Maritime Domain Awareness -
Future Industry Solutions... FY10 and Beyond

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4 April 2007
The Challenge

Conventional Warfare    Global War on Terror

Forward Presence

“We Need a NORAD for Maritime Forces”
Admiral Vern Clark, Former CNO
(August 15, 2002)
The Problem

- Over 150,000 commercial ships
- 80,000 involved in global trade
- 40,000 ships within 1,000 mi of US coastline
Enabling Technology Investment Areas

- Ability To *Uniquely “Fingerprint”* Thousands of Large and Small Hull Commercial Ships
  - Fusion and Reasoning Tools
  - Persistent Surveillance
  - Cooperative Communications / Information Sharing
“Finger Printing”

- AIS (Automatic Identification System)
- EO/IR
- Radar/Radar Emissions
- Acoustics
- Hyperspectral
- Other Unintended Emissions

- Less Uncertainty
- More Targets
- Greater Ranges
- Bearings and Tracks

“Knowing Who’s Who with Certainty”
Fusion and Reasoning Tools/Algorithms

- Behavior Analysis / Pattern Recognition
- Netted and Shared Information

- "Clutter Rejection"... Weeding Out the Good Guys
- Knowing Where Your Ship Has Been Lately?
Persistent Surveillance

- Day ➔ Week ➔ Month ➔ Continuous
- Tracking the Exceptions

Sensor / Capability vs. Power

- Autonomous Refueling
- Hybrid Electric
- Solar Electric
Cooperative Communications / Information Sharing

- Linking dissimilar systems together cost effectively... Today today
- Assured Comms

- “Pay for it only when you need it”
- Seek options which provide interoperability / netcentricity now, and... enable affordable transition to standards / common systems
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Duck Hunting Made Easy