



THE ASSISTANT SECRETARY OF THE NAVY

Research Development and Acquisition
1000 Navy Pentagon
Washington DC 20350-1000

AUG 05 2004

MEMORANDUM FOR DISTRIBUTION

SUBJ: Naval Open Architecture Scope and Responsibilities

Encl: (1) Open Architecture Enterprise Team Organization

The purpose of this memorandum is to amplify and expand upon the policy, guidance and direction necessary for the successful implementation of the Navy's Open Architecture (OA) Strategy. This strategy is essential as a key enabler and pillar of DoD's focus on joint architectures and evolutionary acquisition. DoDD 5000.1 dated 12 May 2003 states: "Acquisition programs shall be managed through the application of a systems engineering approach that optimizes total systems performance and minimizes total ownership costs. A modular, open systems approach shall be employed, where feasible." This mandate to utilize open systems architectures in order to rapidly field affordable, interoperable systems, is consistent with the Navy's vision of developing a coordinated, integrated business and technical approach implementing open architecture enterprise wide.

In light of this, I initiated an effort to establish open architecture principles as the basis for all war fighting systems development and maintenance during the 16 October 2003 Navy Open Architecture Executive Committee (EXCOMM). The plan was originally based on the foundation of a single Navy OA Technical Architecture, a single Navy OA Functional Architecture and conducting best of breed selection for common services. After reviewing OA progress to date and the results of the OUSD (AT&L) Tri-Service Independent Assessment during the second Open Architecture EXCOMM 2 June 2004, I have concluded that modification to this plan is necessary. The approach to develop a single Navy wide Open Architecture will be modified to account for Surface, Air, Submarine, C4I, and Space domain unique requirements.

Effective immediately, PEO IWS is assigned overall responsibility and authority for directing the Navy's OA Enterprise effort. An OA Enterprise Team shall be chartered and led by PEO IWS. The Team shall be comprised of OA domain leads, ASN, OPNAV, and SYSCOM representatives, who will collectively oversee the development and implementation of the processes, business strategies, and technical solutions which support cross Enterprise requirements in addition to domain specific needs. The Enterprise Team shall define an overarching OA acquisition strategy and develop guidance that addresses incentives, intellectual property issues, contracting strategies (i.e. integrator's vs. prime's), and funding alternatives. The acquisition strategy and accompanying guidance will then be utilized in future OA applicable procurements tailored as necessary to incorporate domain specific requirements. In addition, the Enterprise Team shall prepare, staff and promulgate a Navy wide OA business strategy. The primary focus of the business strategy will be to develop an analysis of alternatives process with which to determine return on investment, and thus priorities for adopting OA standards and software reuse practices within and across domains. Upon completion, the

business case analysis process and criteria shall be provided to DASN IWS/SHIPS/AIR/LMW for review and concurrence.

Initially, all ACAT I and II Programs shall be required to provide a business case analysis to the Enterprise Team using this process and approved criteria as part of the Program's Open Architecture implementation plan. In those situations where transitioning to Open Architecture is not warranted, given affordability or operational considerations, a waiver shall be granted by the OA Enterprise Team. All non-ACAT I and II programs will be reviewed in a similar manner, with priorities to be determined by the OA Enterprise Team.

In addition, the Enterprise Team will work closely with Test and Evaluation (T&E) and certification communities in defining regression testing and certification requirements for all OA Commercial Off-the-Shelf upgrades and software reuse applications. Affordability and the streamlining of (T&E) requirements shall be emphasized in accordance with the CNO's direction to reduce overall T&E expenses.

PEO IWS (Ships), PEO Subs (Subsurface), PEO T (Air), PEO C4I (C4I) and PEO Space (Space) will be accountable for managing OA within their respective warfare system domains. Each domain PEO will assign a dedicated full time lead in support of the OA Enterprise Team. The resources for supporting the efforts of the OA Enterprise Team will be funded from the core OA budget line.

PEO IWS (as the Surface Ship domain lead), in collaboration with PEO Ships, PEO Carriers, and PEO LMW, will define open architecture for surface ships, identify the interface specifications for components, and define the layered structure and portability of applications across all classes of surface ships (both in-service and new construction).

PEO Subs will continue to execute the OA implementation plan established by the Virginia Class submarine program Non Propulsion Electronics System, expanding to the in-service systems and applying the proven Advance Processing Build process to all submarine subsystems and to the Submarine force within the fiscal approved budget allocations.

PEO T, working with the other Aviation PEOs and COMNAVAIR, will follow the approach developed for Surface Ships and adapt it to applicable aviation systems in order to achieve overall OA objectives for in-production, in-service and future aircraft.

PEO C4I, working with the other domain leads, will develop the OA Communication's specifications and implementation plans for their systems in support of both system specific and cross domain needs.

PEO Space will follow the approach developed for Surface Ships and adapt it for in-production, in-service, and future space systems.

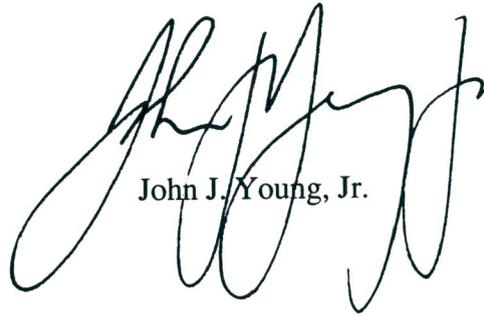
Each domain lead PEO will be responsible for identifying the computing architectures unique to that domain and implementing a configuration control process to ensure OA

compliance. As part of this configuration control process the Domain lead will provide program of record recommendations for all applicable systems within their domain.

The OA Enterprise Team organization and top level responsibilities are depicted in Enclosure 1. In addition to the roles and responsibilities discussed previously, the Team will be chartered to:

- Lead the Navy Enterprise to Open Architecture implementation
- Provide OA Systems Engineering leadership to PEOs, Industry partners, Joint organizations, Navy Warfare Centers and other participating organizations
- Provide the forum and process by which cross domain OA proposals and solutions are reviewed and approved
- Oversee OA implementation efforts ensuring standardized and disciplined processes are utilized across domains
- Identify cross-domain components and opportunities for cost reduction and reuse
- Leverage technical, business, and organizational solutions from all participating communities
- Establish an advisory team, comprised of industry and academia, to interpret and advise the team on an as periodic basis.

The time is right to formalize the Navy OA Enterprise initiative and I am depending on the commitment of all stakeholders to ensure its' success. I am counting on your full support to make this happen.



John J. Young, Jr.

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OA Enterprise Team Organization and Responsibilities

Responsibilities		OAET (PEO IWS)	Surface Domain (PEO IWS)	Air Domain (PEO T)	Subs Domain (PEO Subs)	C4I Domain (PEO C4I)	Space Domain (PEO Space)
Cross-PEO Responsibilities	Develop, manage and enforce Enterprise policies, standards and specifications	L E A D	✓	✓	✓	✓	✓
	Identify and coordinate development / implementation / promulgation of cross-domain reusable software components						
	Develop coordinated OA S&T strategy and plans						
Domain-Specific Responsibilities	Comply with Enterprise OA policies, standards and specifications	P A R T N E R	✓	✓	✓	✓	✓
	Identify appropriate subdomains as candidates for tailored architectures		✓	✓	✓	✓	✓
	Develop and maintain domain standards and guidance IAW Enterprise policies and direction		✓	✓	✓	✓	✓
	Develop and integrate cross-domain within domain, and platform-unique reuse components		✓	✓	✓	✓	✓

*Additional Enterprise Team members to be provided From DASN, OPNAV, and SYSCOM organizations.

OA Enterprise Team Organization and Responsibilities

Responsibilities		OAET (PEO IWS)	Surface Domain (PEO IWS)	Air Domain (PEO T)	Subs Domain (PEO Subs)	C4I Domain (PEO C4I)	Space Domain (PEO Space)
Cross-PEO Responsibilities	Develop, manage and enforce Enterprise policies, standards and specifications	L E A D					
	Identify and coordinate development / implementation / promulgation of cross-domain reusable software components						
	Develop coordinated OA S&T strategy and plans						
Domain-Specific Responsibilities	Comply with Enterprise OA policies, standards and specifications		✓	✓	✓	✓	✓
	Identify appropriate subdomains as candidates for tailored architectures		✓	✓	✓	✓	✓
	Develop and maintain domain standards and guidance IAW Enterprise policies and direction		✓	✓	✓	✓	✓
	Develop and integrate cross-domain within domain, and platform-unique reuse components		✓	✓	✓	✓	✓

PARTNER



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