traffic issues (Panama and St. Lawrence).

- Allows sharing of non-classified AIS data, real-time, between international government users through an internet-based, password-protected, exchange portal. The data is by design, not owned or controlled by anyone.

- Displays un-altered, AIS data streams gathered from shore-based, waterborne and airborne AIS receiving units.

A data exchange tool fostering trust among nations.
“Advancing technical, operational, institutional, and managerial innovation to improve transportation systems.”

Panama Canal
Communications, Traffic Management and Navigation (CTAN)

St. Lawrence Seaway
First operational Automatic Identification System (AIS) network in North America.

FAA – Enhanced Traffic Management System

Consolidated Planning & Decision Making
MSSIS = 48+ countries to date
Existing MSSIS Applications

- Canal Transit Management (Panama Canal, St. Lawrence Seaway).
- Pilot navigation (ETA, Closest point of Approach, dead reckoning).
- Safety Statistics (via data logging & playback, snap shot files).
- Vessel traffic Management (VTS, situation displays etc.).
- Accident Investigation (via data logging and playback).
- Bouy Positioning.
- Oil Spill Modeling Display.
- Harbor surveillance.
- Secure Vessel Transiting.
- Monitoring of Territorial Waters.
- Security zones – Dynamic, static, user defined.

MSSIS is serving as the data feed and basis for numerous sophisticated applications.
MSSIS/TV32 at Panama Canal
MSSIS & AIS Safety Text messaging.
MSSIS/TV32 & Photo Overlay
Caribbean - perfect for Maritime Data Sharing

- Important trade routes (Commerce).
- Important ecosystem (Environmental Protection).
- Diverse maritime traffic area (Safety at Sea).
- Existing cooperation between neighbors.
- Availability of Infrastructure (sensors, antennas).
- Existing Regional view point (open data sharing).
Possible Benefits of Open AIS Data Sharing

Safety

• Traffic Safety Statistics on Maritime Choke Points.
• Search & rescue efficiency (coordination of vessels nearby etc).
• Accident Investigations (responsibility of states of interest).
• Safety zones, fishing zones, Territorial rights etc.
• Pilots/procedures via underwriters recommendations.

Commerce

• Local Harbor Traffic Flow Control & access to open terminals.
• Port timed-arrival/departure scheduling versus waiting risks.
• Coast-wise traffic flow control to accommodate shuttle cargoes.
• Vessel cross-ocean transit optimization to reduce fuel and carbon.
• Reduction of demurrage/delay costs presently paid by cargo interests.
THANK YOU!

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