Program Executive Office
Command, Control, Communications, Computers and Intelligence (PEO C4I)

Consolidated Afloat Networks and Enterprise Services (CANES)

Statement A: Approved for public release, distribution is unlimited (5 FEBRUARY 2014)
What is CANES?

- The Navy’s next generation tactical afloat network
  - Consolidates five legacy networks into a single integrated network
  - Inherent capability to defend and secure the network
  - Based on commercial off the shelf hardware / software and open architecture,
  - Government owned data rights
  - Serves as the cyber platform for more than 200 applications and connected systems

- Value of CANES
  - Strengthens cyber security posture
  - Network standardization reduces variation and increases interoperability
  - Technology refresh cycle provides the fleet with current technology to pace the cyber threat
  - CANES drives down total ownership costs through consolidation and lifecycle competition

- Installations (as of May 2014)
  - Complete on 6 destroyers
  - Ongoing on two carriers, one amphibious assault ship, seven destroyers, one landing dock ship and one cruiser.
Afloat networks have lost agility, security, maintainability and interoperability

Today

CANES

- CANES is the Navy’s Afloat IT execution strategy
  - Transforms the network into a platform enabling significant operational capabilities
  - Replaces operationally ineffective and unaffordable networks
  - Aligns multiple programs, capabilities, requirements and resources into single PoR

- CANES replaces five existing shipboard network systems

- CANES provides extensive network capabilities
  - Data, transport, voice and video services, systems management, cyber security
  - Enables insertion of next generation of C2 and ISR capabilities
Consolidated Afloat Network
Enterprise Services (CANES)

CANES Consolidation

CANES Components

DDG represents a baseline for open, scalable design shared by all platforms
CANES Acquisition Strategy

• CANES strategy maximizes competition throughout program lifecycle
  ➢ Competitive procurement for Engineering and Manufacturing Development (EMD)
  ➢ Down-select for Limited Deployment (LD)
  ➢ Full and open competition for Production
  ➢ Indefinite Delivery Indefinite Quantity (IDIQ) Multiple Award Contract (MAC)

• CANES specifications promote further competition
  ➢ Vendor neutral specification “commoditizes” major COTS components
  ➢ Leads to comparable costs enabling teams to select the best product for the system
  ➢ Open, modular and scalable design
Value of Competition

• Competition enabled FOC acceleration by three years from FY2023 to FY2020 within program budget
• Additional $230 million savings over the FYDP directly attributed to result of down-select competition
  • $118 million returned to Navy for FYDP reinvestment
  • $112 million savings retained within POR to field high risk orphan platforms
• Continued competition planned for production
  • Re-compete at 4-year hardware baseline refresh window
  • Eliminate single vendor lock-in

The value of competition is being realized
Variance Reduction

• Developed to reduce Total Ownership Cost and C4I variance in the fleet
  - Four C4I Capability Build segments
    - Networks/Applications
    - Warfare Support
    - Common Radio Room
    - Signals Exploitation
  - Two-year update cycle
• Disparate C4I platform configurations negatively impact:
  - Interoperability
  - Operational Effectiveness
  - Cyber security / Information Assurance
  - Training
  - Logistic Support
• Fielding C4I Capability Builds requires a coordinated resource plan with input from the fleet
CANES Technology Insertion Strategy

- CANES technology insertion strategy considered ARCI model to optimize technology insertion period
- CANES programmed to execute 2 year software / 4 year hardware development cycle with 4 year minor / 8 year major insertion cycle to reduce obsolescence
Application Integration Overview

- **External Governance - Fleet Functional Area Manager (FAM)**
  - Led by CPF/FCC/USFFC
  - USFFC N6 facilitates
  - Maintains the Baseline Allowance Control List (BAC)
    - Lists Fleet required applications by platform type
    - Lists only those applications that are appropriately resourced/sponsored
  - Reduces similar/redundant applications and versions
  - Monitors and enforces shipboard configuration management via the Fleet Applications Solutions Team (FAST)

- **Application Integration (AI) – The Network Interoperability Certification Process for PMW 160 Tactical Networks**
  - Processes only those applications/systems on BAC
  - Engineers and tests system of systems solution (network and applications)
  - Approves final integrated “Application Baseline” by platform type and network variant

*PMW 160 serves as Fleet Functional Area Manager Technical Agent*
CANES

• What is CANES?
  - A business strategy that implements “Enterprise” IT Afloat
  - Consolidation reduces SWAP and variance while streamlining logistics
  - DDG represents a baseline for open, scalable design shared by all platforms

• Benefit for the Navy
  - CANES drives down TOC through lifecycle competition and consolidation
  - CANES regains and maintains Information Assurance posture
  - CANES technology insertion paces the cyber threat at optimal cost
  - CANES and C4I Builds decrease cost while increasing mission effectiveness

• Installation Scope and Optimization
  - Prioritization and Integration within CNO availabilities are keys to success
  - Reducing install lengths to fit targeted availability windows

CANES puts warfighting first, operates forward and is ready
We Deliver Information Dominance Capabilities to the Warfighter

Visit us at www.peoc4i.navy.mil