

UAV's And Homeland Defense *...Now More Critical Than Ever*



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United States Coast Guard**

Common Maritime Threats



U. S. Coast Guard Missions

Maritime Safety

Search and Rescue
International Ice Patrol

Maritime Mobility

Lightering Zone Enforcement
Foreign Vessel Inspection

Maritime Security

Drug Interdiction
General Enforcement of Laws and Treaties
Alien Migrant Interdiction

National Defense

Homeland Security
General Defense Operations
Maritime Interception Operations
Military Environmental Defense Operations
Port Operations, Security, & Defense
Peacetime Military Engagement
Coastal Sea Control

Protection of Natural Resources

Marine Pollution Enforcement & Response
Living Marine Resource Enforcement

National Fleet Concept – Homeland Security Considerations

- Build a National Fleet of multimission surface combatants and cutters to meet the full spectrum of threats
- Coordinate surface ship/cutter planning, R&D, and information systems integration
- Build Coast Guard and Navy ships designed around common equipment and systems
- Expand and synchronize joint concept of operations, logistics, training, exercises, and deployments to ensure interoperability
- MOU signed 12 April 2002 between IDS and DDX
- National Fleet Policy Statement signed 08 July 2002 between CNO and COMDT to operationally integrate their forces
- Naval Operational Capabilities (NOC) for National Security Cutter, Medium Endurance Cutter, & Patrol Boats



U.S.C.G. 212 Years of Homeland Security

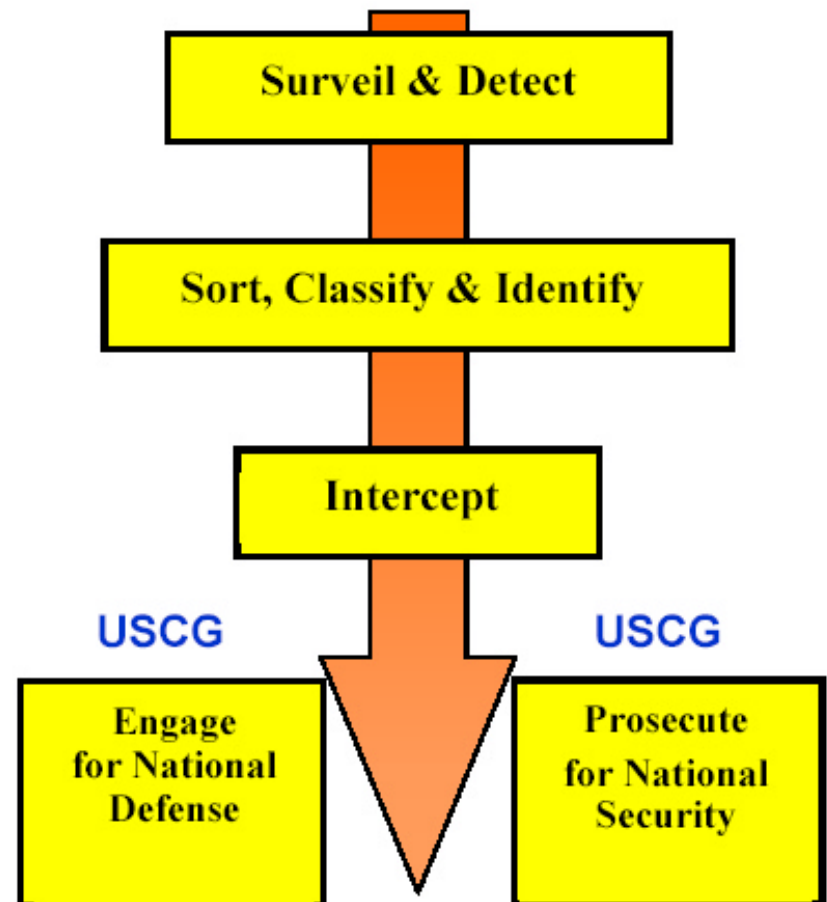


Homeland Security “Cornerstones”



Prevention and timely response are key to success:

- Active and acceptable presence
- Mission task sequence
- Innovative tactics, techniques & technologies
- Local, regional, national and international cooperation
- Outreach and education



Homeland Security Strategy

Comprehensive National Strategy



*Deepwater
Mission Task
Sequence*



*Coast Guard
Homeland Security
Strategy*



*National Strategy
for Homeland
Security*

Surveil

Detect

Classify

Identify

Prosecute

Supports

Conduct layered maritime security operations

Establish & maintain a baseline level of maritime security

Strengthen the port security posture

Build & leverage Maritime Domain Awareness

Develop required capabilities, improve core competencies & recapitalize the CG

Organize & sustain a public private sector partnership; increase international partnership

Prepare, equip & train forces to transition between & conduct HLS & HLD ops

Supports

Prevent Terrorist Attacks within the United States

Reduce America's Vulnerability to Terrorism

Minimize the Danger and Recover from the Attacks that do Occur

Global Mission Requirements

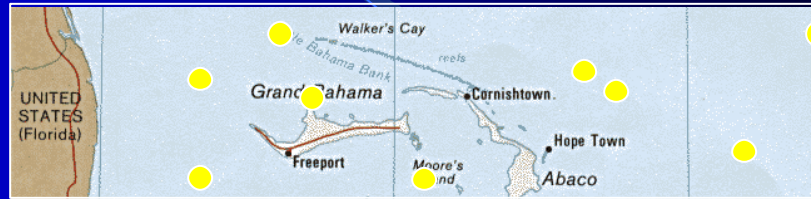
Surveillance

Detection

Classification

Identification

Prosecution



TOI = Target of Interest

Homeland Security is a two-front war

Navy

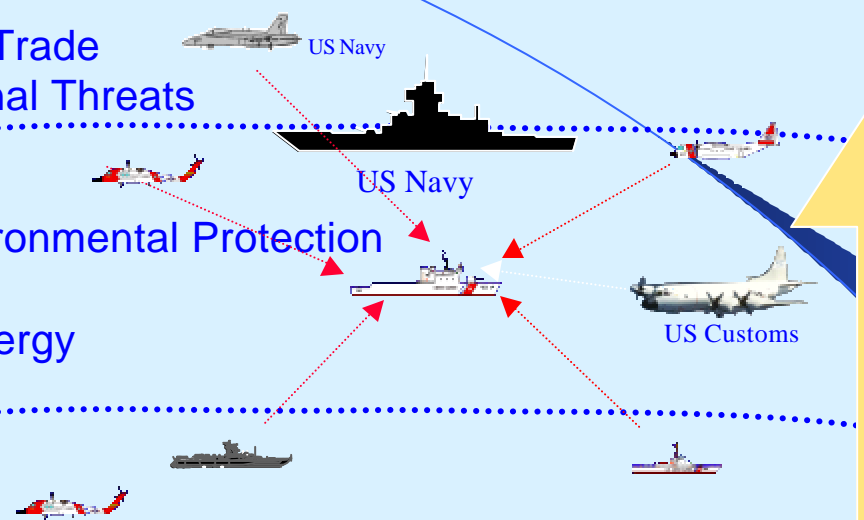
High Seas Legitimate Trade
Transnational Threats

Exclusive Economic Zone Marine Environmental Protection
Fisheries Offshore Energy

Territorial Sea

Ports & Inland Waterways

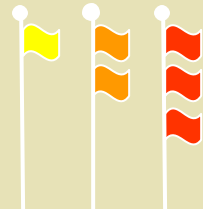
Port Safety
Port Security



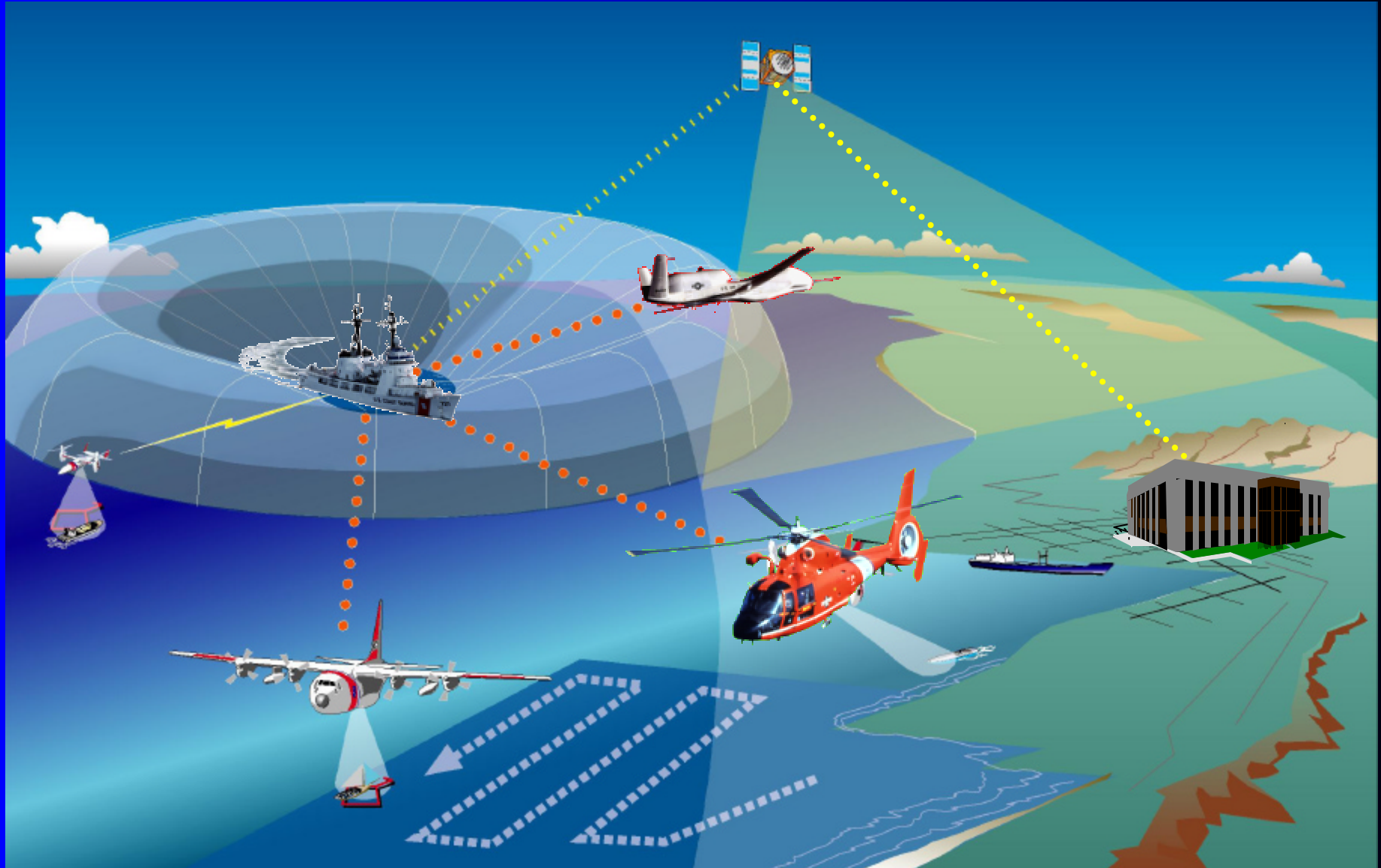
Push the border out

Maritime Security Posture

USCG

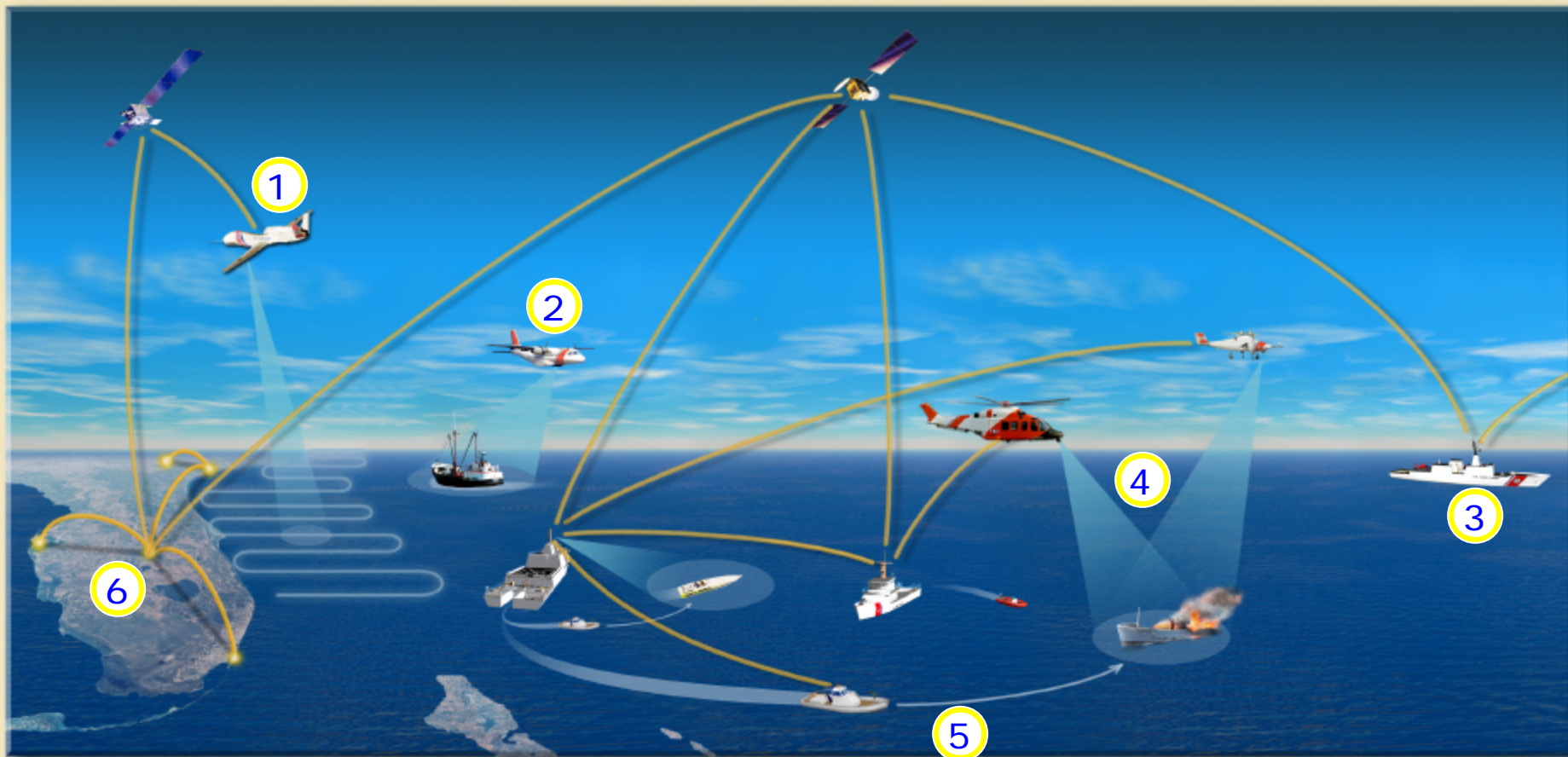


Maritime Domain Awareness thru Common Operational Picture



Facilitates operational risk analysis affecting the maritime domain

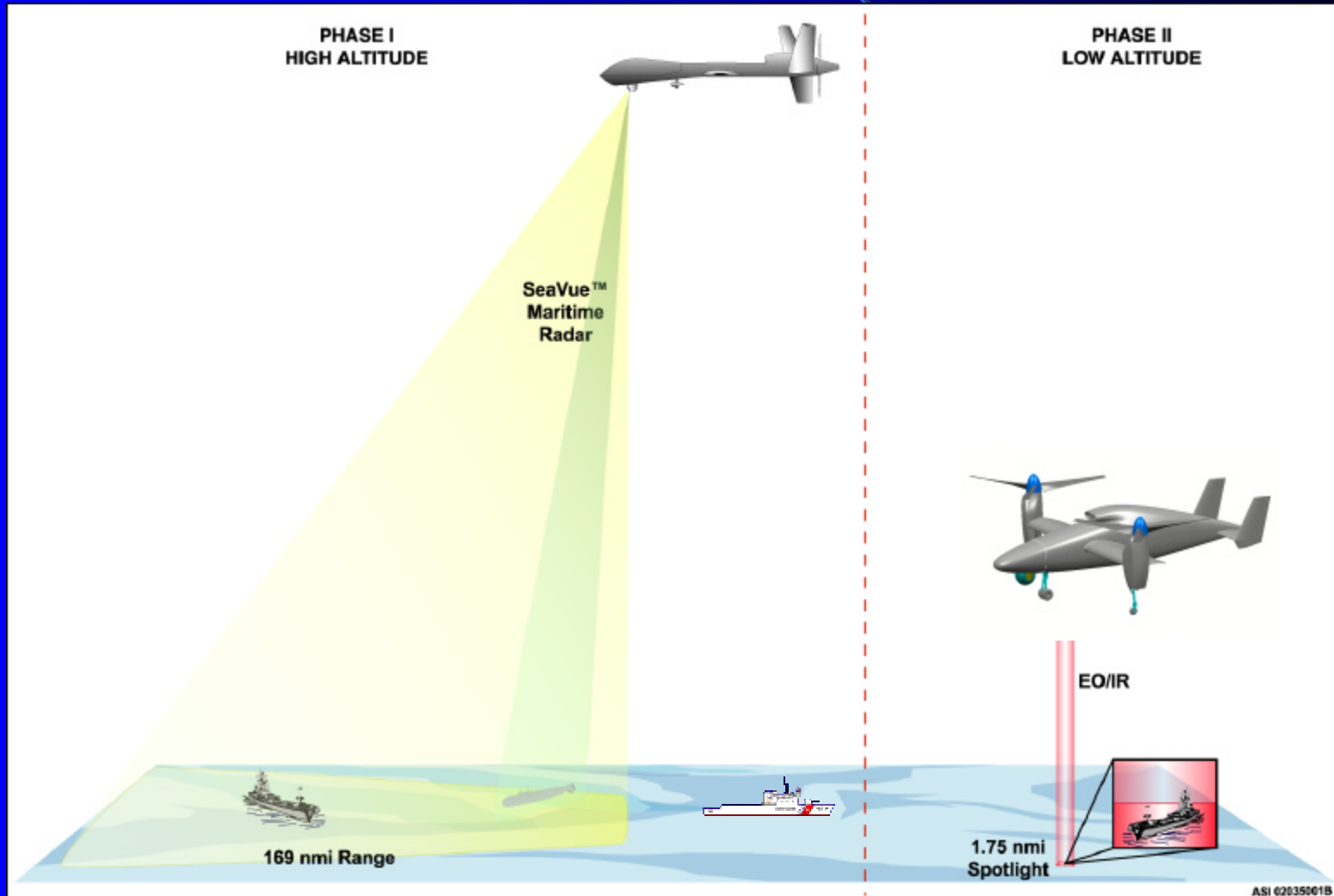
CONOPS Summary



1 HAEUAV Wide Area Surveillance
2 MPA Prosecution
3 NSC Interoperability

4 Multi Asset Operation
5 Over-the-Horizon Operations
6 Shore-based Command Center

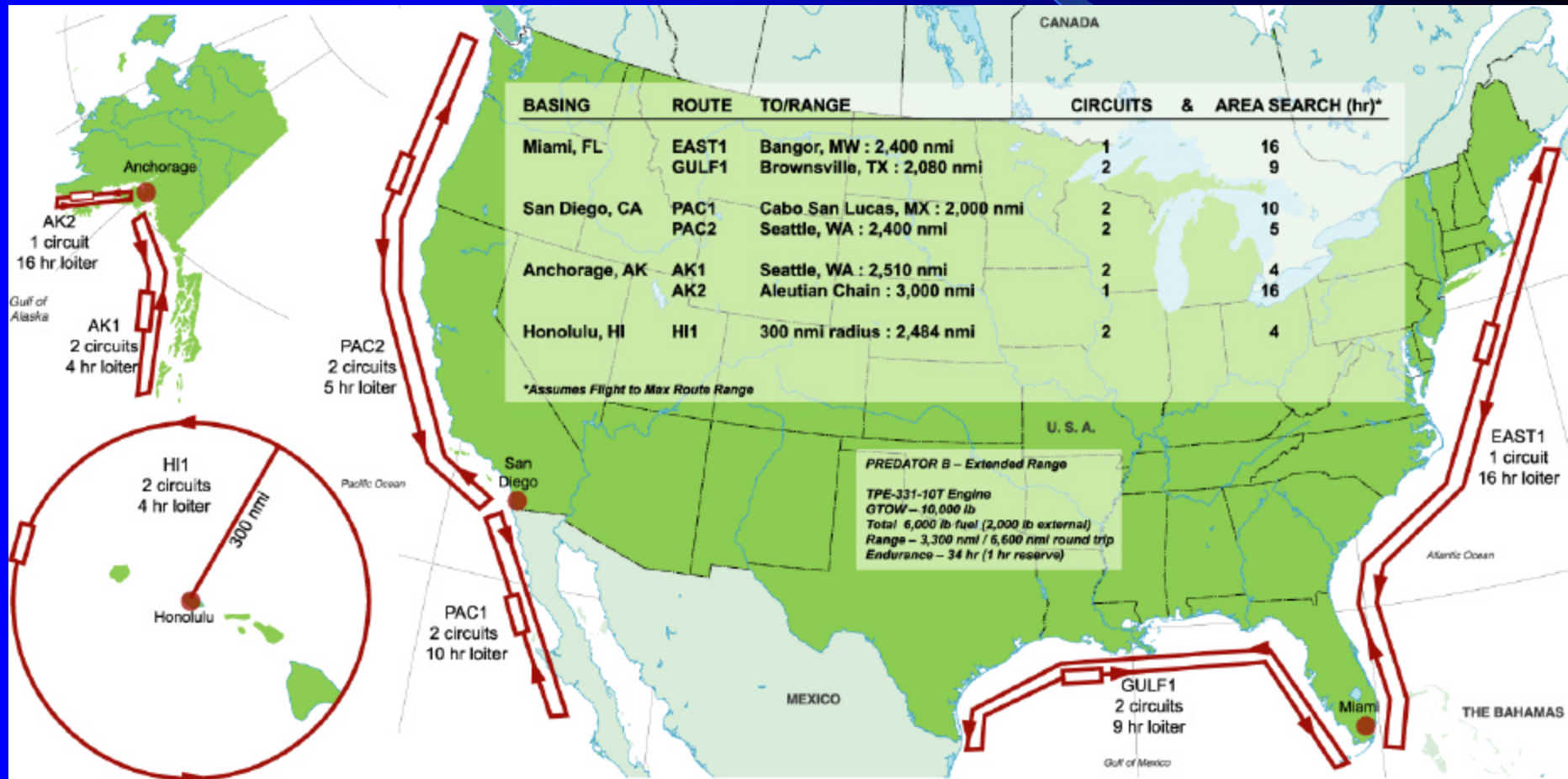
Maximizing UAV Capabilities for Homeland Defense



Evaluation of possible deployment sites based on UAV Capabilities



Persistent Presence provided by UAVs



Note: Flight Routes ≈ 300 nmi offshore

UAV Activities – UCARS Test

- November 1999
- 10 miles south of Key West, FL
- Test held from USCGC Thetis flight deck



UCARS



CL-327 Landing

VUAV Characteristics

Bell HV-911 "Eagle Eye" VTOL Unmanned Air Vehicle - Delivery 2006-2018 (69)

Flight-Ready Configuration

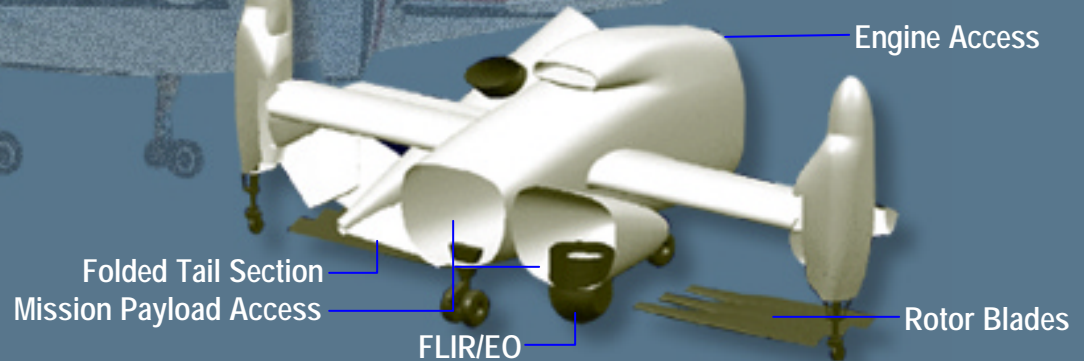


FLIR/EO

General Characteristics

- All Composite Construction
- Fully Shipboard Deployable
- Low Maintenance (<1 MMH/FH)
- Up to 4 VUAVs per NSC or OPC
- Modular Mission Payloads (FLIR/EO, Radar, etc.)
- High Speed Dash (220 kts), Cruise (200 kts)
- Airplane Loiter (90 kts)
- 5 Hour Endurance
- Maximum Height 5.7 ft
- Maximum Length 17.23 ft
- Maximum Wing Span 23.6 ft

Stowed Configuration



Engine Access

Rotor Blades

FLIR/EO

Folded Tail Section
Mission Payload Access

HAEUAV Characteristics

Northrop Grumman RQ-4A VTOL High Altitude Endurance (UAV) – Delivery 2016(7)



Payload Bay Can Accommodate up to 2,000 Pounds of Payload

General Characteristics

- DoD Surveillance Asset
- Low Risk After USAF Production, Testing, Fielding
- Huge Surveillance Areas Covered per Mission
- >3,000 nm Range, >30 Hours Endurance
- High-resolution Sensors (FLIR/EO, SAR, ISAR/GMTI)
- Range Endurance Allows Operation from Only 2 Sites
- Centralized Control from Ground Control Station
- GCS Integrated into CG-C2 System

General Specifications

- Power Plant: Single Allison AE3007H (Approximately 7,000 Pounds Thrust)
- Length: 44 feet
- Height: 15 feet
- Weight: Approximately 25,600 Gross Take-off Pounds
- Wingspan: 116 feet
- Speed: 300 to 400 Kt True Air Speed (KTAS)
- Range: 1,200 nm Radius with 24 Hours On Station
- Loiter Altitude: 50,000 to 65,000 feet
- Fuel Capacity: 14,800 Pounds, JP-8

Homeland Security

SEMPRE PARATUS

Coordinated and Focused on the Real Threats

Prepared for the 21st Century

QUESTIONS?



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