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# *US Navy's Perspective on Maritime Domain Awareness and Global Information Sharing*



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# Agenda

- ***US Fleet Forces***
- ***Cooperative Strategy for 21<sup>st</sup> Century Seapower***
- ***Maritime Domain Awareness***
- ***US Fleet Force's Role in Maritime Domain Awareness***
- ***Exercise Ardent Sentry***
- ***Summary***



# United States Fleet Forces



CNIC



NSA



USFF



- COMPACFLT
- COMUSNAVEUR
- COMUSNAVCENT
- COMUSNAVSO
- NAVSPECWAR
- MSC
- NAVAFRICOM

- REGIONAL COMMANDERS
- SHORE INSTALLATION COMMANDERS



SECOND FLEET



THIRD FLEET



NAVAL SURFACE FORCES



NAVAL AIR FORCES



SUBMARINE FORCES



NAVAL NETWORK WARFARE COMMAND



NAVY EXPEDITIONARY COMBAT COMMAND



MILITARY SEALIFT COMMAND



# Cooperative Strategy

- **A Cooperative Strategy for 21<sup>st</sup> Century Seapower**
- ***A major revision to USN maritime strategy. Agreed to by all three sea services, USN, USMC and USCG, in 2007***
- ***Acknowledges US dependence upon a global economy and the importance to US security to maintain freedom of movement across all maritime commons.***
- ***Focus on maintaining safe, global commerce operations across the seas, preventing wars, and focusing on opportunities versus threats.***



# Cooperative Strategy

## Core Capabilities

- ***Forward Presence***
- ***Deterrence***
- ***Sea Control***
- ***Power Projection***
- ***Maritime Security Operations***
- ***Humanitarian Assistance/Disaster Response***





# *Maritime Domain Awareness*

*Maritime Domain Awareness (MDA) is the effective understanding of anything associated with the global maritime domain that could impact the security, safety, economy, or environment of the United States.*

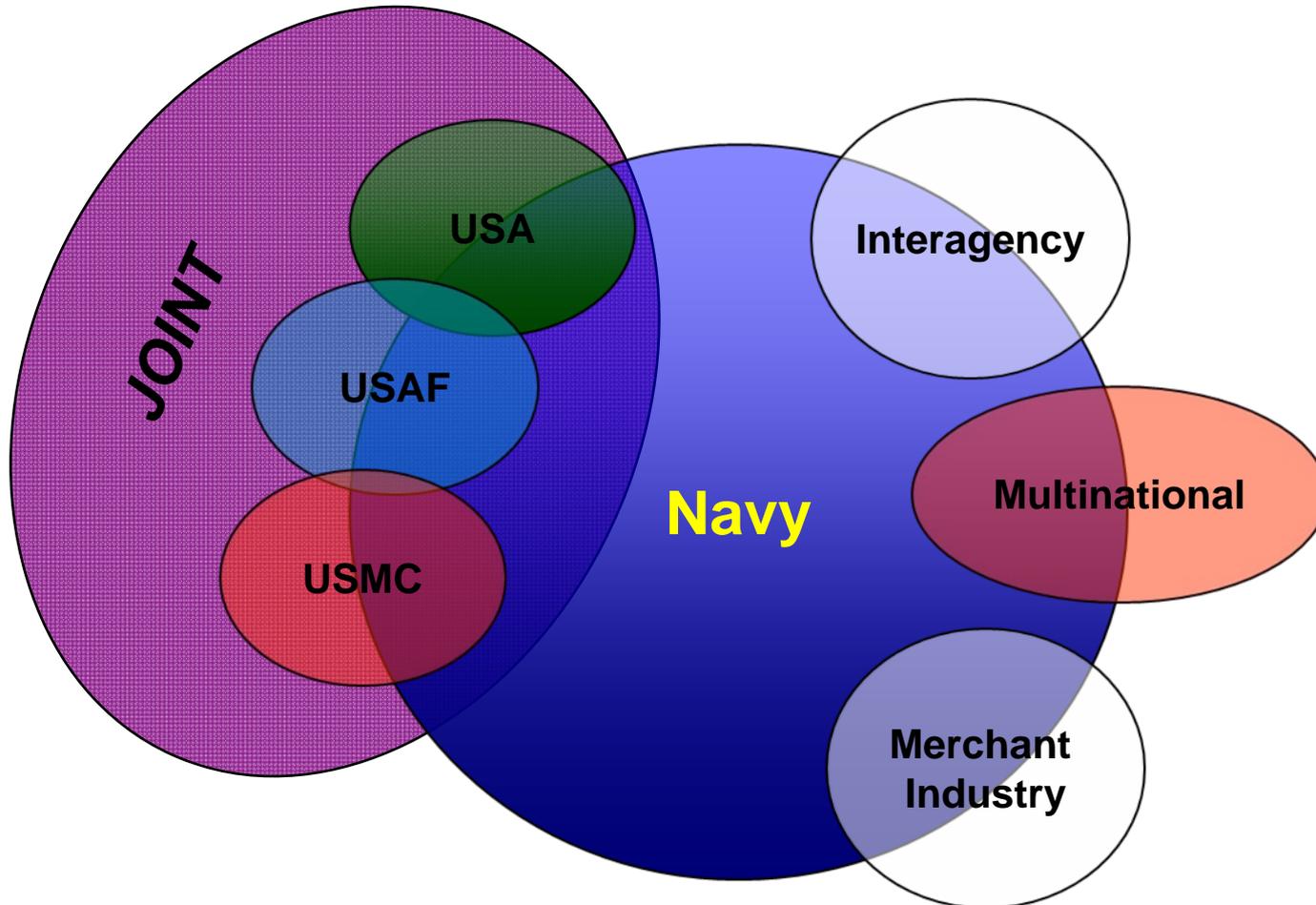
*- National Strategy for Maritime Security*





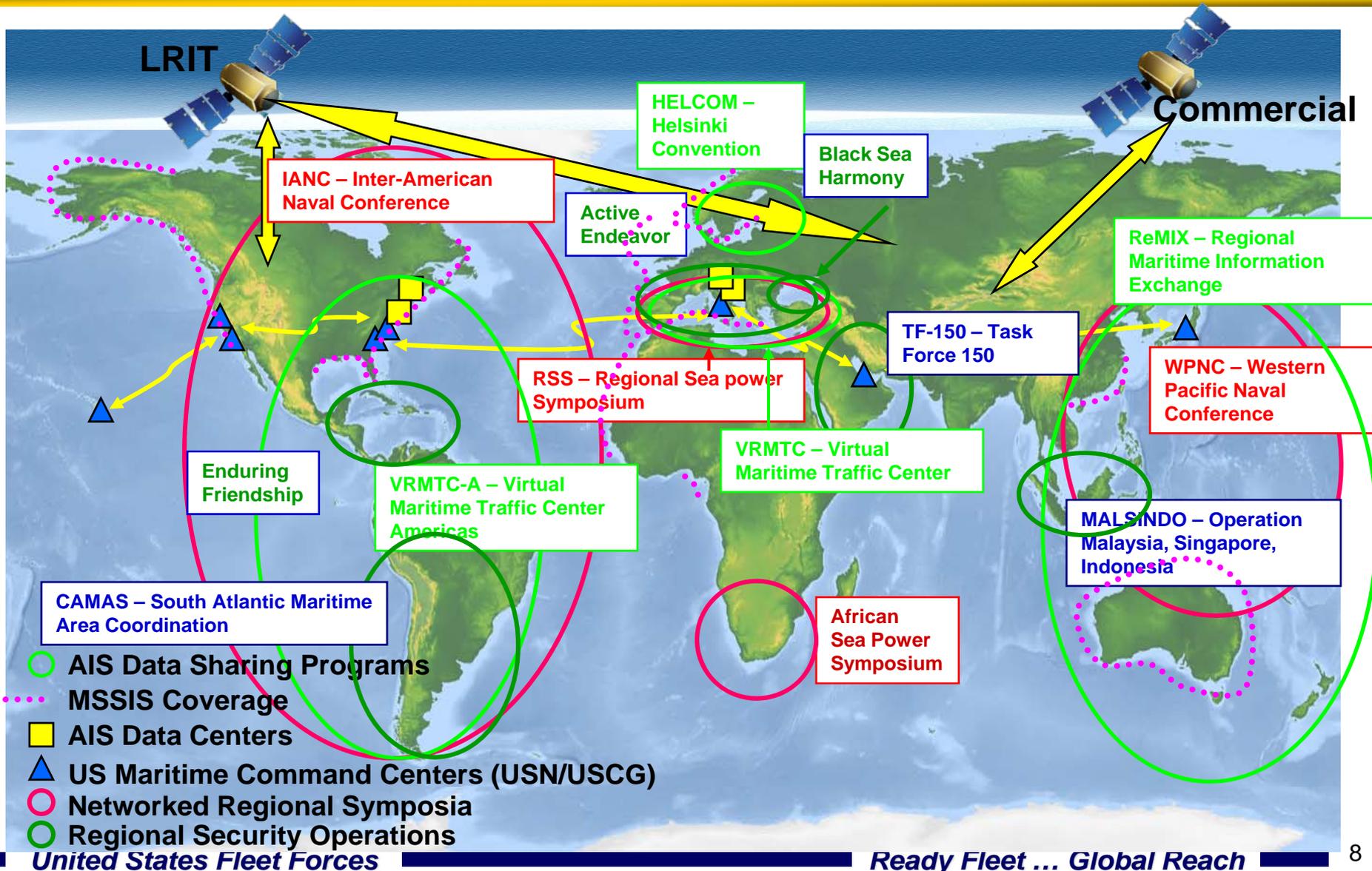
# Maritime Domain Awareness

## Cooperative Environments for Information Sharing





# Information Sharing Partnerships





# ***Maritime Domain Awareness challenges***

***Example of complexity of protocols for  
information sharing:***

- ***US Navy's focus is national security. Collected information must be actionable.***
- ***US Coast Guard has a major law enforcement mission. Their Information must withstand the chain of custody for evidence***



# MDA Efforts & Initiatives

## GOVERNANCE

- Maritime Security Interagency Policy Committee (MSIPC) – N3N5
- Global Maritime & Air Intelligence Integration (GMII) – N3N5
- Office of Global Maritime Situational Awareness (OGMSA) – N3N5
- Maritime Operational Threat Response (MOTR) – N3N5
- Maritime Security Working Group – N3N5
- DoD Executive Agent for MDA – N3N5
- MDA Stakeholder's Board – N3N5
- Navy MDA Senior Steering Group – N3N5
- Navy MDA Oversight Group – N3N5

## STUDIES & CONOPS

- Navy MDA Concept – N3N5MDA
- Global War on Terror CONOPS– C3F
- Fleet MDA CONOPS - USFF
- MOC CONOPS – C3F
- National MDA CONOPS – OGMSA
- Navy MDA CBAs – N3N5
- Navy MDA Fusion & Analysis AoA – N2/N6
- MDA Assessment – N81
- Homeland Defense Fusion Study – SSC-SD
- POM/PR Front End Assessments – N81
- MDA Joint Integrating Concept – NORTHCOM/PACOM
- Joint Integrated MDA (JIMDA) Analysis – NORTHCOM

## OPERATIONAL ACTIVITIES

- Unclass AIS Network – EUCOM
- Regional Maritime Awareness Capability (ACTD) – EUCOM
- MDA Data Sharing COI – NORTHCOM
- Event Management Framework – NORTHCOM
- Automated Maritime Reporting System (AMRS) – ONI
- Seawatch – ONI
- National Maritime Intelligence Center – ONI
- ONI CNO Datamining Effort – ONI
- Aquabase – NRO
- Tactical SOA LOE – NWDC
- TWEAK – TR CSG
- Comprehensive Maritime Awareness ACTD – PACOM/NORTHCOM/EUCOM

## RESOURCES AND REQUIREMENTS

- AIS PR 07 – N8
- TENCAP PR 07 – N8
- CMA ACTD – N8
- EMIO Wireless LAN – N8
- Biometrics Readers – N8
- MDA IT R & C WG – N5

# MDA

## ACQUISITION ACTIVITIES

- AIS Stand-alone – PEO C4I
- AIS Server Solution – PEO C4I
- EMIO Wireless LANS – PEO C4I
- Anti-Terrorism/Force Protection (ATFP) SGIR (ISRnet) – PEO LMW
- Biometric Readers – NAVFAC
- Vessel Tracking Program – DASN C4I
- Regional Awareness Capability (RMAC) JCTD – PEO IWS

## S&T / R&D EFFORTS

- Multi-Source Tracking Intelligent Correlator (MSTIC) – SSC-SD
- Swampworks Knowledge Management Tool (SWKMT) – SSS-SD
- DAESSI/OASIS – SSC-SD
- Remote Sensing of Datamanagement for Cargo Security – SSC-SD
- Littoral Combat Ship (LCS) Mission Module for Maritime Security – SSC-SD
- SIGINT Fusion for Ship Tracking (SF4ST) – SSC-SD
- Globally Netted JFMCC – ONR
- Fusion EC – ONR
- XCRAFT – ONR
- Automated Information System (AIS) – ONR
- Wireless E-MIO – ONR
- Maritime Security Operations dB – ONR
- Vessel Tracking Program (VTP) Assessment – ONR
- Master ACTD – ONR
- ADEPT Tagging – ONR
- Radiant Alloy / Gypsum / Sunrise / Garnett – TENCAP
- CNO Datamining Effort – ONI
- Global Trader – ONI
- Predictive Analysis of Naval Deployment Activities (PANDA) – DARPA
- Architecture for Distributed Information Access (ADINA) – JHU/APL
- Signals Intelligence Fusion for Ship Tracking (SF4ST) – NSA
- Analytic Support Architecture-Maritime (ASA-M) - NRO
- Multi-Int Ship Tracker (MIST) - NRO
- Aquabase – NRO
- OPTIMUS PRIME – Lawrence Livermore
- Analysis Dissemination, Visualization Insight and Semantic Enhancement (ADVISE) – Sandia
- Web Enabled Temporal Analysis (WEBTAS) – Rome Labs
- Project R Study – DASN C4I
- CATE – Commercial
- Storymaker – Commercial
- Shipboard Composite Combat Control Identification (SCCID) – Commercial

## Exercises and Engagement

- Trident Warrior - NNWC
- Sea Trial
- Noble Resolve
- Ardent Sentry
- Black Sea Harmony
- WPNS



# ***USFF Current Role in MDA***

- ***Concept of Operations for Fleet Maritime Domain Awareness***
- ***Maritime Operations Centers***
- ***Naval Cooperation and Guidance of Shipping (NCAGS)***
- ***Joint Maritime Component Commander for NORTHERN COMMAND***

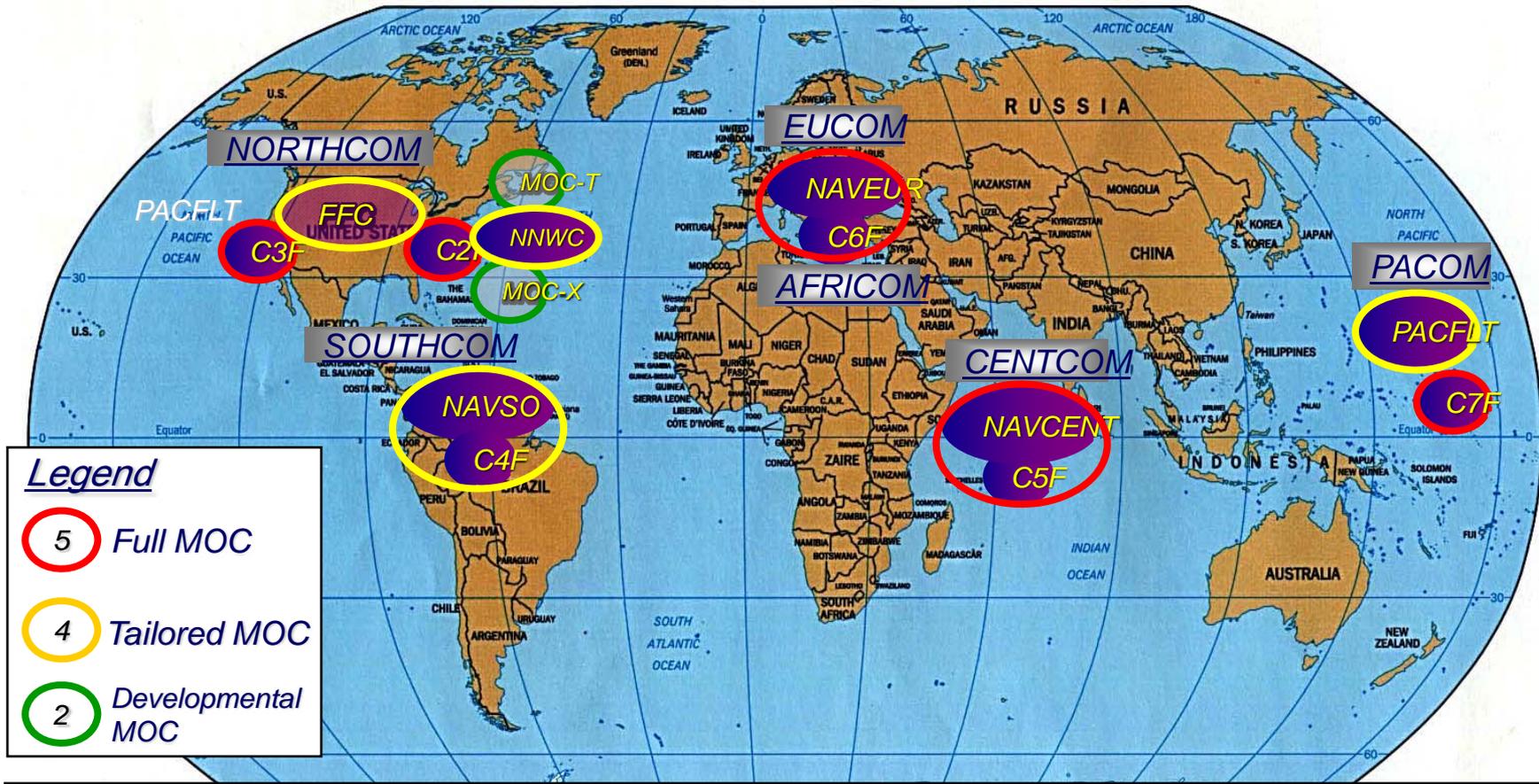


# ***CONOPS for MDA***

- ***Doctrine for use by Fleet Commanders with the end state of rapid flow of actionable information.***
- ***Defines how to establish MDA partners and collaboration.***
- ***Identify operational functions required to support MDA.***
- ***Guidance for information flow and data sharing to enable MDA.***
- ***Provide for MDA training and equipment to Fleet Commanders.***



# Maritime Operations Centers



*Distributed, collaborative, interdependent, global Maritime Situational Awareness*



# NCAGS

- ***Naval units dedicated to the relationship between the US Navy and merchant marine***
- ***Many of the officers are from the merchant marine and a number of them maintain their licenses***
- ***During times of peace, tension, crisis or war they are liaisons between military commander and the civil authorities, specifically the merchant marine industry***
- ***Subject matter experts for MDA***





# ***Maritime Component Commander***

- ***Joint Forces Maritime Component Commander for Northern Command***
- ***Maritime Homeland Defense. Maintain maritime alert forces for Homeland Defense***
- ***Defense Support of Civil Authorities. Defense support in case of crisis***
- ***Anti-Terrorism/Force Protection.***



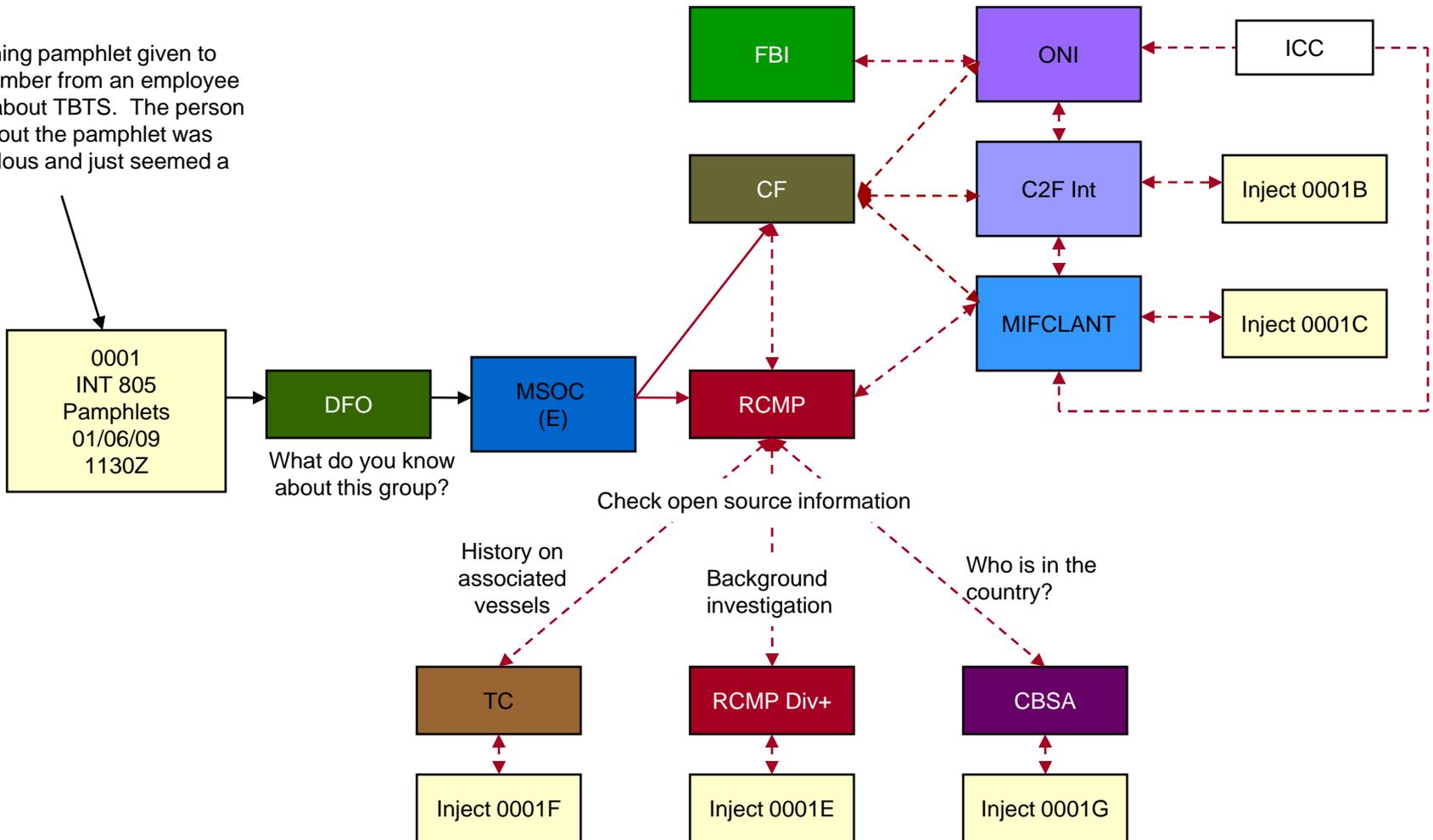
# *Exercise Ardent Sentry*

- *NORTHCOM exercise in June 2009 to test concepts of MDA, MOC and NCAGS.*
- *Involved USN, USCG, Canadian Military and other US Govt agencies.*
- *Scenario of terrorist groups infiltrating merchant ships with intent of sinking ships in key harbors along US East coast*
- *Successful information sharing between agencies and foreign nations*



# Exercise Ardent Sentry

Threatening pamphlet given to CCG member from an employee curious about TBTS. The person handing out the pamphlet was very zealous and just seemed a little off.





# ***US Navy's MDA Challenges***

- ***Define Inter-agency and International protocols for sharing of MDA information***
- ***Embrace and integrate common, cost-effective technology systems***
- ***Adapt to the commercial and international requirements for NON-Classified data***
- ***Integrate and coordinate MDA initiatives within the US Navy.***
- ***MDA SME's integrated at the fleet level***



# Summary

- ***US maritime strategy acknowledges the importance of global trade and the Navy knows it is critically aligned with US commerce – now more than ever***
- ***US Fleet Forces is a key contributor to Maritime Domain Awareness.***
- ***The Navy can not do it alone, we need to share information with:***
  - ***Coalition and partner navies throughout the world***
  - ***US government agency partnerships***
  - ***Merchant Marine Industry***
- ***Balance national and global needs for Situational Awareness***





# Way Ahead

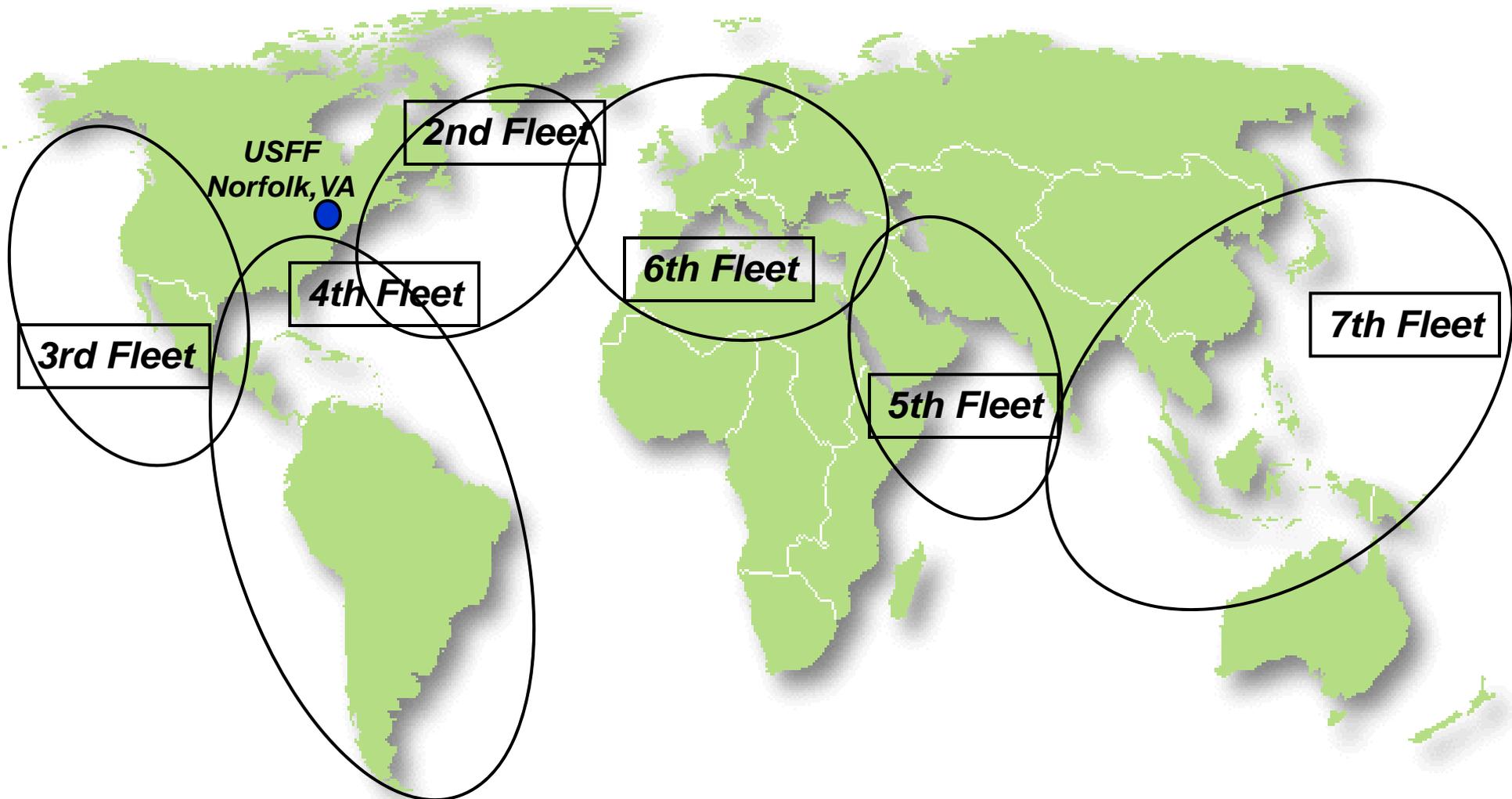


- Optimize interoperability
- Emphasize partnering at regional level
- Share Automatic Information System (AIS) data

**Seamless, integrated and rapid flow of actionable information and intelligence throughout the strategic, operational, and tactical levels of the Navy**



# United States Fleet Forces Command





# *Maritime Operational Security*

- ***Countering Piracy Off the Horn of Africa: Partnership & Action Plan***
- ***US Govt direction, executive agent is NSC***
- ***Prevent piracy by partnering and creating coalitions***
- ***Maritime Security Patrol Area in Gulf of Aden***
- ***Participate in bringing about economic stability in the region***

# GLOBAL MARITIME INFORMATION SHARING SYMPOSIUM 2009

SEPTEMBER 15-17  
NATIONAL DEFENSE UNIVERSITY  
FORT LESLEY J. MCNAIR  
WASHINGTON, D.C.

## Streamlining Information Sharing

*Improving Efficiency, Security, Safety and the Environment*



U.S. Navy photo



OFFICE OF GLOBAL MARITIME SITUATIONAL AWARENESS

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