

# *Open Architecture*





# *Why Open Architecture*

## *Business*

- ◆ Today's In-Service Computing Architectures are Unaffordable
- ◆ Each Ship Class Addressing the Problem Uniquely
- ◆ Replacement of Obsolete Hardware Fact of Life
- ◆ Commercial Industry has Already Embraced Open Architecture Approach

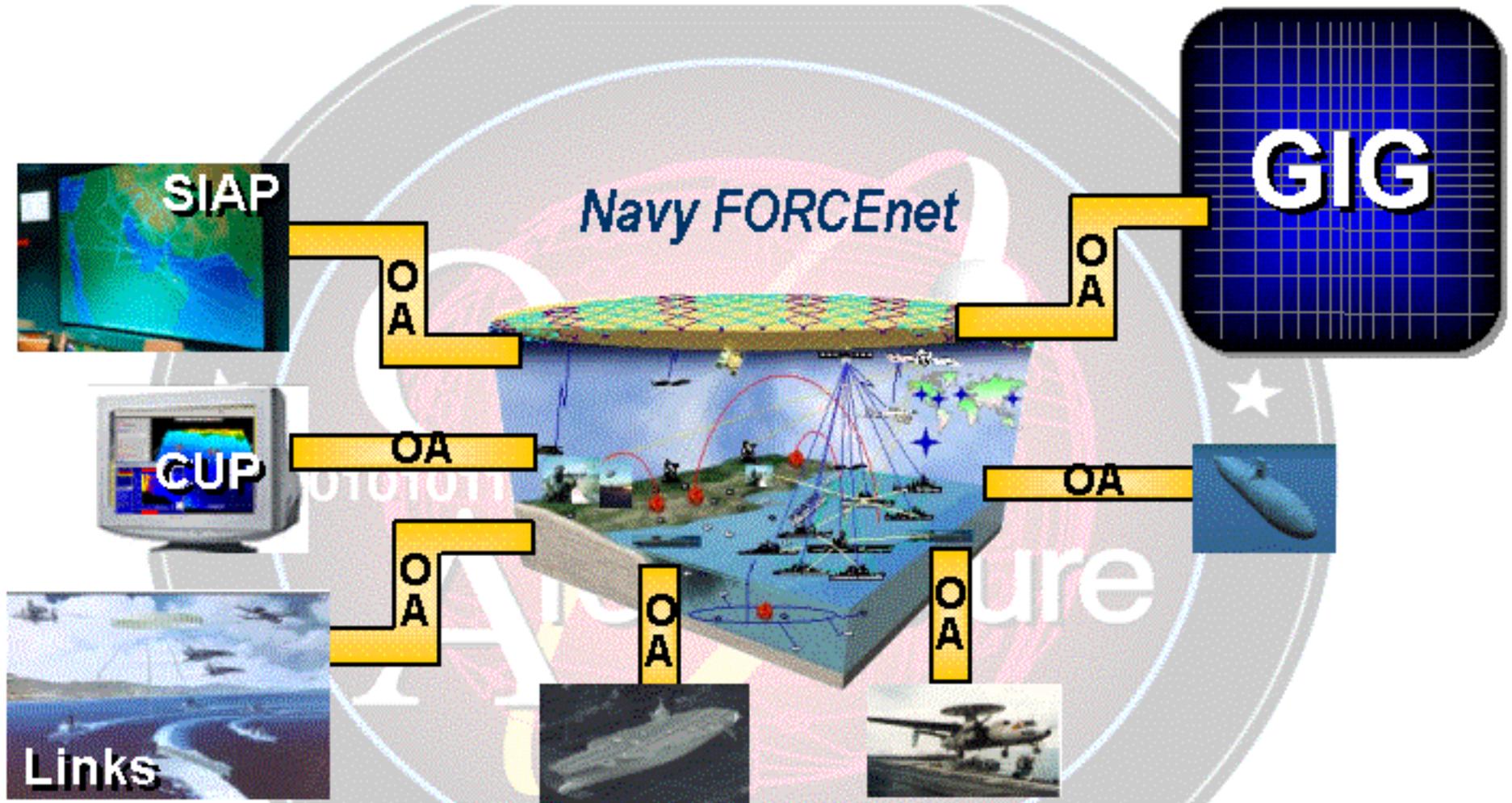
## *Technical*

- ◆ Current Surface Ship Computing Systems Have Been at Performance Capacity for Years
- ◆ Current Computing Architectures Limit Capability Increase
- ◆ Warfighting Concepts to Warfighting Capability Takes on the Order of 5 Years to IOC
- ◆ Computer Throughput and Speed Requirements Dictate use of Commercial Computing Technologies and Modern Software Languages

*Improved Warfighting Capability Depends on Open Architecture*



# OA Controls the Future



*Open Architecture is Fundamental Enabler to Future Warfighting*



# Open Architecture

## What Is It?

### ➤ **A Navy Wide Technical**

**Architecture...** Computing Environment  
Based on International Commercial  
Standards

### ➤ **A Navy Wide Functional**

**Architecture...** Standardization of  
Common Components and Critical Interfaces

### ➤ **Common and Reuseable Software**

**Applications...** Across Platforms

## What Does It Mean...

### **Operationally**

- ✓ Provides Joint Interoperability
- ✓ Enables Sea Power 21 and FORCENet
- ✓ Enables Effective Employment of Global Information Grid
- ✓ Increased Capabilities and Performance

### **Programmatically**

- ✓ Streamlined Software Development / Maintenance
- ✓ Faster "Time to Market"
- ✓ Facilitates COTS Refresh / Technology Insertions
- ✓ Broader Industrial Base

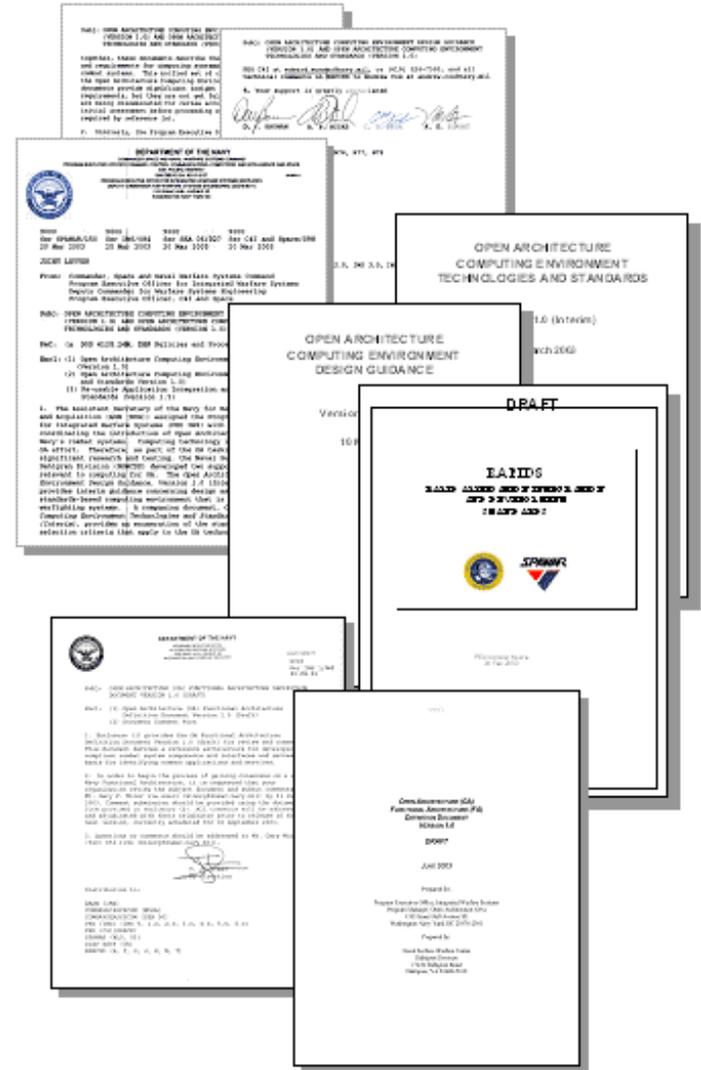
### **Affordability**

- ✓ Potential for 4-to-1 Reduction in Common Software Development and Maintenance Efforts
- ✓ Reduces Costs for Testing / Certification
- ✓ Enables Manning Reductions



# OA Standards and Design Guidance

- ◆ OA Standards and Guidance Document Version 1.0 (Interim) Released in March 2003
  - Signatories PEO IWS, PEO C<sup>4</sup>I, NAVSEA and SPAWAR
- ◆ OA Standards and Guidance Document Version 1.0 (Final) Scheduled for October Release
  - Signatories PEO IWS, PEO C<sup>4</sup>I, NAVSEA and SPAWAR
  - ASN(RD&A) Letter of Promulgation
- ◆ OA Functional Architecture Definition Document Version 1.0 (Draft) Released in July 2003
  - Final Version Scheduled for October 2003
- ◆ N7 Requires all Systems Conform to OA Standards, Specifications and Guidance to Comply With FORCENet





# Consensus

- ASN(RD&A)
- Fleet
- OPNAV
- NAVSEA
- SPAWAR
- Industry
- NAVAIR

- FORCEnet
- SIAP SE
- JTAMDO
- NETWARCOM
- RDA CHENG
- MARCOR SYSCOM

## ◆ Open Architecture is Required to Enable:

- SEA POWER 21
- FORCEnet
- Joint Interoperability
- Affordable Modernization