

Department of the Navy Chief Information Officer



Interoperability...NMCI and Beyond

May 31, 2001

Presented by

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Department of the Navy*

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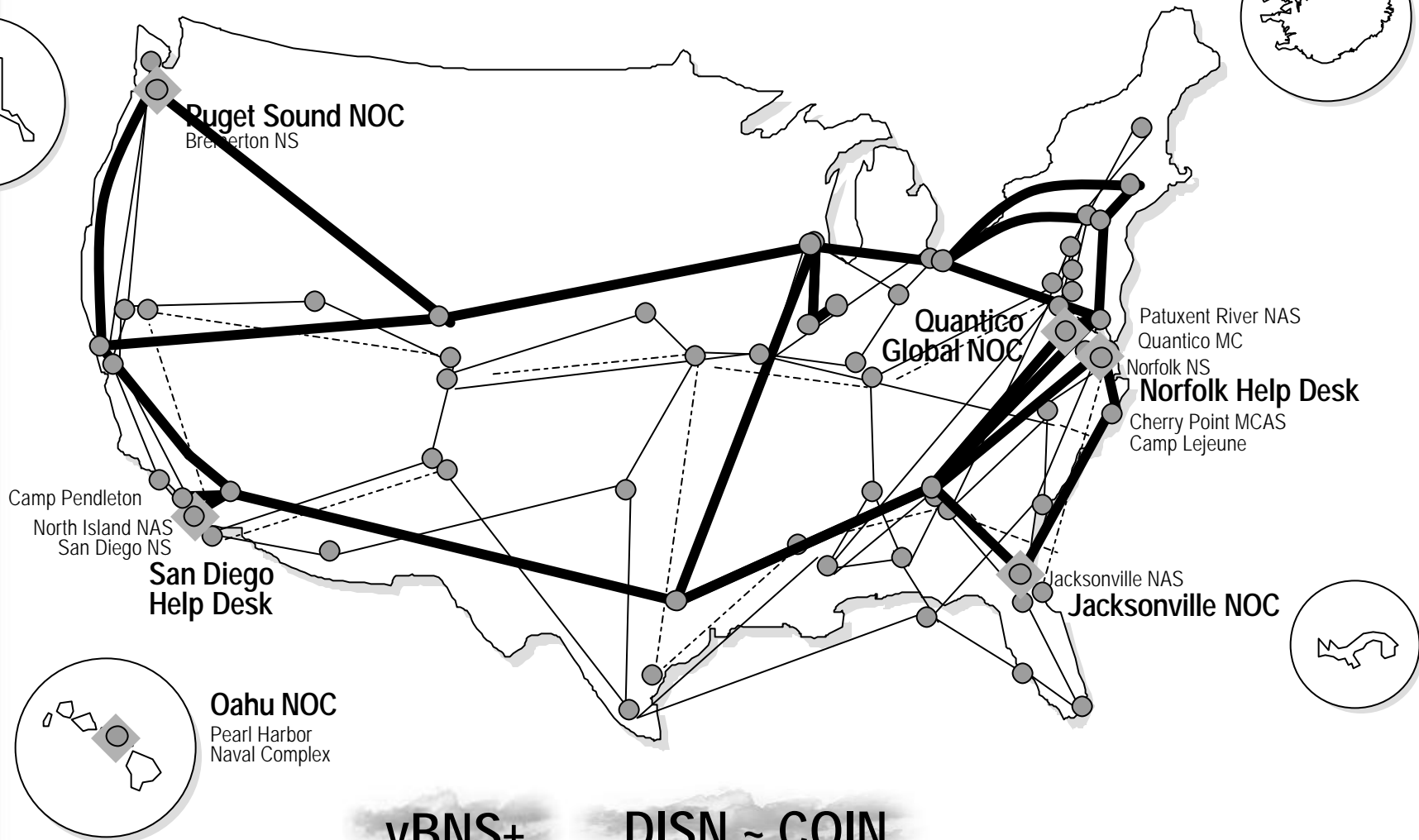


Background

- \$90 billion organization
- Employing about 900,000 people
- On any given day ~ over a hundred ships forward deployed.
- At any given moment ~ 88,000 sailors and Marines outside of CONUS.
- Keeping that organization connected is a critical proposition as we move into the 21st Century.



NMCI Network Snap Shot

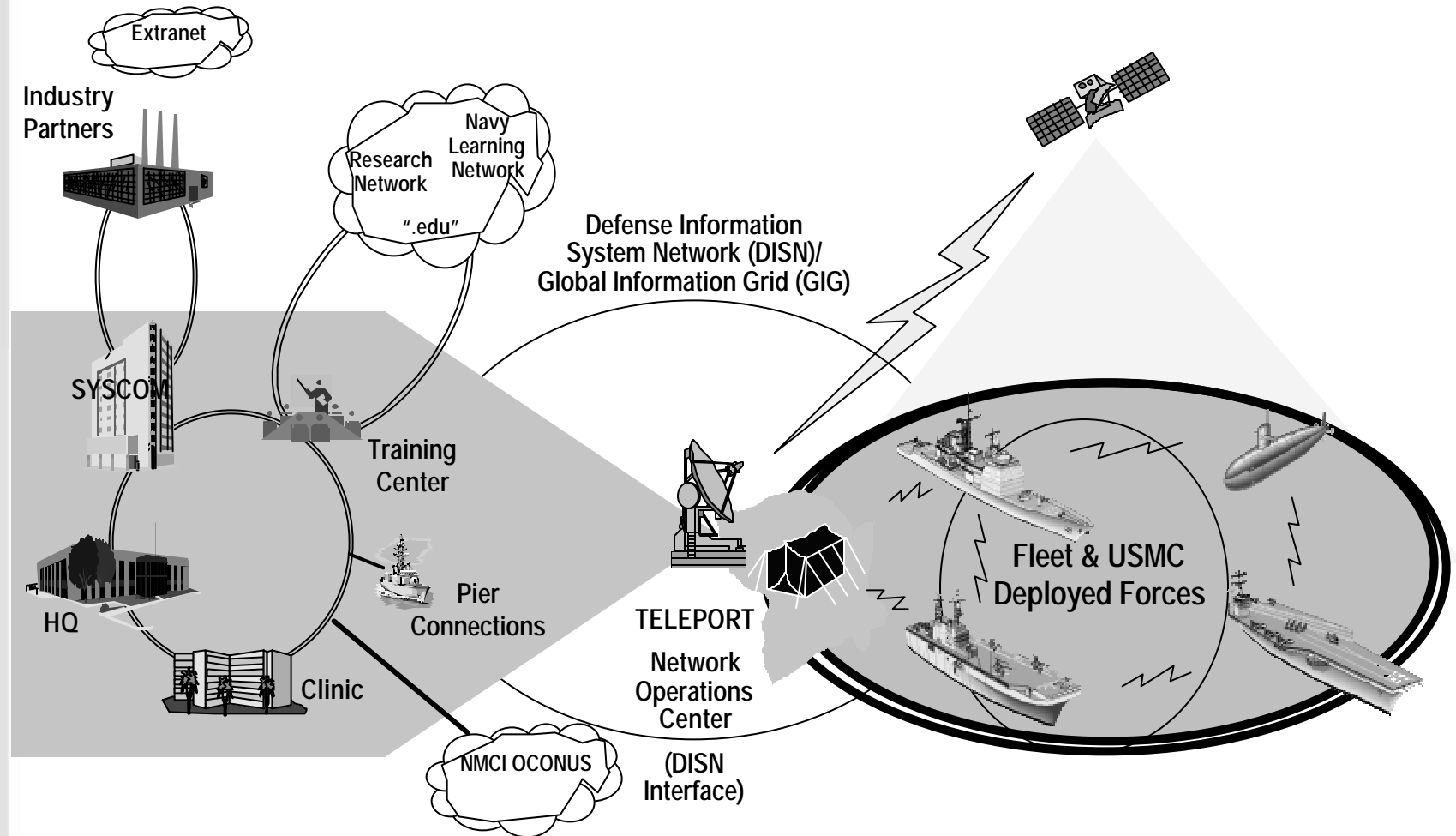


vBNS+

DISN ~ COIN

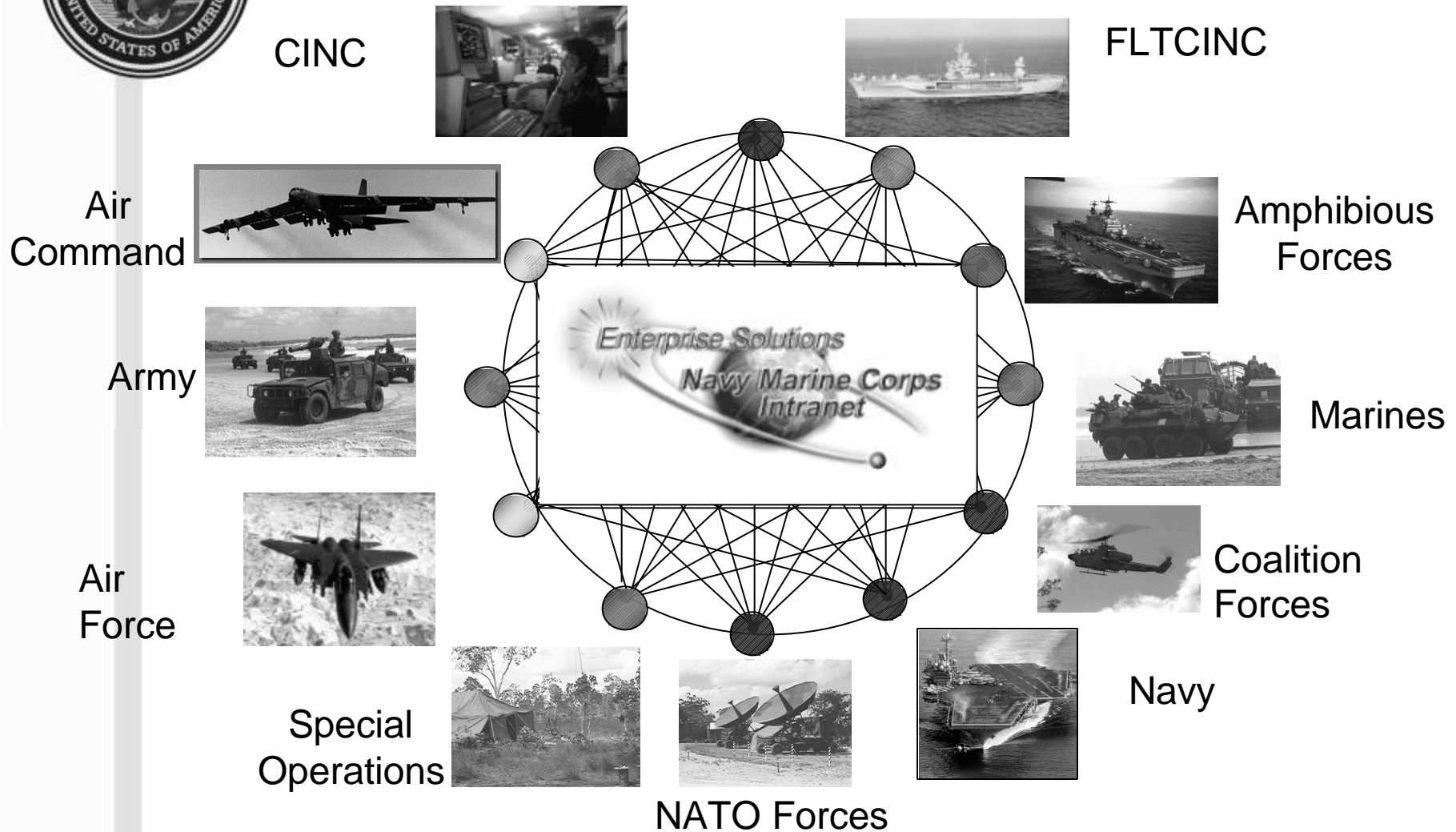


NMCI, IT-21 & MCTDN



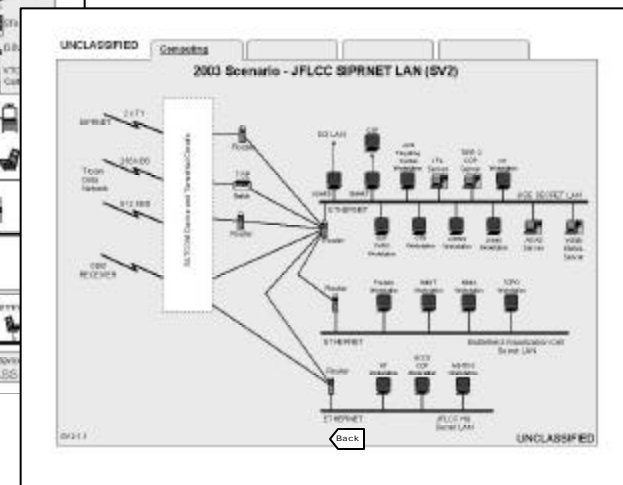
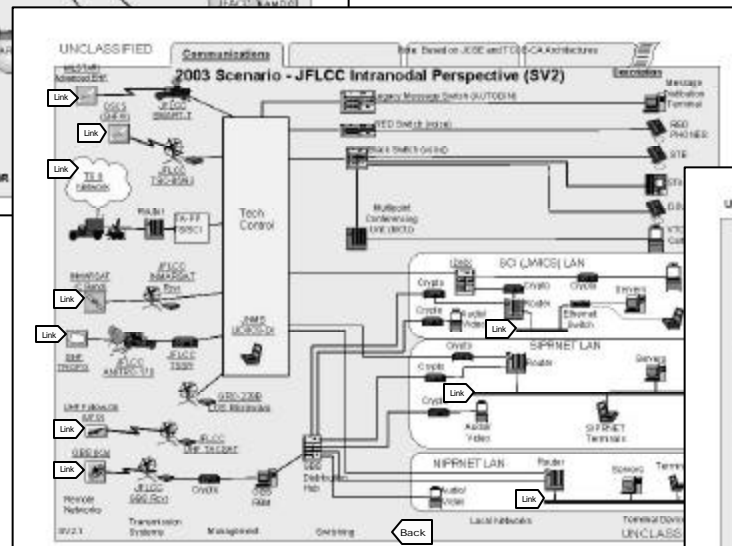
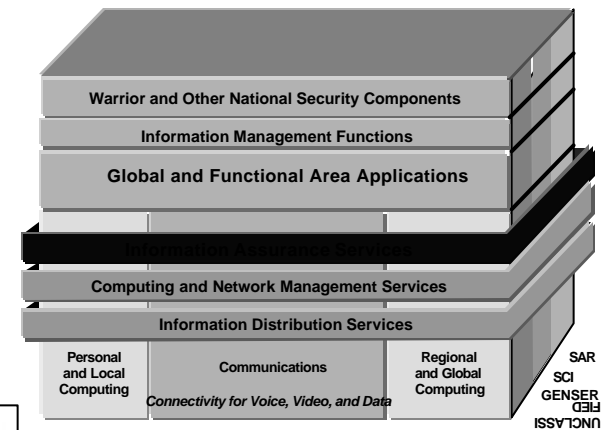
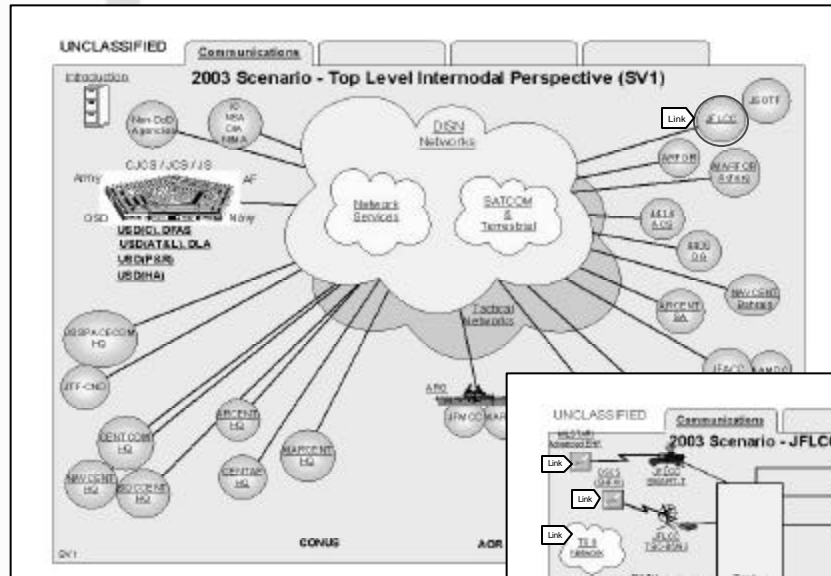


Integration of NMCI & GIG





Architectural Views and Relationships



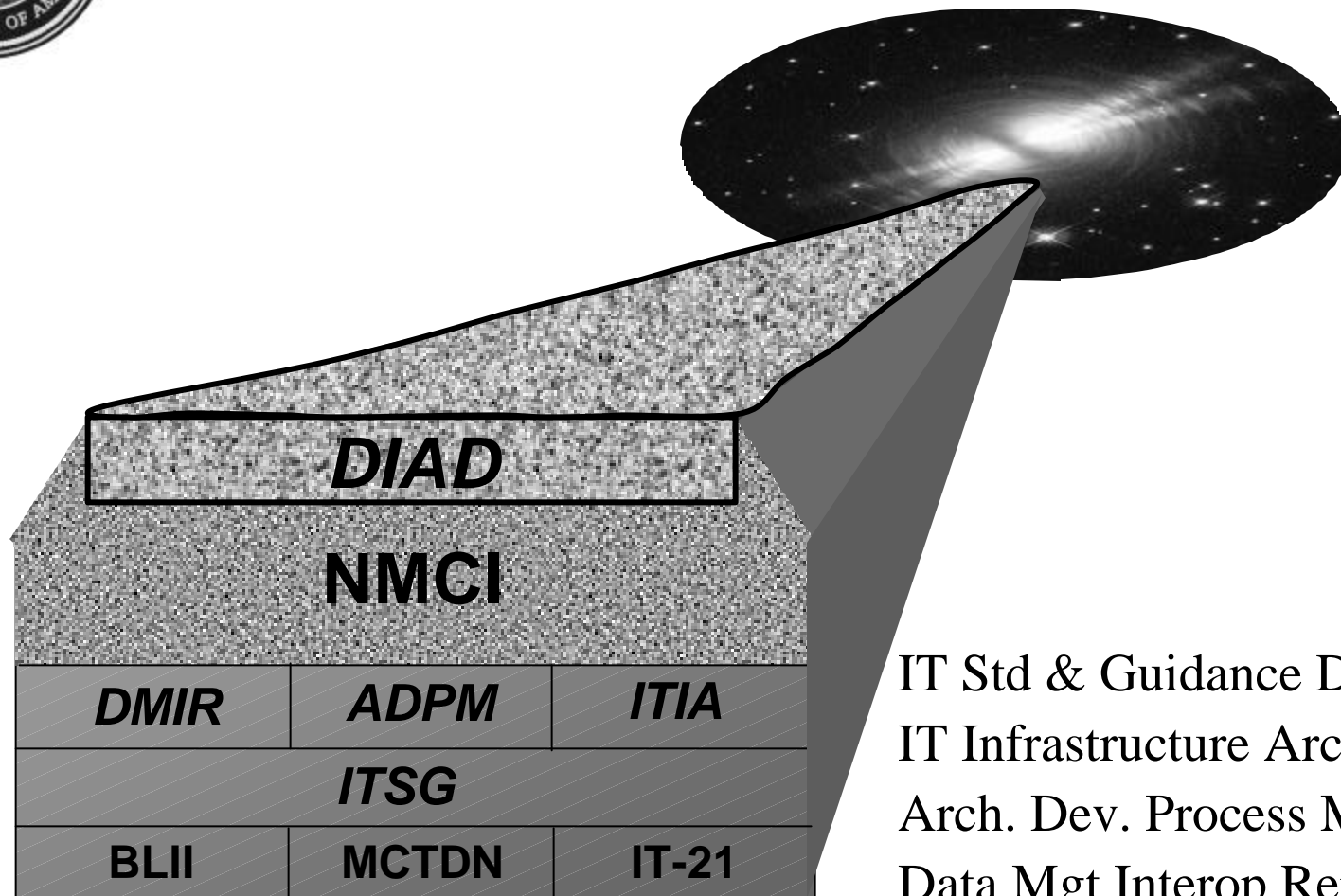


DON CIO General Responsibilities

Clinger-Cohen	→	Capital Planning Architecture & Stds Process Improvement Personnel
10 USC 2223 Additional Duties	→	Budget Review Interoperability
PDD-63	→	Critical Infrastructure Protection Critical Infrastructure Assurance
Government Paperwork Reduction Act Government Information Security Reform Act	→	Information Security Information Assurance
Section 8121/8102 Appropriations Acts	→	Registration Certification/Confirmation
Section 508 Rehabilitation Act	→	Accessibility



DON Arch. and Stds. Tools

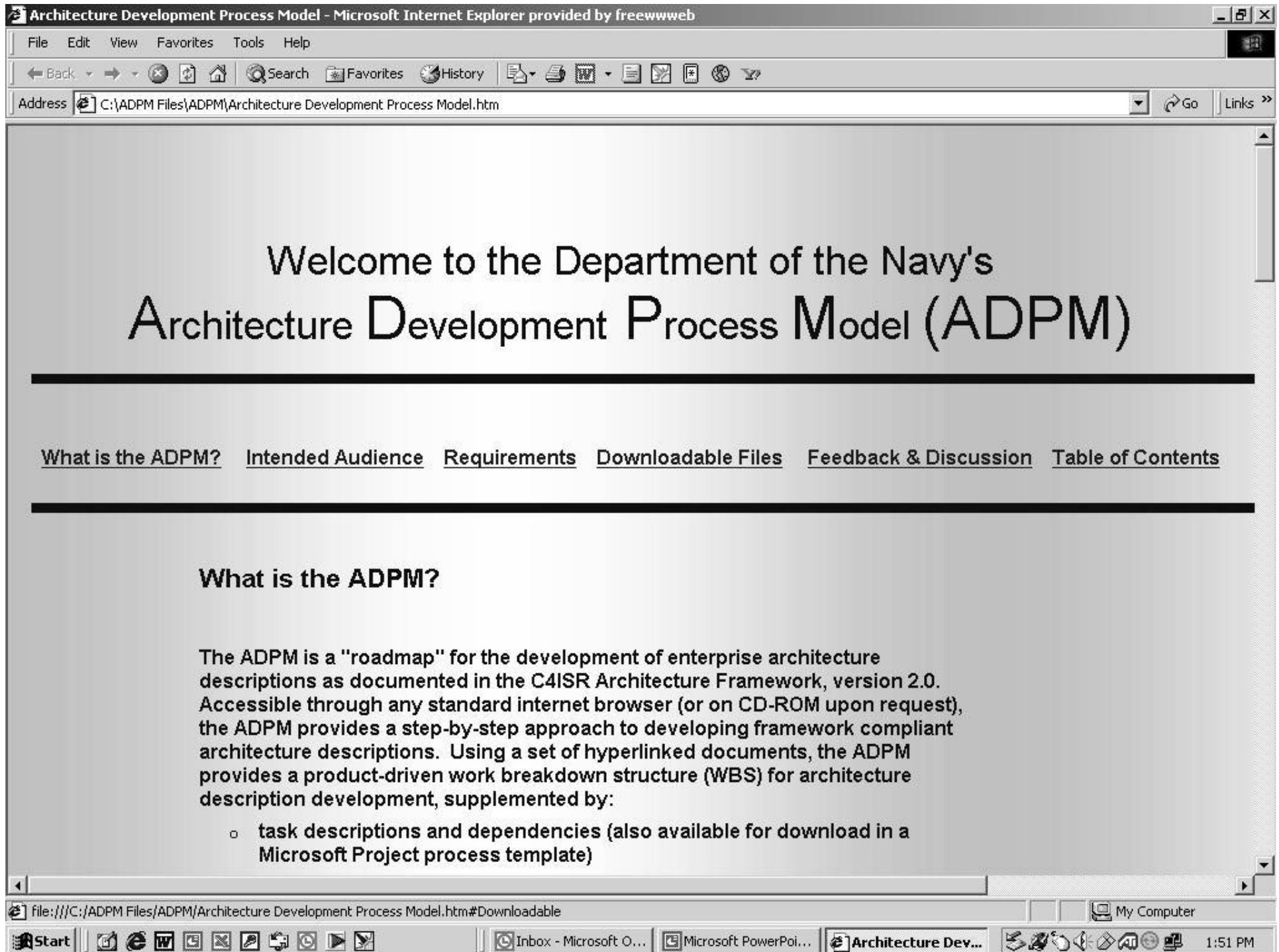


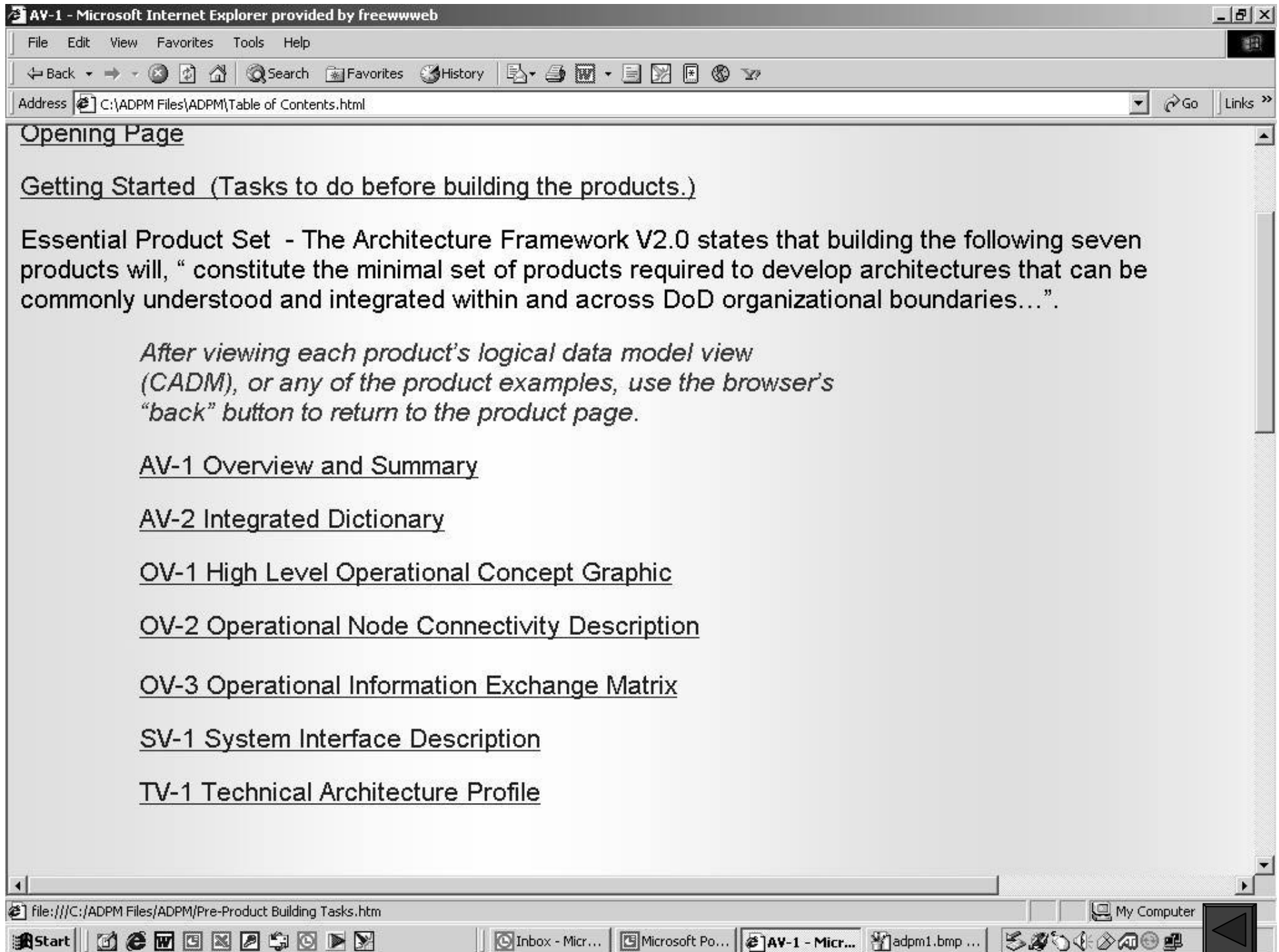
IT Std & Guidance Doc. (V1)
IT Infrastructure Arch. (V1)
Arch. Dev. Process Model (V1)
Data Mgt Interop Repository
DON Integrated Arch. Database
(V5)



DON CIO Tools

- **Architecture Development Process Model (ADPM)**
 - Architecture Framework Tool enabling Architecture Education, Process Development and Project Management
- **Data Management & Interoperability Repository (DMIR)**
 - Provide the capability to register systems and their associated database metadata in support of data integration and database consolidation efforts.
 - Testing in progress; operation version available late Summer 01
- **DON Integrated Architecture Database (DIAD)**
 - An Architecture Development Tools Suite based on an Architecture Framework Compliant Data Repository
 - In development with production version 1.0 in July 01







DMIR System Registration

Data Management & Interoperability Repository (DMIR) Main Screen

Welcome to the (Development) V

MISSION: Provide the data management and interoperability infrastructure, a common environment to enable systems interoperability, knowledge management and information assurance.

VISION: Global, affordable, timely access to reliable, and secure that enable war information age by 2035.

DMIR Management

Information Requirements

Data Architecture & Standards

Assessment Support

Screen Format Last Changed: 01/01/2001 02:22:58 PM

URL: http://dmirprod.dmiprod.com/DMIRMainScreen.cfm

System Registration Module - Microsoft Internet Explorer

Address: http://dmirprod.dmiprod.com/Register/menuRegister.cfm?

Systems Registration Module

MAIN MENU

PREVIOUS SYSTEMS
SELECT A SYSTEM
FIND A DATABASE
REGISTER SITE
LINK ORG TO SITE
APPLICATION
ADVANCED SEARCH
REGISTER NEW
LOGOFF

|- BACK -| EDIT -| WELCOME -|

Welcome to the Systems Registration Module

To Begin:

Select a system to register. Use the PREVIOUS SYSTEMS or SELECT A SYSTEM options to find an existing system to continue registration, or use REGISTER NEW to add a new system to the database. DMIR contains system data extracted from the Y2K database so most systems will have an initial entry. Please check for the existing entry before trying to add a new system.

Each time you select a different system, the system name will be added to the list under PREVIOUS SYSTEMS. This list will be available to select from as long as you remain on this screen. If you wish to carry this list to another option (selected from the graphic in the upper left corner), you must click the SAVE option under the list. This will save the list for duration of your current session. When you LOGOFF, you will be offered the option to save the session list to your profile, making it available the next time you login to DMIR.

Update System Data:

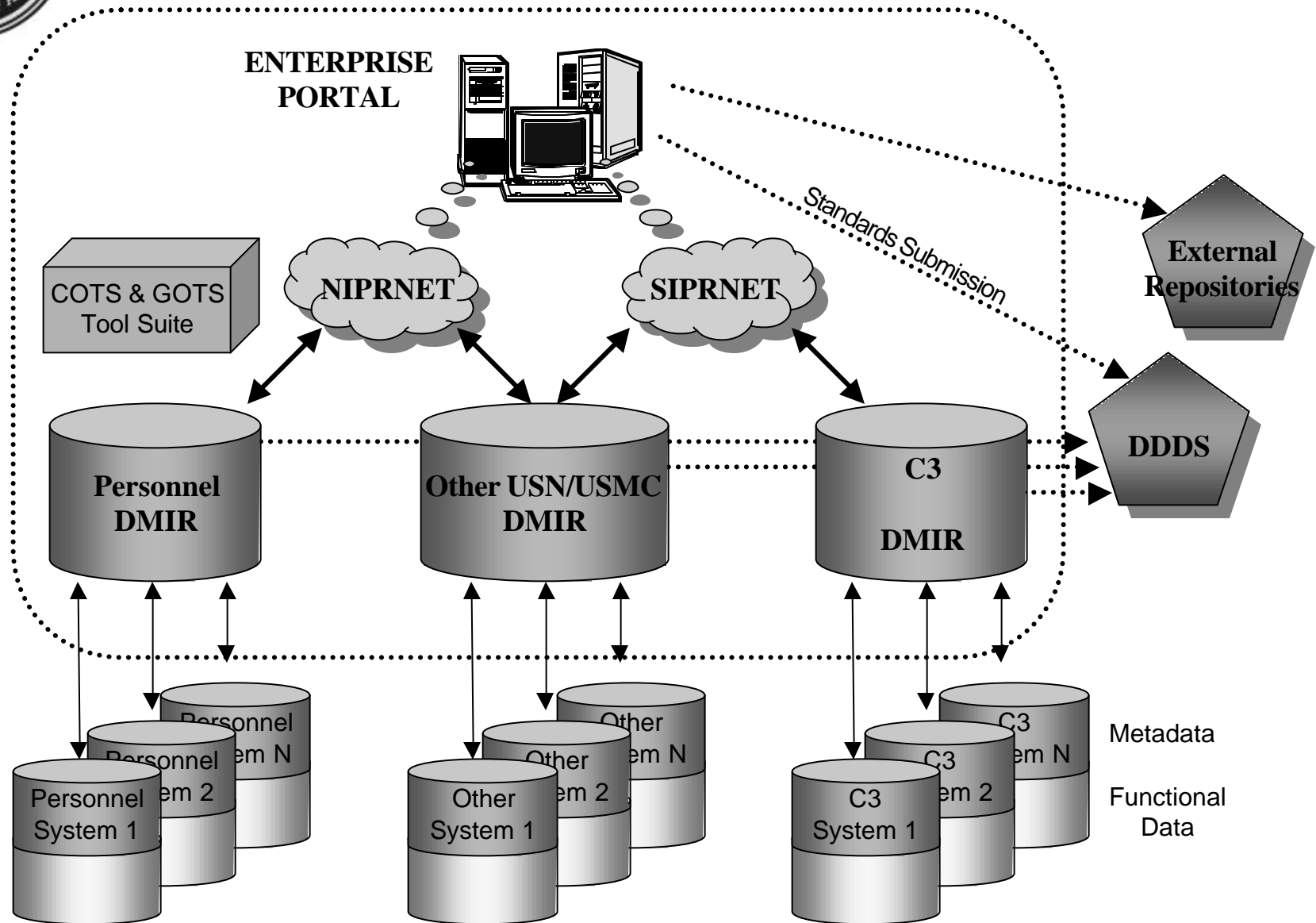
Once you have selected or created your basic System entry, you will be offered options to provide additional data about the system using either options in the left panel or options under the System display. Please fill out all the relevant system data. In some cases you may be required to create new Organization or Point of Contact records. Please fill out the information as completely as possible. When you relate these new Organizations or POCs to your system, you will then be required to fill in additional information specific to your System.

NOTE: In ALL cases, you MUST SUBMIT any changes for them to be recorded in the database.

Local intranet



DMI Repository Implementation



☐ New in Version 5.0**General Info**

About DIAD
Overview
Links
Technical Support
Help

Architectures

Select:

OCEANOGRAPHIC

Define New

Development

All-View
Operational
System
Technical
DIAD Navigator

Verification

Node Connectivity
Inputs & Outputs

Product Reports

All-View
Operational
System
Technical

PICKLISTS

Log Off DIAD

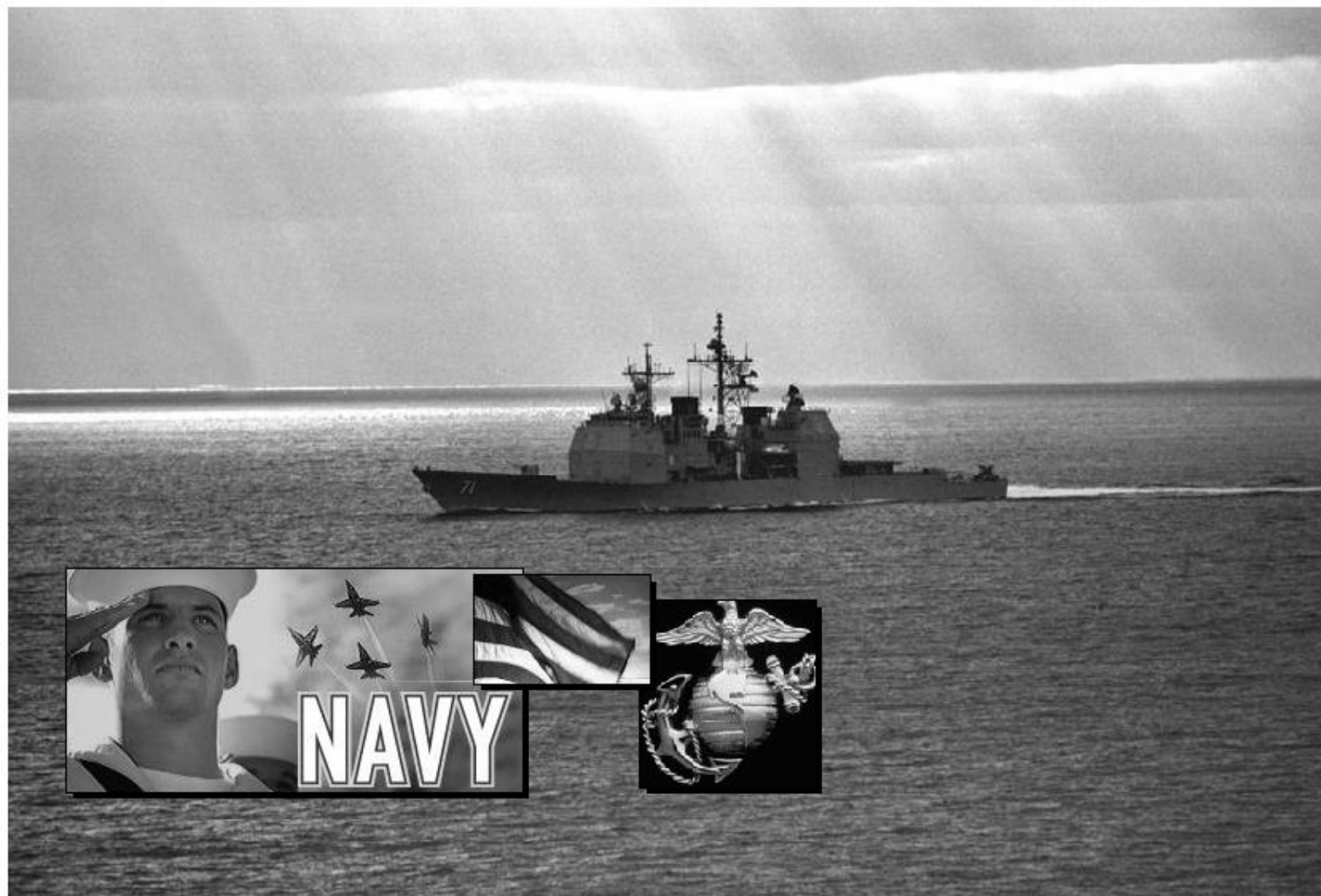
Quit DIAD

DIAD

 Department of the Navy
Integrated Architecture Database

OCEANOGRAPHIC

version 5.0

ALPHA EDITION**WELCOME**

☐ New in Version 5.0**General Info**

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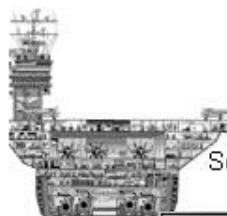
Quit DIAD

DIAD

Department of the Navy
Integrated Architecture Database

version 5.0
ALPHA EDITION

OCEANOGRAPHIC

**SYSTEM ARCHITECTURE**

Select one of the following System Architecture products:

System Functions	Systems	Platforms & Facilities	Link Developer (Path-centric)
Functionlines	System Needlines	Plat/Fac Needlines	Link Developer (Device-centric)
Functionlines to Information Elements	System Interfaces	Plat/Fac Interfaces	Link Attributor
Functional IER Browser	System I/F Attributes	Plat/Fac I/F Attributes	Comm Protocol Stacking
Functional Allocation	Subsystem Allocation/ System Composition	Operational Nodes to Plat/Facs	
Activity Automation	System Technology Insertion	System Allocation to Plat/Facs	
Information Elements	System Migration Plan	Plat/Fac Migration Plan	



Node Connectivity: OV-2

Select up to eight
Organization Types:

REG CTR MAJOR

MET PROD CV

OCN PROD NOAA

ALLIED USN

Related tools:

View all Information Elements

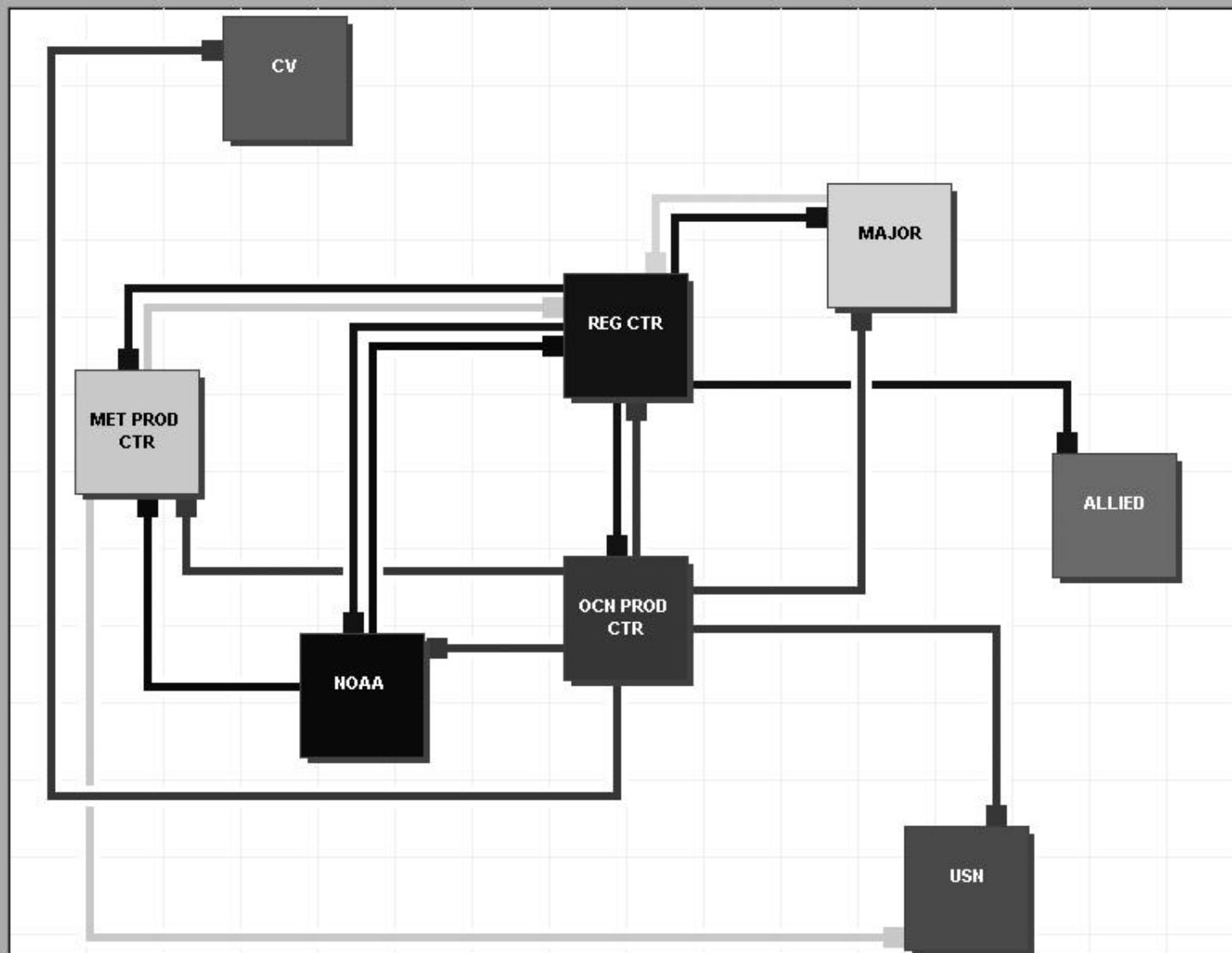
View all Organization Types

Attribute Information Elements

Create Needlines

Needlines to Information Elements

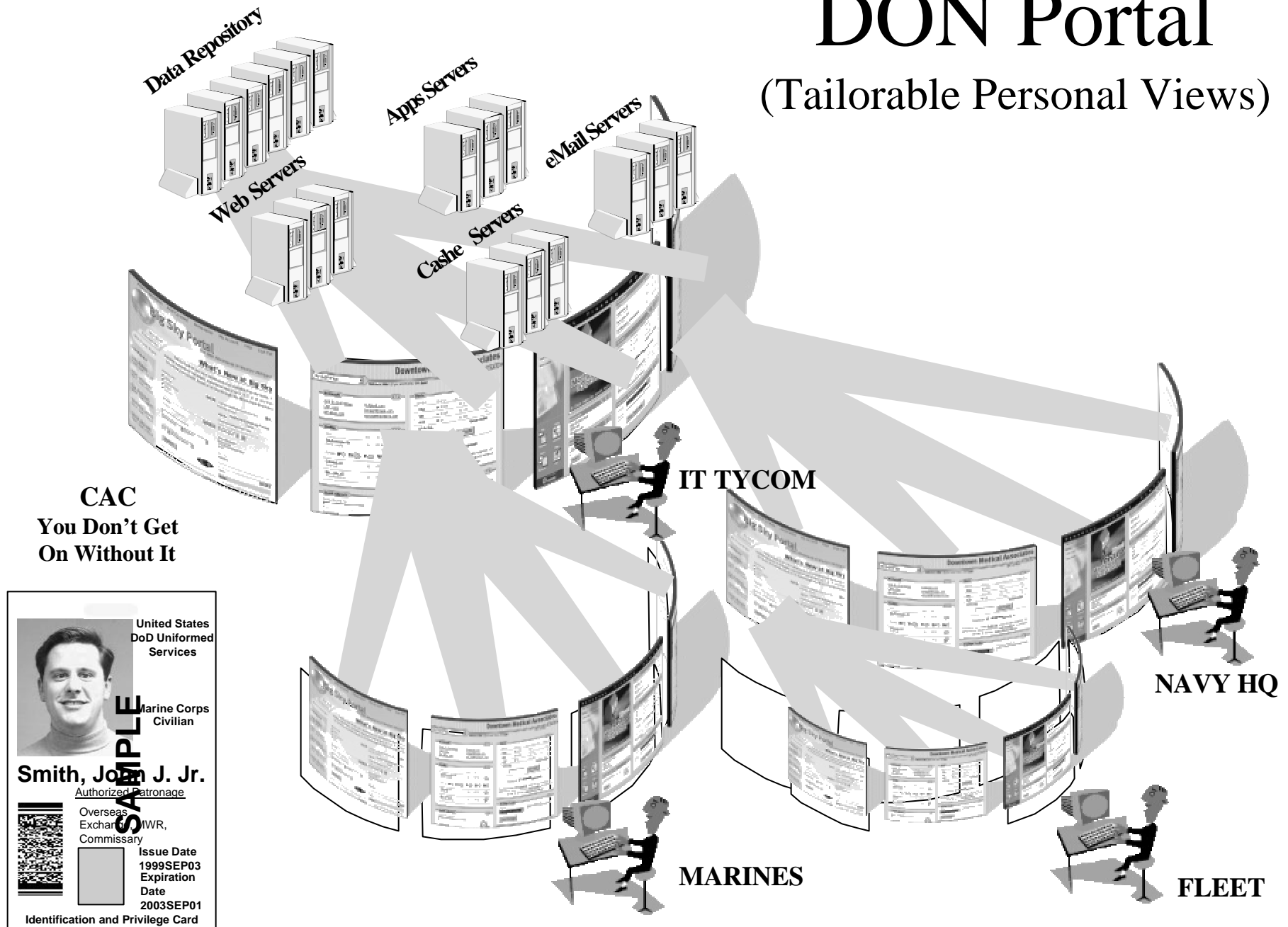
Create OV-2 Graphic



Double-click Node or Needline for details

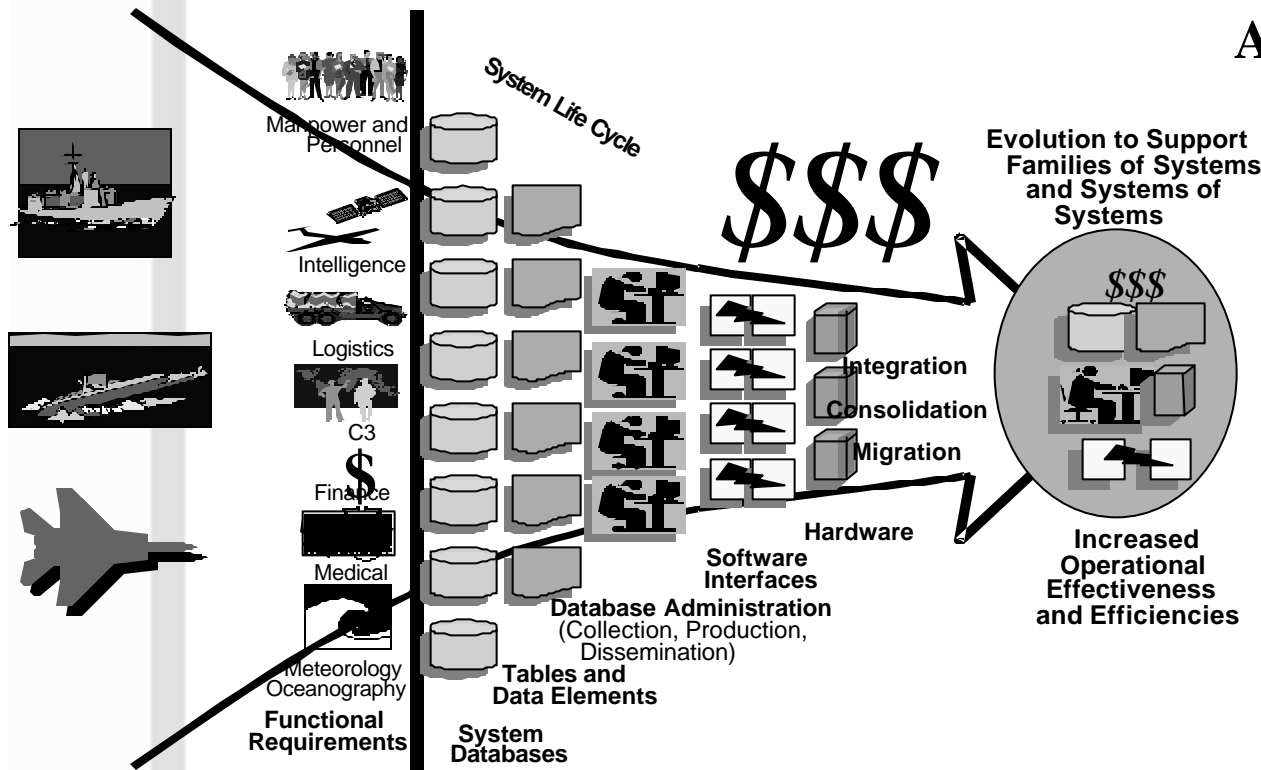
DON Portal

(Tailorable Personal Views)





Web Enabling the Navy



ALNAV Message:

- VCNO Established N09W
- Web-enable 50 apps by 11/01
- Establish portal in 4 mo.
- Web-enable all Navy apps by 2004

“AN XML CENTRIC ARCH.”



Nomadic Future





Nomadic C&C

- Nomadic Computing & Communications deals with the capability of simultaneously being:
 - physically mobile
 - having access to a set of computing, information, and communication services while moving, stopped at intermediate points, and at various destinations.
- It is more than just being mobile.
- It is more than just being wireless.



“On The Road”

■ Some of us carry a combination of “gadgets” such as:

- *Pagers*
- *Cell phones*
- *Palm-size PDAs*
- *Two way pagers*
- *Hand-held computing device*
- *Laptop computer*
- *Two-way radios*
- *A bag full of different data cables*
- *A collection of different batteries*
- *A collection of PCMCIA cards*
- *A collection of attachments and peripherals*
- *A bag full of different power cords and transformers*

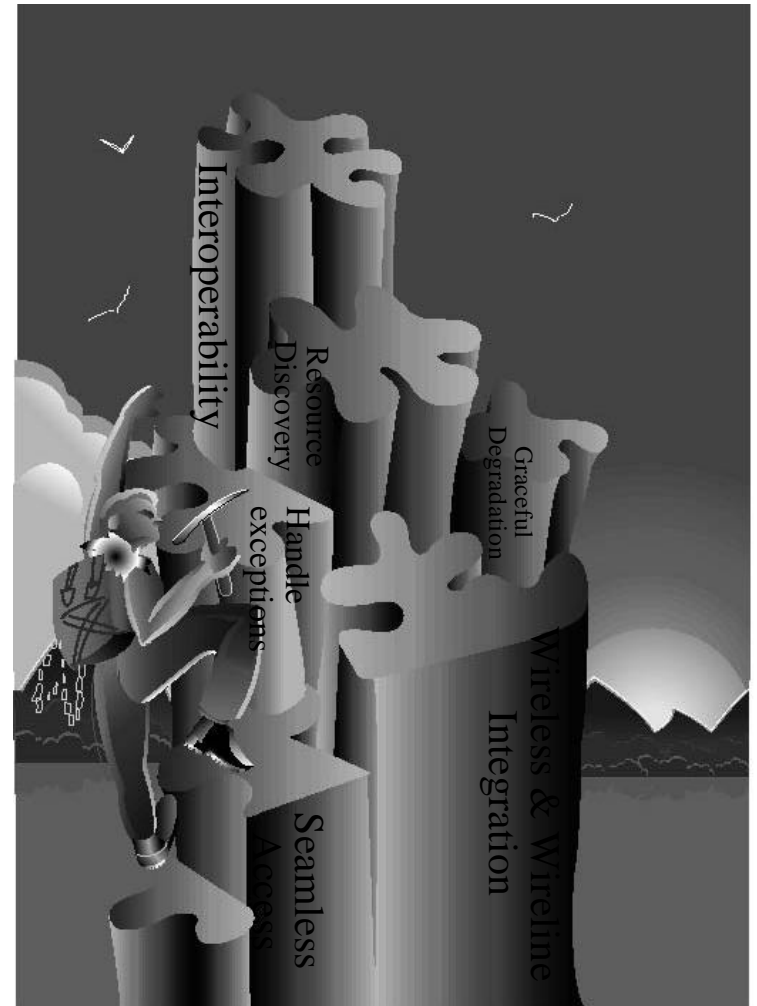


.....Not an integrated/convenient/efficient/hassle-free environment



Nomadic Problems

- Security
- Seamless interoperability between wireless and wireline networks
- Unpredictable user behavior
- Unpredictable network behavior
- Unpredictable computing behavior
- Graceful degradation
- Integrated access to remote services
- Bandwidth resolution & adaptivity
- Automatic sensing, searching, locating, tracking
- Applications awareness





Summary

- Interoperability is “critical” to DON, Joint, and Coalition operations
- Infrastructure wise...
 - *NMCI helps CONUS and OCONUS*
 - *IT-21 and MCTDN help deployed*
- Data interoperability is the “gemstone”
- Nomadic technologies throw a whole new set of interoperability issues on the table
- Architectures will allow us to better define & defend our reqts & budgets in an ABC environment



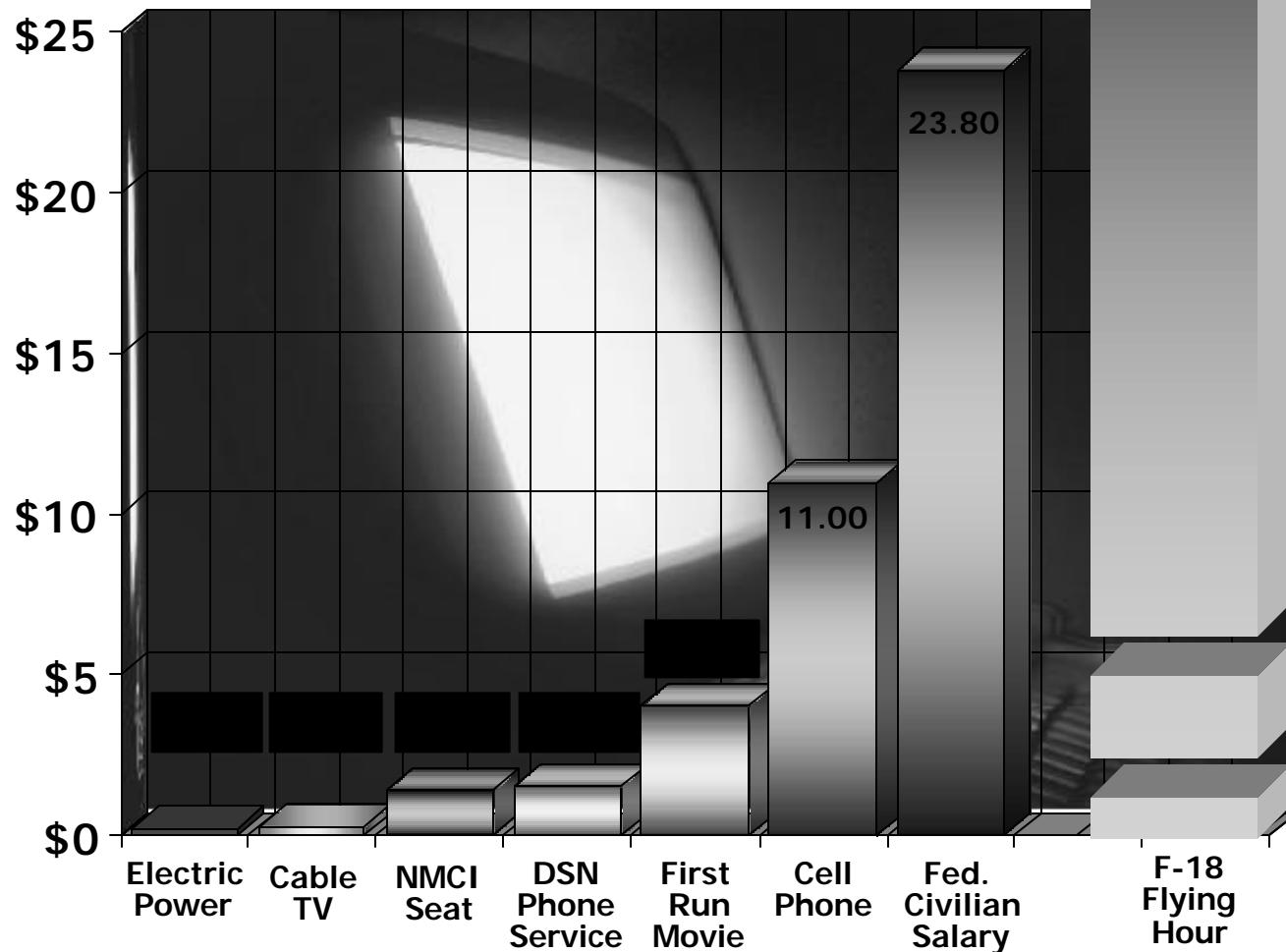
What's Interoperability Worth?

Extracts of speech from the Hon. Gordon England
to DON SES Community on 5/30/01

“My slogan is “One Team...One Fight” and that slogan captures our jointness across DoD and with our Coalition Forces to put forth the best possible Total Force to any adversary. We have to focus on this.”

“We are going to focus on Activity Based Costing across the enterprise”...because...”as far as I’m concerned, we don’t cut combat capability”...

*Think “salesmanship”
What’s Interoperability
Worth ?*



All Data is Cost Per Hour