



Creating USCG's Contribution to National MDA

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MDA Process

Observables

- Vessels
- People
- Facilities
- Cargo
- Infrastructure
- Sea lanes
- Threats
- Friendly forces
- Weather

Collect

- Sensors
- Operators & field personnel
- Intel Sources
- Open source
- Private sector data
- Law enf

Fuse

- Tracks w/ tracks
- Data w/ data
- Tracks w/ data

Analyze

- Anomaly detection
- Pattern recog & analysis
- Compare w/ rules
- Research tools

Disseminate

- Networks
- Displays (COP/UDOP)
- Command centers

Decide/Act

- Strategic
- Operational
- Tactical

MDA = Intelligence + Situational Awareness



Developing MDA Capability

Collect

Fuse

Analyze

Disseminate

FIST

MFIC

NAIS

SCCS

SCCS

LRIT

MAGNET

AWW

VTS

COP/UDOP

IRVMC

WebCOP

Rescue 21

Homeport

Command 21



MDA Capabilities - Topics of Discussion



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



MDA Layered Coverage Areas



LRIT

- 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.



NAIS

- 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.



Command 21

- 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.

Enterprise
CG

Foreign
Port

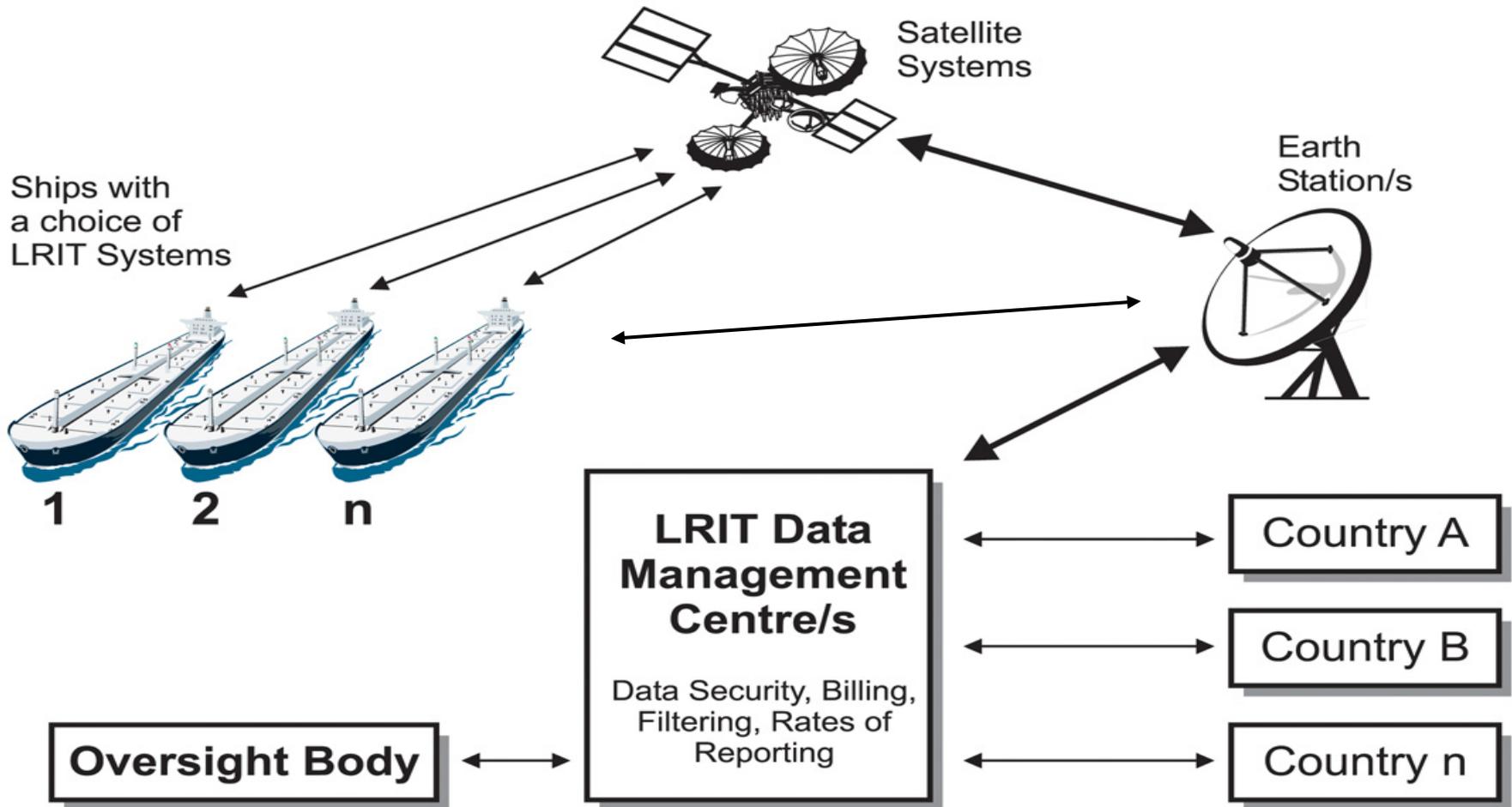
US Port

All 3 tracking systems feed data to CG enterprise data warehouse for strategic fusion.



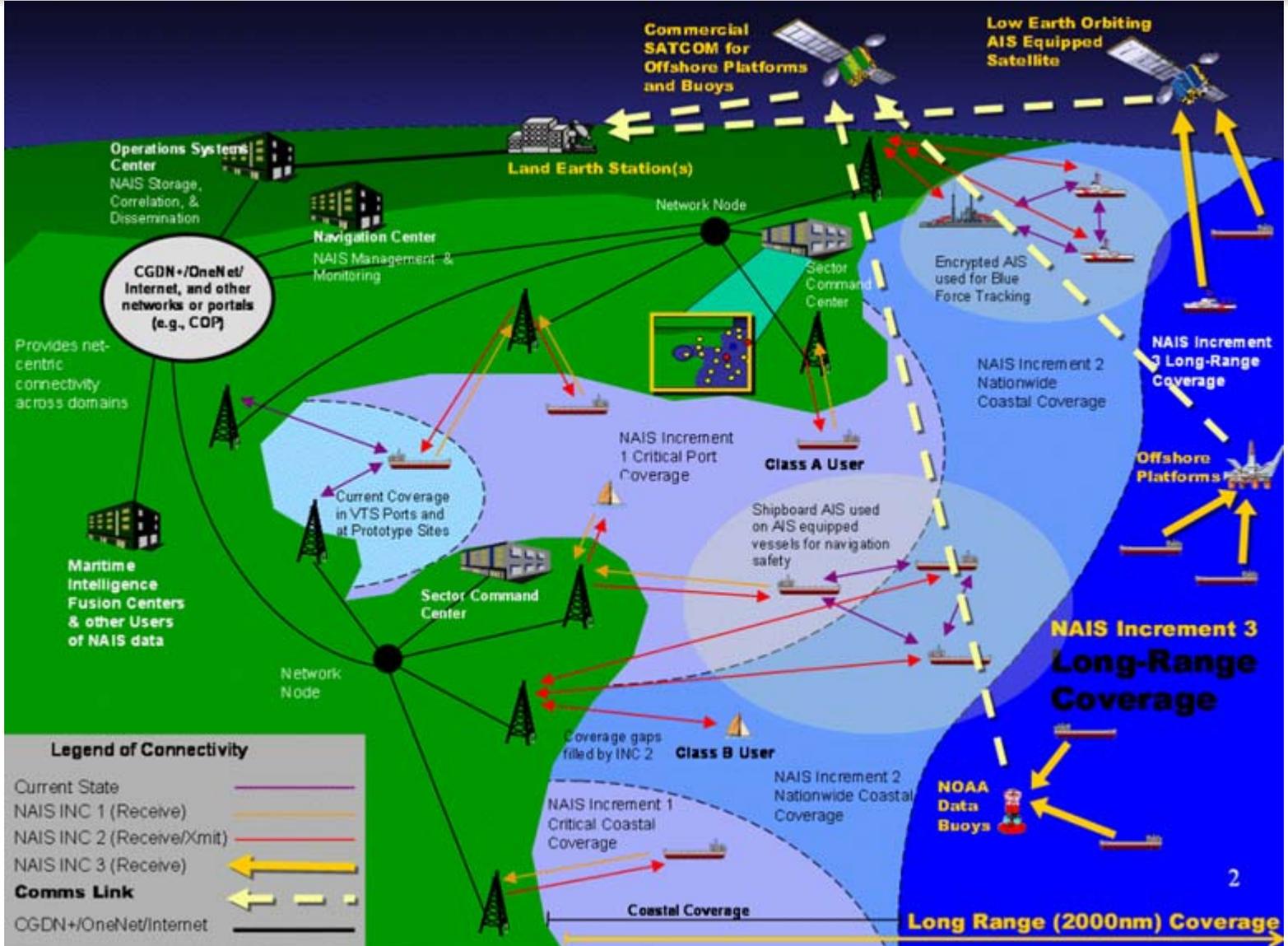
LRIT Concept

(Used with Permission of Inmarsat)





Future NAIS Operational View



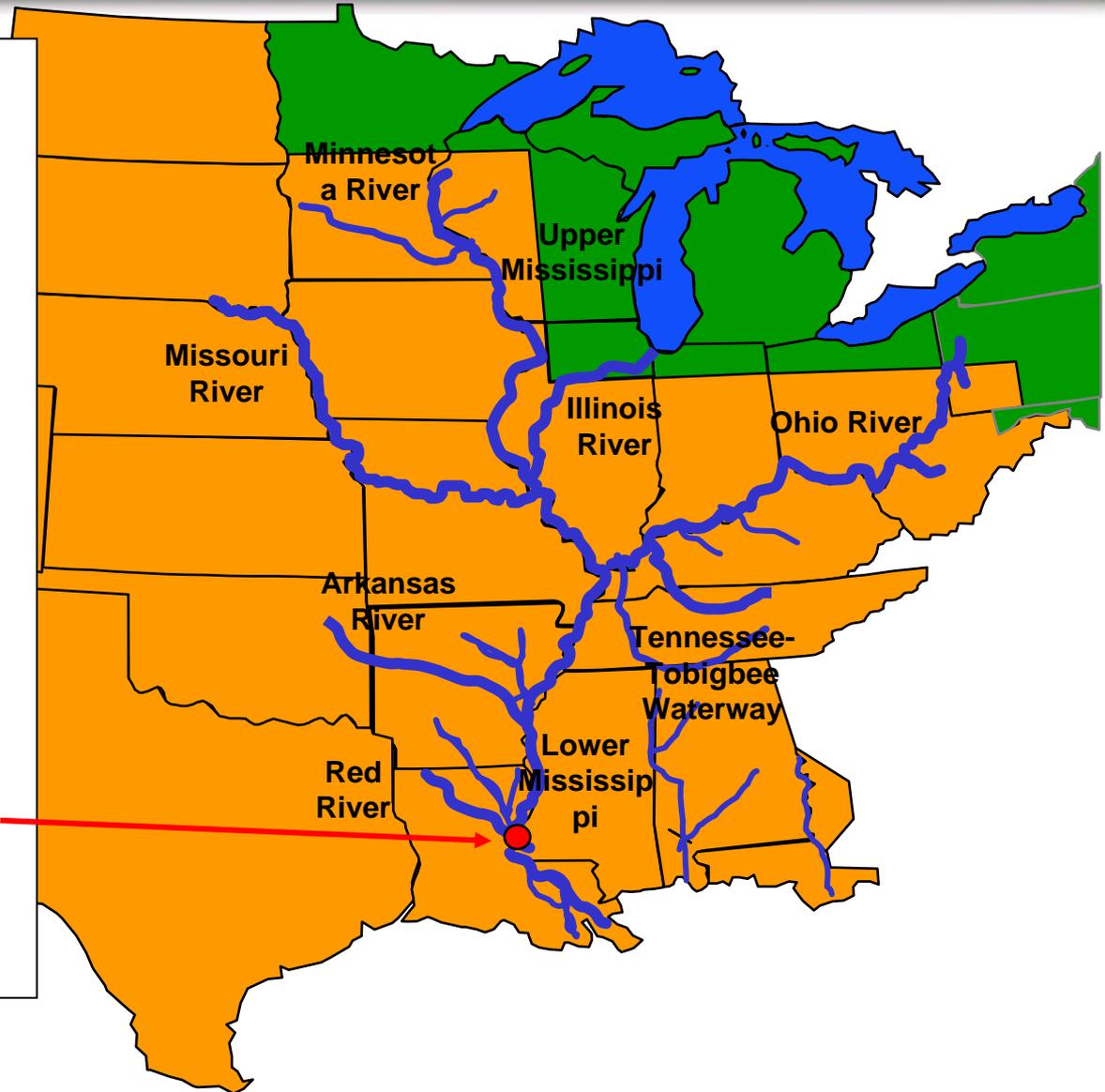


Inland Rivers Vessel Movement Center



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**



Maritime Awareness Global Network



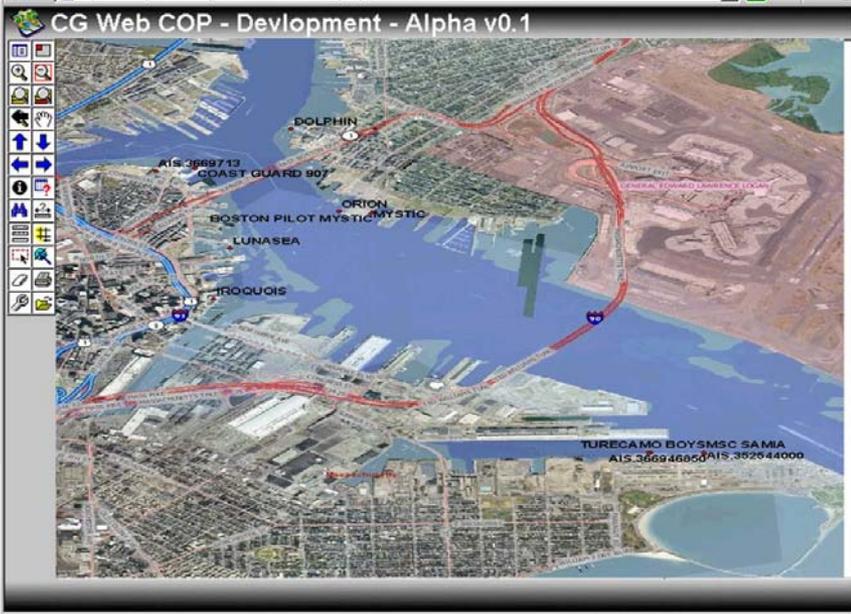
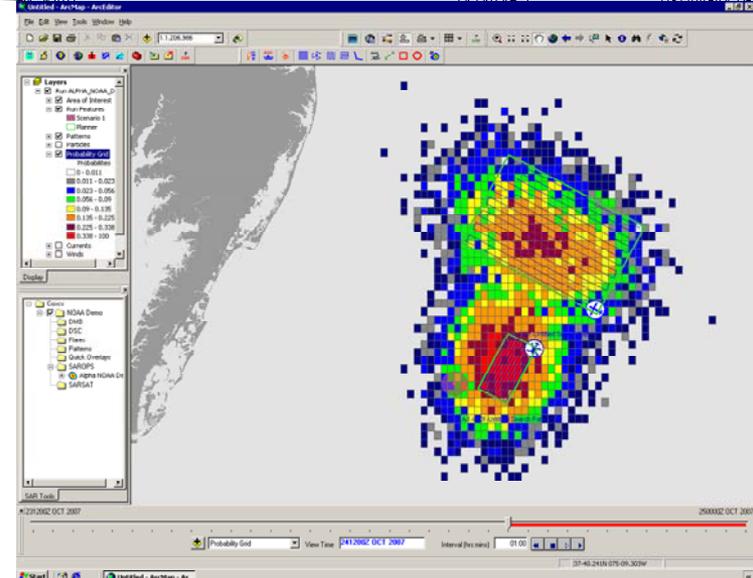
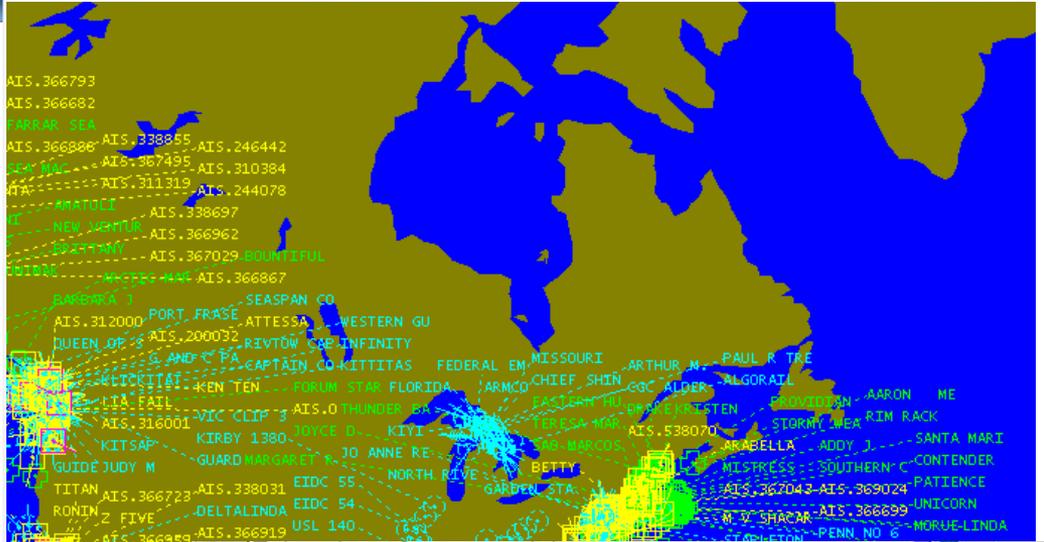
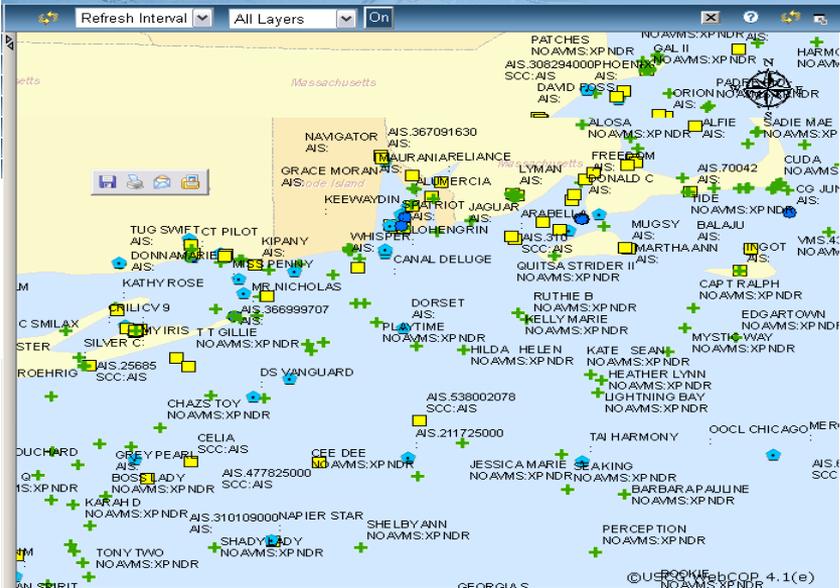
MAGNet:

- 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...





COP/UDOP





MDA Capabilities - Topics of Discussion



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



Command Centers

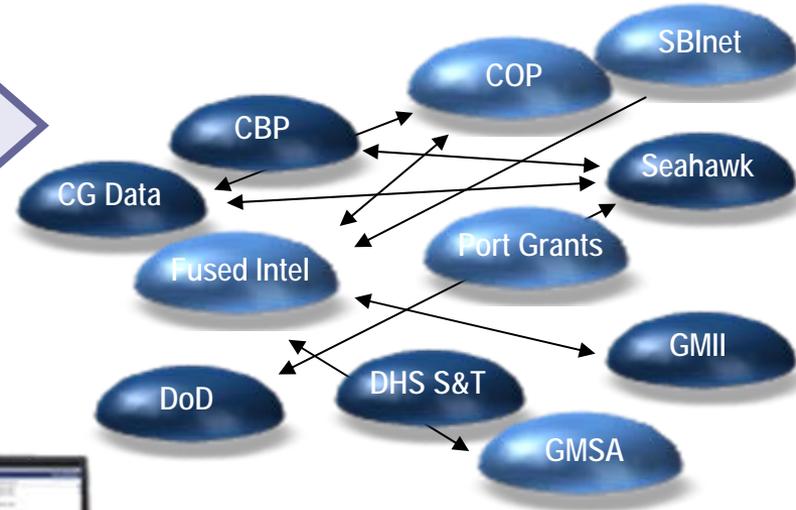
See



Understand



Share



Turning Awareness Into *Action*

Questions?





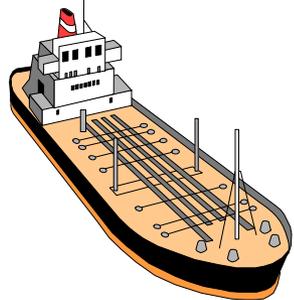
AIS Via Commercial LEO Satellite



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

- Launch scheduled for Dec 2007

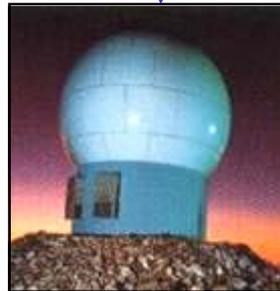
AIS signal received by satellite – no AIS transmission from satellite



Vessel equipped with AIS



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



Gateway Earth Station (GES)

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



Network Control Center (NCC)

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



USCG Data Network – distribute to end users



Field Intelligence Support Teams



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