



U.S. Naval Academy Alumni Luncheon

Rear Admiral Michael C. Bachmann
Commander, Space and Naval Warfare Systems Command
15 July 2010



Class of '74





Overview

- ▼ Perspectives on the Navy
- ▼ SPAWAR Solutions
- ▼ Discussion / Q & A



Perspectives on Navy

- ▼ Recent comments from leadership
- ▼ Fiscal realities
- ▼ Capabilities
 - Strategic re-thinking / validation of requirements
 - Cover the range of warfare
 - Numbers vs cost vs capability vs risk
 - Net-centric warfare more relevant than ever
 - Robust, secure, adaptive,
 - Sustain and improve our existing capital assets
- ▼ Acquisition
 - Total ownership costs
 - Best use of talent / infrastructure / funding
 - Rapid product delivery





Team SPAWAR's Contribution

We are well positioned to support the "next" Navy

- ▼ Net-Centric culture and expertise
 - Physical and virtual
- ▼ Cost-effective enhancements for existing and future platforms
 - Platform / Service agnostic
- ▼ Acquisition processes and reducing TOC
 - Design Build
 - Provider of Choice
 - Rapid Acquisition Processes
- ▼ Research Efforts - cutting edge





Team SPAWAR

SPAWAR

Is the Navy's acquisition command and technical authority for C4ISR - our cross-platform expertise, our state-of-the-art labs, and our connection to the fleet, industry and academia enable us to deliver:

- ✓ Knowledge Superiority
- ✓ Decisive Effects
- ✓ Strategic Advantage

KEY STAKEHOLDERS:

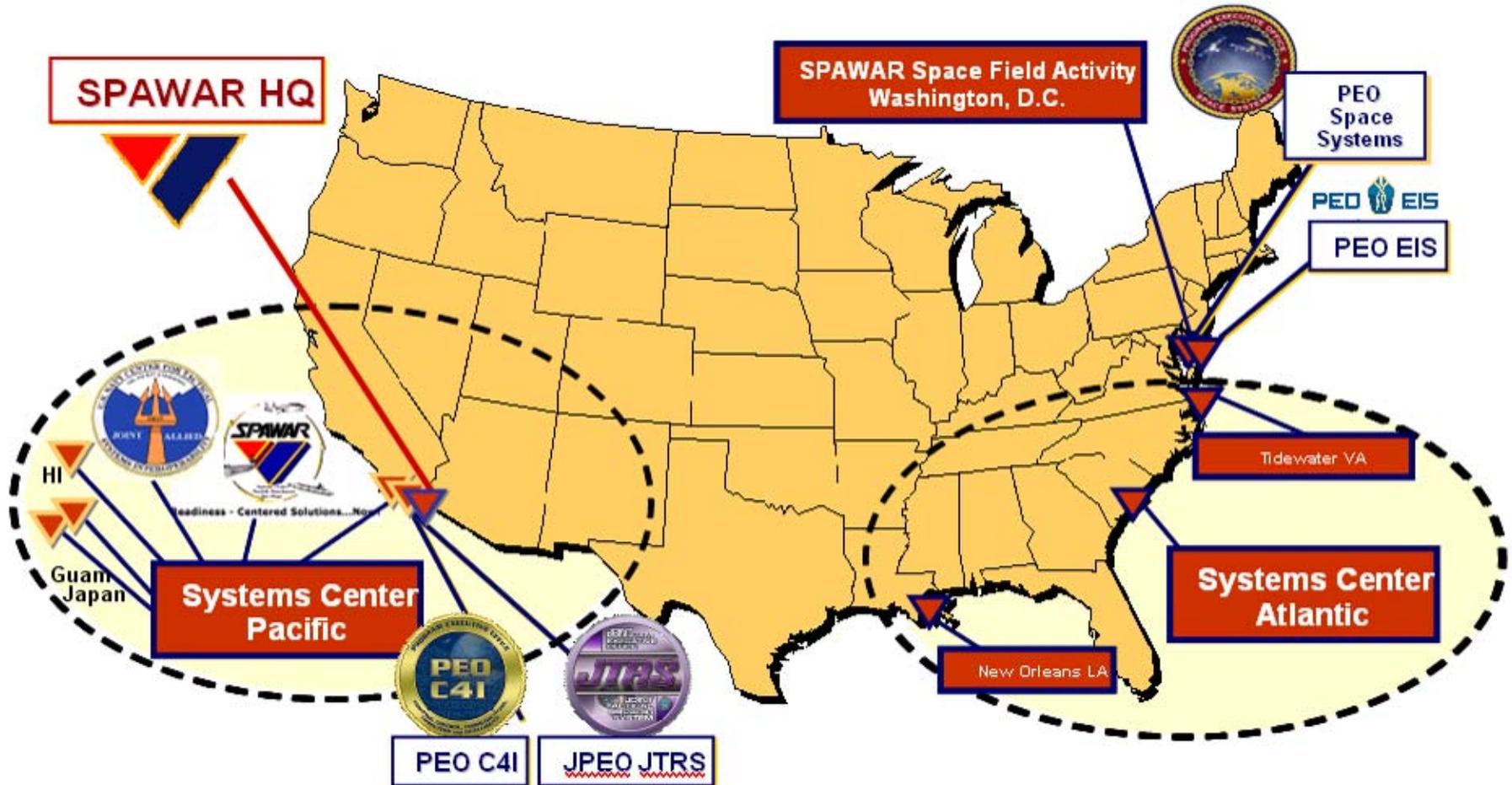
- CNO
- DON CIO
- ASN(RDA)
- NETWARCOM
- OPNAV N2/N6
- OPNAV Other N Codes
- Fleet Commanders
- PEOs (C4I, EIS, Space)
- Other Acq Commands (NAVAIR, NAVSEA)

Mission

Team SPAWAR acquires, develops, delivers and sustains decision superiority for the Warfighter at the right time and for the right cost.



Team SPAWAR – SSCs and PEOs

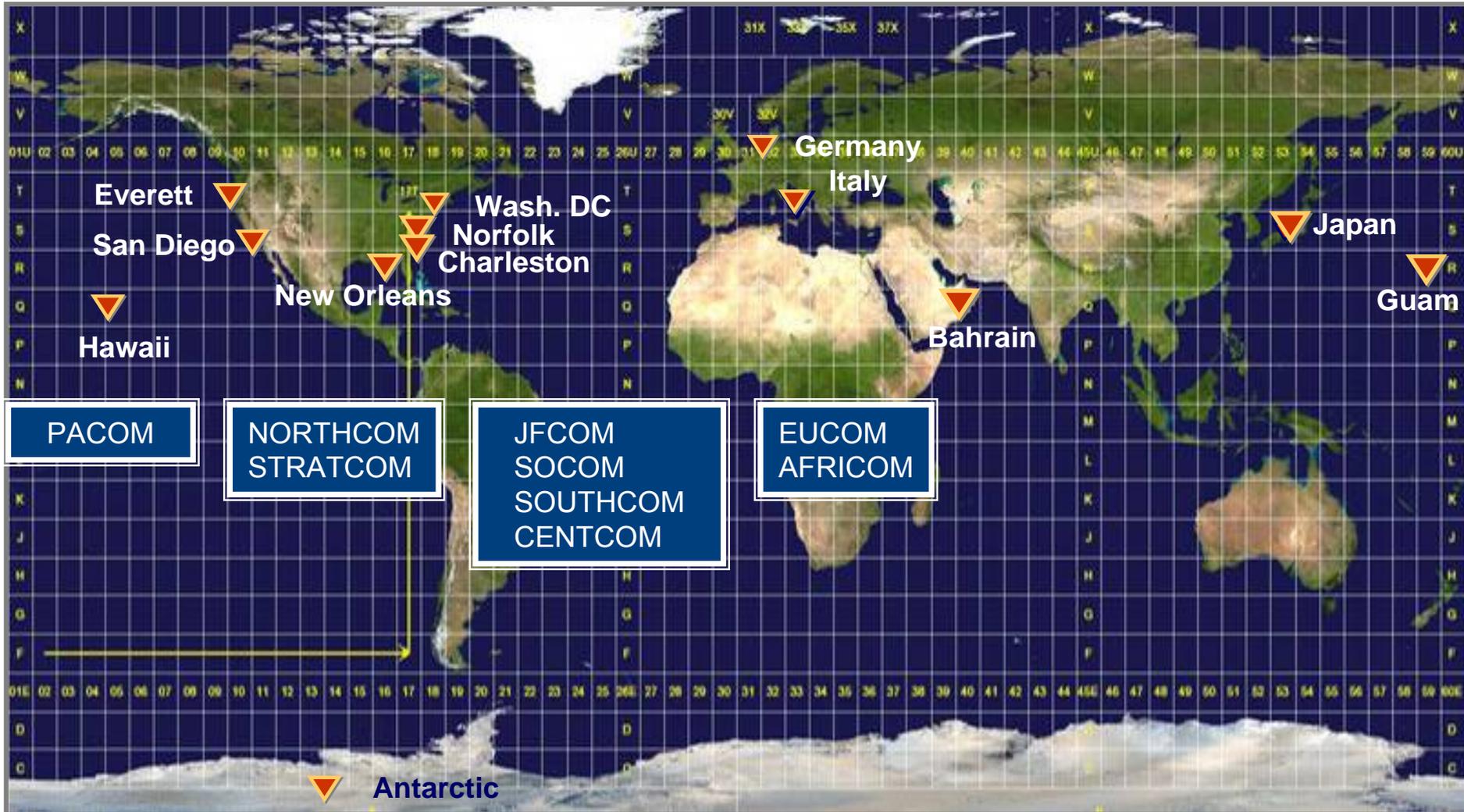


Global Presence

≈ 8,000 Government Staff (bulk are NWCF)

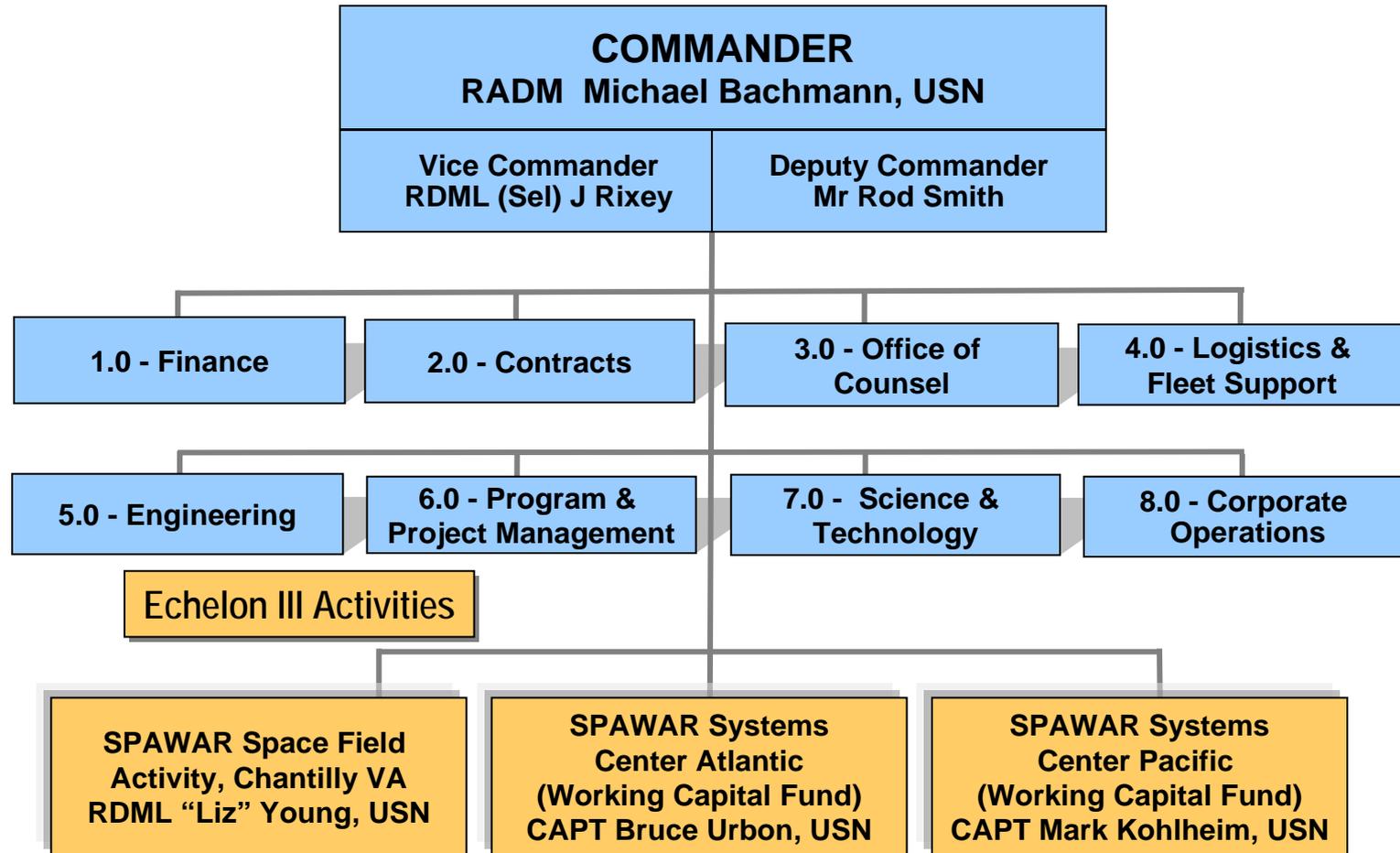


Team SPAWAR - Global Presence





Team SPAWAR

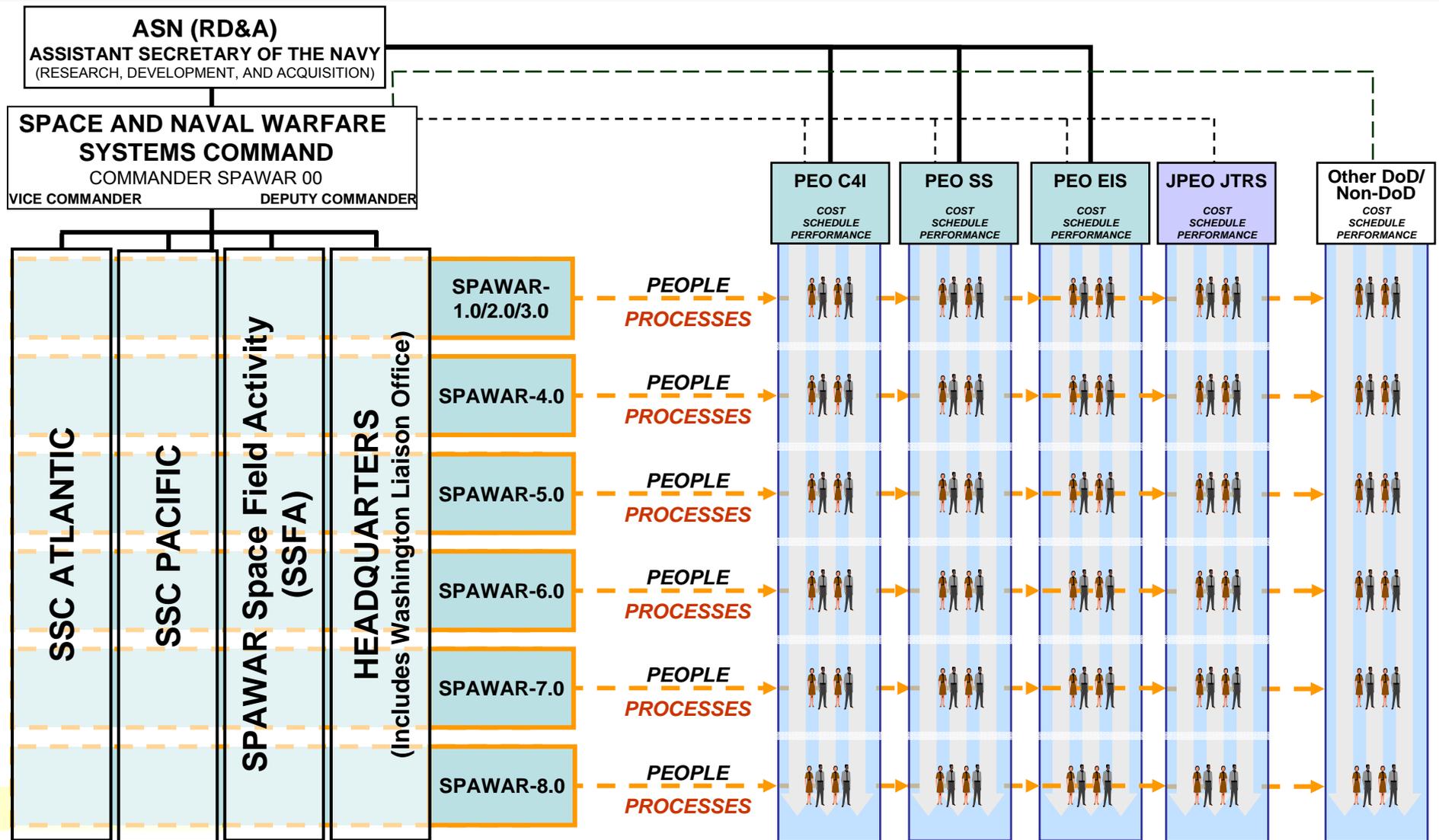


- PEO C4I
- PEO EIS
- PEO Space Systems
- JPEO JTRS

FY09 - \$9.86B TOA



How We Support the Programs - Competency Alignment and Integrated Product Teams





SSC's Profiles and Missions

SSC Pacific Mission

To provide Naval, Joint and National knowledge superiority through quality research, development, acquisition, test and evaluation (RDAT&E) and full life cycle support of effective Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR), Information Operations (IO), Enterprise Information Services (EIS) and Space capabilities.

SSC Atlantic Mission

To provide quality full-service systems engineering and acquisition to rapidly deploy capabilities to the Naval, Joint and National Warfighter through the development, test, evaluation, production and fielding of sustainable, survivable, and interoperable Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR), Information Operations (IO), Enterprise Information Services (EIS), and Space capabilities that enable knowledge superiority.

Inventors, Innovators, Integrators

TOTAL 4264

Highly Educated Workforce:

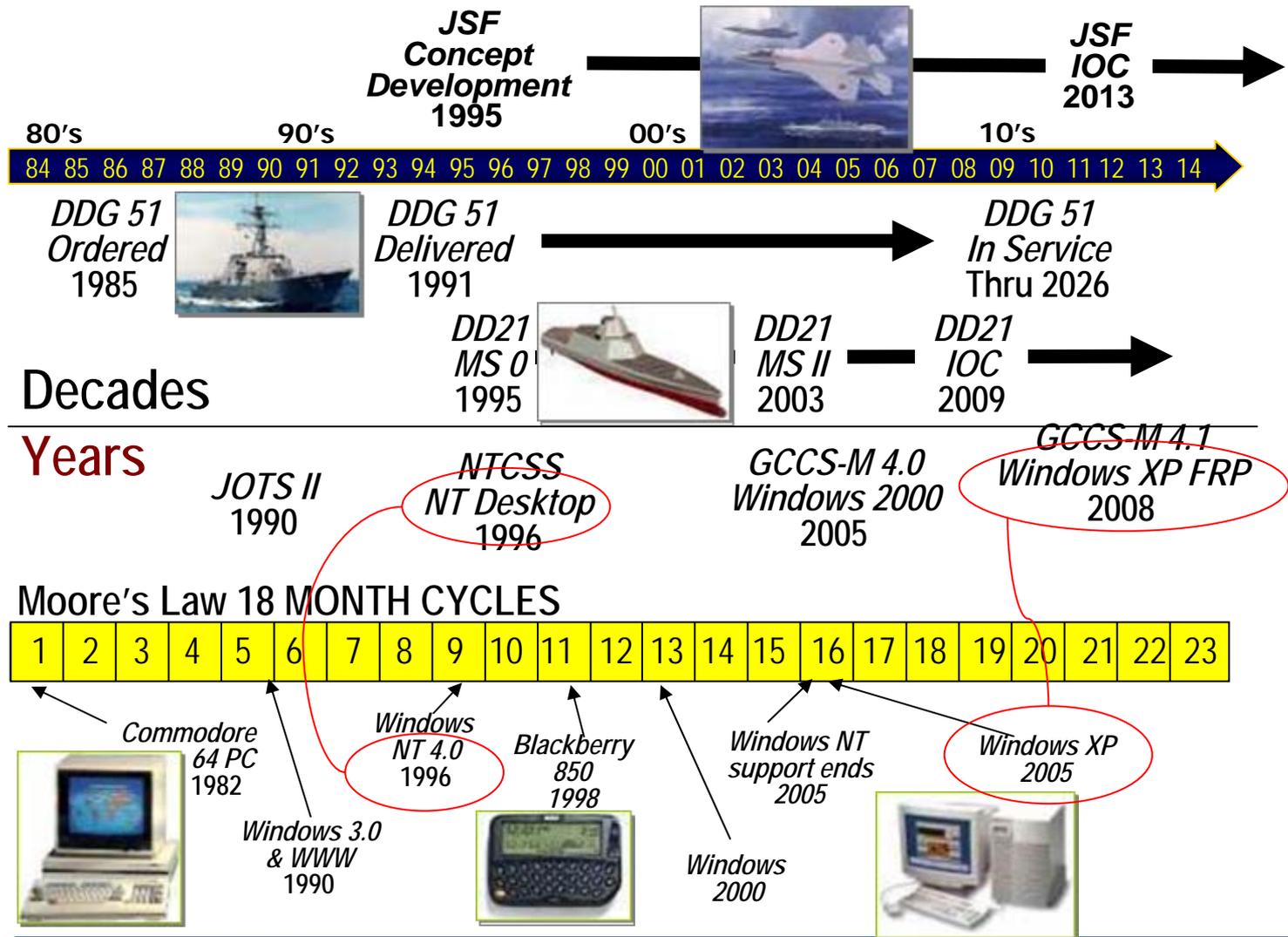
- ✓ 160 PhDs
- ✓ 1368 Masters
- ✓ 3448 Bachelors

Inventors, Innovators, Integrators

TOTAL 3424

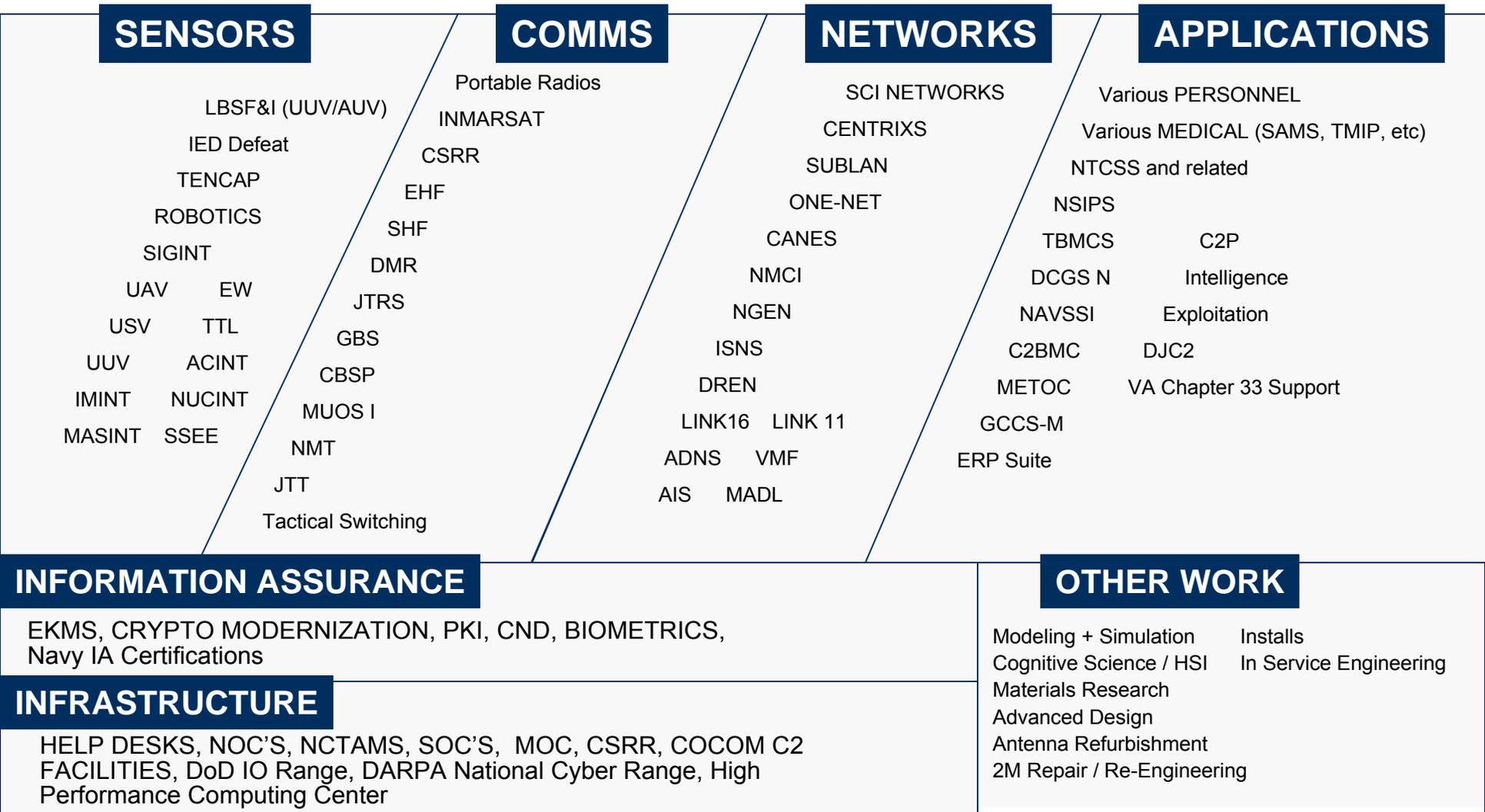


Team SPAWAR Product Environment





Capabilities - Areas of Expertise (*Partial List*)



C4I Provider of Choice - *Acquisition Strategies*

Current Acquisition Strategies



Full Service Contract

**DD(X) LCS Flt 0
LPD-17 Networks**

Modified Turnkey

**DDG-51
CVN 77/78**

**LHD 8
CVN RCOH**

**LPD 17
Comms/Apps**

Full Turnkey

**CJR T-AKE
LHA 6
SSN 784 and later**

Strategy: Move to one provider of common C4I Equipment across the fleet – both new construction and backfit

Advantages:

- Common equipment
- Efficiencies of scale
- Maximum benefit/applicability of R&D expenditures
- Lower Total Ownership Cost

Provider of Choice/Turnkey Benefits:

- Minimizes Total Ownership Cost
- Facilitates interoperability and commonality between platforms
- Capabilities delivered with long-term sustainment strategy
- Configurations managed and maintained consistently
- Most effective and modern C4I equipment upon delivery
- Leverages investment in existing Navy programs, expertise and resources

Functional Integration

▼ Team SPAWAR is integrating systems today

- Detailed understanding of layers of integration
- Systems Engineering skills
- “Not Invented Here” not applicable to Government Engineers - able to use “best of breed”

Data Integration

Universal Core (UCore)
Interagency Information Sharing Initiative

Overview:

- Background:**
 - SPAWAR is Federal Co-lead and project manager
 - Federal Government Initiative
 - Co-developed by: DOD, DOI, DHS and the IC.
- Purpose:**
 - Improve information sharing
 - Define and exchange common terms
 - Create extension framework for detailed exchange
- Maturity:**
 - Production Baseline Released 31 March 09

UCore Community:

- Constant Growth Since March Release
- Mission Implementation Increasing
- Incorporated into Homeland Security Enterprise Arch
- Incorporated into ICD Architecture Hub
- Being Evaluated by OMB as a Federal Data Standard

UCore: BMD Live Fire: 18 Nov 09

UCore In SensorWeb Enablement: JCTD

SensorWeb Goal: Develop and implement a sensor-specific enterprise framework based on open standards to facilitate and support inter-agency data fusion networks.

UCore Used to Integrate Existing Infrastructure

UCore Used in Data Translation Layer



Rapid GFE Integration

“...successful.....best practices...”

“The military services buy the subsystems for their vehicles and provide them as government furnished equipment to be installed at a government integration facility located at the Space and Naval Warfare Systems Command in Charleston, South Carolina.”

Assured C2 and Information Access

End-to-End Certification (E2C)

INTRODUCTION TEAM SPAWAR PEO C4I PEO EIS JPEO JTRS PEO SPACE SYSTEMS

- SPAWAR/PEO C4I/SSC processes, engineers, and laboratory environments supporting development of End-to-End integrated solutions
 - Verify system-of-systems components work together in an operationally representative environment before they are fielded
 - Provides operationally representative environment for development and experimentation for new capabilities

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Cryptographic Binding of Metadata (CBM)

Project Definition & Approach

- Integrity** - ensure that the metadata and data asset have not been altered either maliciously or accidentally
- Authentication** - ensure the identity of the binding entity is authenticated

CBM Method 1 - Digital Signature

Some Reasons Cryptographic Binding is Needed:

- GIG requires metadata to facilitate access control and discovery of information.

JRAE 08 Outcome

Cryptobinding for SOA

- Reliable
- Validation takes place 100% of the time
- Invalid data is rejected 100% of the time
- Can operate in enterprise, split between enterprise and forward, or forward deployed architecture if Disconnected Ops are employed

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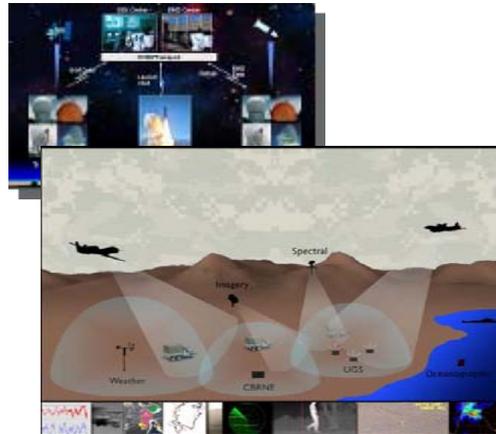
- ▶ SPAWAR has an end-to-end testing capability (Navy and DoD levels)
- ▶ SPAWAR fulfils the Navy Certification Authority technical role
- ▶ Ongoing research in this field is providing multiple solutions

Rapid Delivery of Capability *(Selected Examples)*

**USS RONALD REAGAN
Automated Identification
System (AIS)**
Example: Quick Reaction



Universal Core (UCore)
Example: Interagency Information



MRAP C4I Integration Example:
Agile, robust



ASW Mission Package
Example: Rapid Prototyping



**ADM to EDM Development
& Test**

COCOM Support
Example: Common C4I Solutions

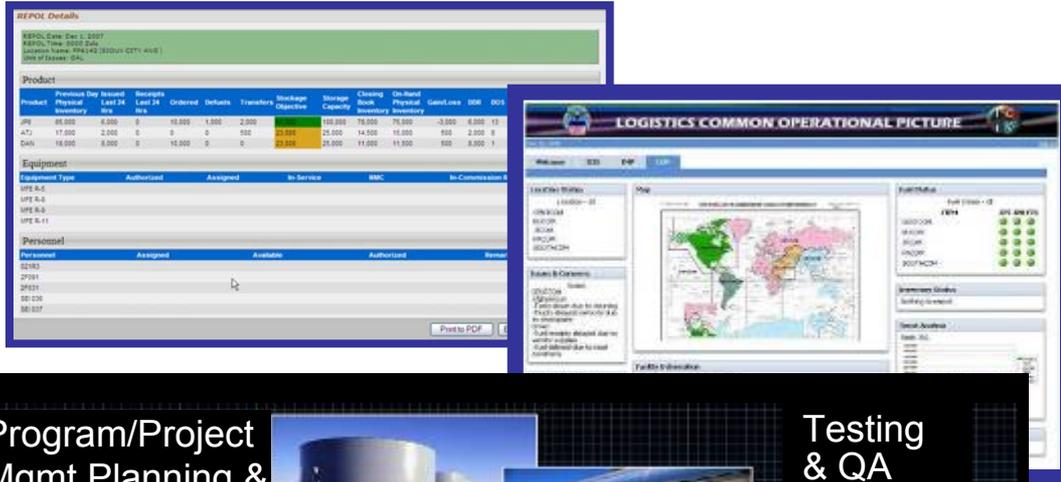


Internet Café
*Example: Support for Morale and
Welfare*





Logistics Capabilities



Defense Logistics Agency Automation Program

Automation Program provides worldwide installation & maintenance support for all DoD fuel facilities (over 500 sites)

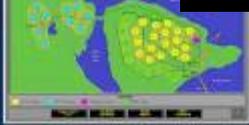
- Supervisory control & data acquisition/distributed control systems at bulk terminals
- Automated leak detection systems
- Tank gauging and automated service stations
- Communications
- Flight line automation
- Logistics decision support information systems
- Security systems

Program/Project Mgmt Planning & Design Systems Engineering



Testing & QA Training Life-Cycle Support

Software Dev. procurement & installation system Integration



MONITORING, CONTROL, AND DATA ACQUISITION

Partnerships with Industry and Academia



University Partners

- Clemson
- Citadel
- Cal Poly San Luis Obispo
- University of California Santa Barbara
- University of California San Diego
- University of California Irvine
- San Diego State University
- Georgia Tech
- Eastern Carolina
- University of Hawaii

University of California San Diego



CRADAs

FY09
➤ 23 In Place

Industry Partners

- COMNEXUS
- NDIA
- CONNECT
- AFCEA
- Maritime Security Network



Team SPAWAR Differentiators

- ▼ **Provider of IT solutions.** We provide technical leadership for IT solutions that give the Joint Warfighter a strategic advantage
- ▼ **Focus on Capability Delivery.** We translate warfighter requirements to capabilities through the expertise of our personnel, our state-of-the-art labs, and our proximity to the Fleet
- ▼ **Critical Partnerships.** Our partnerships with the Fleet, Other DOD, Non-DOD, industry, and academia allow us to provide integrated best-value C4ISR technology across platforms
- ▼ **Continuous Improvement.** We strive to improve business processes to better meet the needs of the warfighter



Closing / Discussion Points

- ▼ Fiscal realities - challenges and opportunities
- ▼ Team SPAWAR's value
 - Net-centric warfare
- ▼ Collaboration with stakeholders essential
 - Best practices
 - Affordable alternative to growth
- ▼ Change of Command!

