Creating USCG’s Contribution to National MDA

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United States Coast Guard

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**MDA Process**

<table>
<thead>
<tr>
<th>Observables</th>
<th>Collect</th>
<th>Fuse</th>
<th>Analyze</th>
<th>Disseminate</th>
<th>Decide/Act</th>
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<tbody>
<tr>
<td>Vessels</td>
<td>Sensors</td>
<td>Tracks w/ tracks</td>
<td>Anomaly detection</td>
<td>Networks</td>
<td>Strategic</td>
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<tr>
<td>People</td>
<td>Operators &amp; field personnel</td>
<td>Data w/ data</td>
<td>Pattern recog &amp; analysis</td>
<td>Displays (COP/UDOP)</td>
<td>Operational</td>
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<td>Facilities</td>
<td>Intel Sources</td>
<td>Tracks w/ data</td>
<td>Compare w/ rules</td>
<td>Command centers</td>
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<td>Law enf</td>
<td>Research tools</td>
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<td>Private sector data</td>
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<td>Weather</td>
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**MDA = Intelligence + Situational Awareness**
Developing MDA Capability

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<td>Command 21</td>
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MDA Capabilities - Topics of Discussion

- **Collection**
  - Nationwide AIS
  - Long Range Identification & Tracking
  - Inland Rivers Vessel Movement Center

- **Fusion & Analysis**

- **Dissemination**
• Global position reporting mandated by SOLAS regulations.
• 4 daily broadcasts mandated by IMO
• More than 160 contracting governments participating in LRIT.
• Track 40,000+ SOLAS Class vessels globally.
• Satellite based reporting.

• Nationwide network of towers & transceivers.
• VHF radio-based (line of sight technology), self-generated vessel reports mandated by IMO/SOLAS regulations.
• Conceptually similar to aircraft transponders.
• Provides AIS data feed to CG enterprise data stores.
• Inside 50 NM: near real time reports (seconds/minutes).
• Inside 2000NM: less frequent satellite based coverage.

• SCC monitors vessel behavior with radars and cameras.
• Corroborate vessel behavior with actions advertised in LRIT/NAIS.
• Joint planning and operations tools.
• Real-time operational decision support.
• Covers critical port/coastal approaches to 24NM.
• Ingests fused intel products from systems like MAGNet and other Situational Awareness data.

All 3 tracking systems feed data to CG enterprise data warehouse for strategic fusion.
Future NAIS Operational View
**Reporting AOR**

- 10,300 miles of inland rivers
- Tracks all CDC movements and status changes
- Feeds track data to the COP via MISLE
- Ends at Mile Marker 235 near Baton Rouge, LA
MDA Capabilities - Topics of Discussion

- Collection

- Fusion & Analysis
  - Maritime Awareness Global Network
  - Common Operational Picture / User Defined Operational Picture

- Dissemination
MAGNet:

- a multi-faceted intelligence capability;
- built on an integrated, multi-level data repository, dissemination vehicle, and decision support system;
- that extracts and combines information from government, commercial and private sector sources;
- delivers strategic and tactical intelligence to the USCG and government agencies at operational and policy levels;
- that enhances U.S. maritime security and advance all USCG missions…
MDA Capabilities - Topics of Discussion

- Collection
- Fusion & Analysis
- Dissemination
  - Command Centers
Command Centers

See

Understand

Share

Link Information with Operations

Turning Awareness Into Action
Questions?
AIS signal received by satellite – no AIS transmission from satellite

AIS signal processed onboard satellite – remove data to lessen bandwidth, meet reporting requirements, etc.

Processed AIS data sent from satellite to GES via ORBCOMM data link

AIS data routed through NCC – quality check, satellite maintenance, etc.

USCG receives data and incorporates into appropriate command and control (C2) systems, distributes to other users as appropriate

Vessel equipped with AIS

Gateway Earth Station (GES)

Network Control Center (NCC)

USCG Data Network – distribute to end users

• Launch scheduled for Dec 2007
FISTS:

- 30 ports have dedicated FISTS
- Provides port-level intelligence collection and reporting
- Liaison with Federal, state, local, tribal, and industry partners
- Provides better port-level threat assessments
- Report on activities in foreign ports using information gathered from ship master and crew interviews
- Source development and lead generation
- Generate Field Intelligence Reports (FIRs)
Maritime Intelligence Fusion Centers

• Mission: Timely, Fused, Actionable Intelligence for…
  • Coast Guard Operational Commanders
  • DoD & National Intelligence Community
  • Federal, State, and Local Law Enforcement Partners

• Intelligence Program Management for each CG Area and 24x7 Intelligence Watch Center

• Provides Intel Analysis and Collection for the following mission areas:
  • Terrorism
  • Targeting (Vessel Screening)
  • Transnational Crime (Migrants / Drugs / Piracy)
  • Living Marine Resources (LMR)
  • Geo-Political

• MIFC Locations:
  • Pacific Area (MIFC PAC) – Alameda, California
  • Atlantic Area (MIFC LANT) – Virginia Beach, Virginia