



Web Enabled Navy

NMCI Industry Symposium

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Task Force Web

- **In April 2001, the Chief of Naval Operations chartered TFW to lead the Navy's transformation to a web-enabled environment by:**
 - **Establishing and maintaining a web architecture.**
 - **Providing recommendations on Web Enablement technologies.**
 - **Reviewing Operational Requirements for Web Enablement opportunities.**
 - **Working with major the Navy's major System Commands to prioritize and migrate existing systems.**



WEN Benefits

- **More ubiquitous access to information services**
- **Improved interoperability**
 - **Extensive use of recognized commercial standards**
 - **Separation of data from presentation enables support for multiple display devices**
- **Improved quality of information**
 - **Establish authoritative databases supporting similar services across multiple locations**
 - **Provides ability to aggregate data from multiple sources**
- **Reduced Total Costs**
 - **Software support & hardware costs reduced**
 - **Configuration management simplified**



NMCI / IT-21 / BLII / MCTN

Accessible via Business & Warfare Operations

Distributed Navy Enterprise Web

Navy Marine Corps Intranet

IT21 & OCONUS BLII
Marine Corps Tactical Network

Industry Partners

Internet

Extranet

Defense Information System Network (DISN)/
Global Information Grid (GIG)

Replicated & Synchronized Per Mission Requirements

Training Center

SYSCOM

8-12 Operating Centers

Pier Connections

HQ

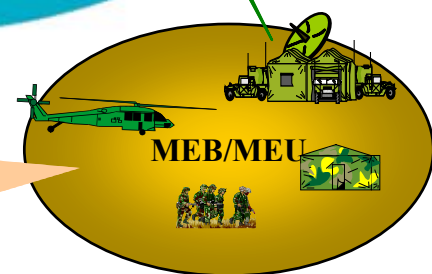
Clinic

TELEPORT
Network Operations Center
(DISN Interface)

~300 Ships

Authoritative & Consolidated Data Sources

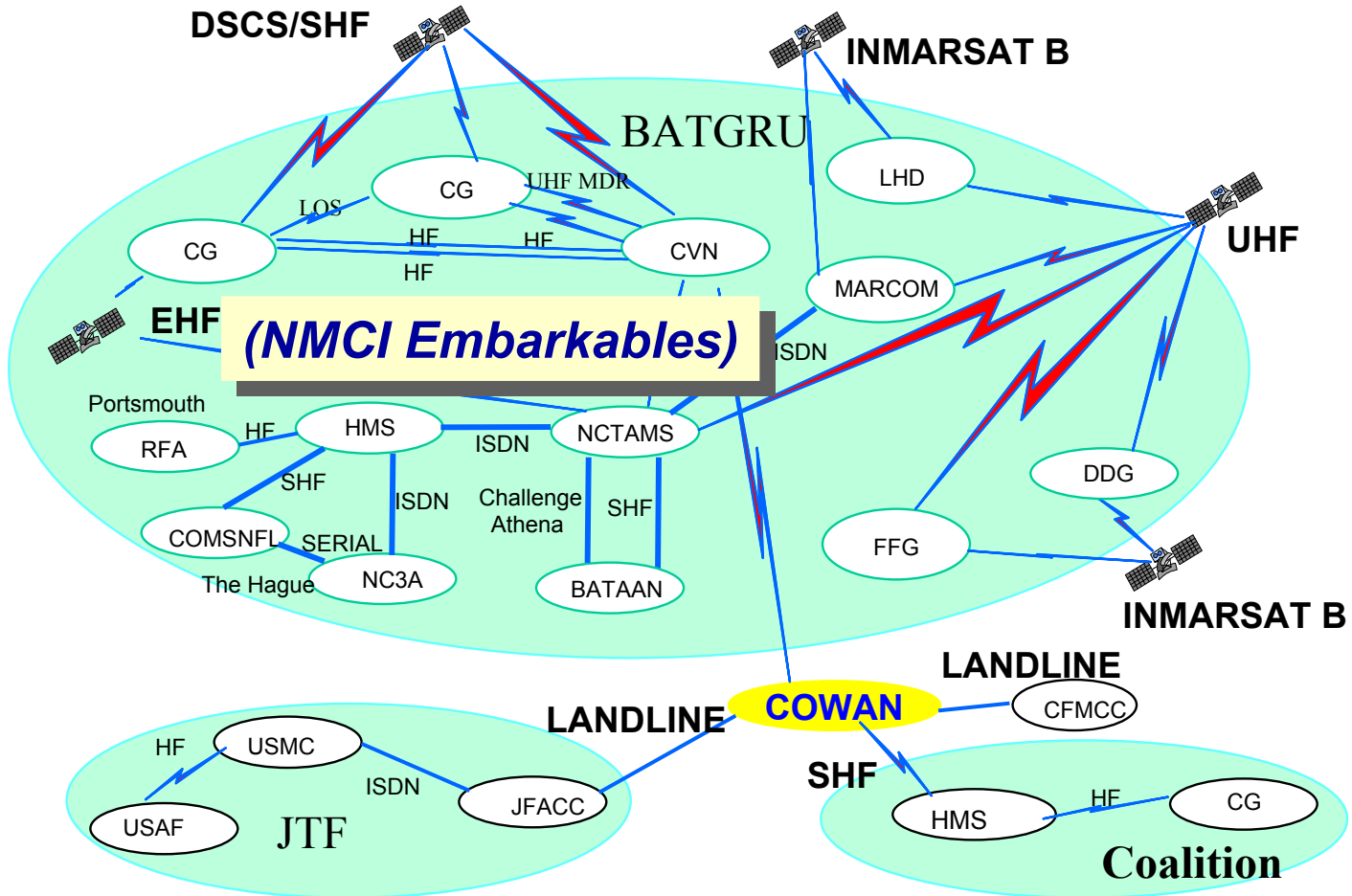
Common User Access Afloat and Shore



MEB/MEU



Comms Architecture





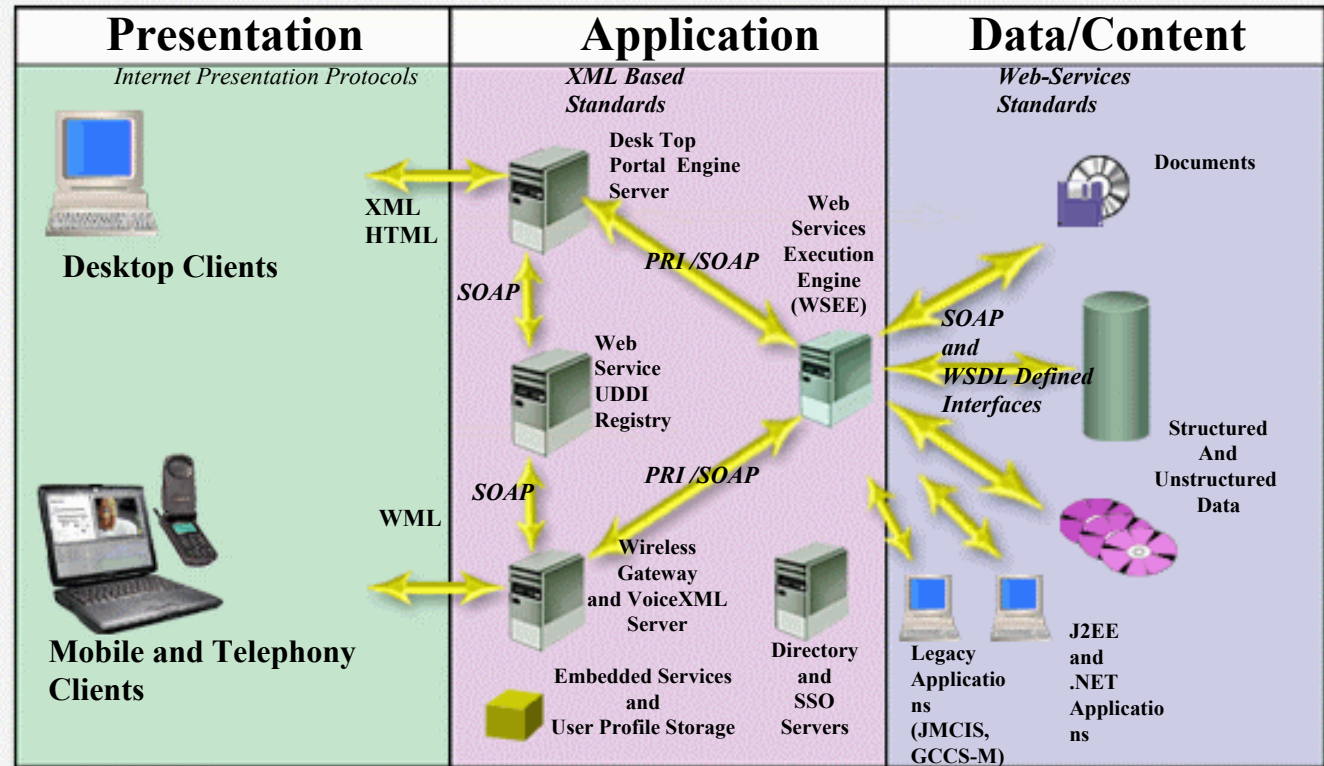
Standards

- **The Navy Enterprise Portal is based on COTS technology and industry standards.**
- **GOTS technology is minimized and when used, is because either:**
 - **No clear standard exists, so a transition strategy has been implemented (Portal Proxy Service).**
 - **Protection of Navy intellectual capital requires a specific GOTS component to implement a unique process.**



n-Tier Model

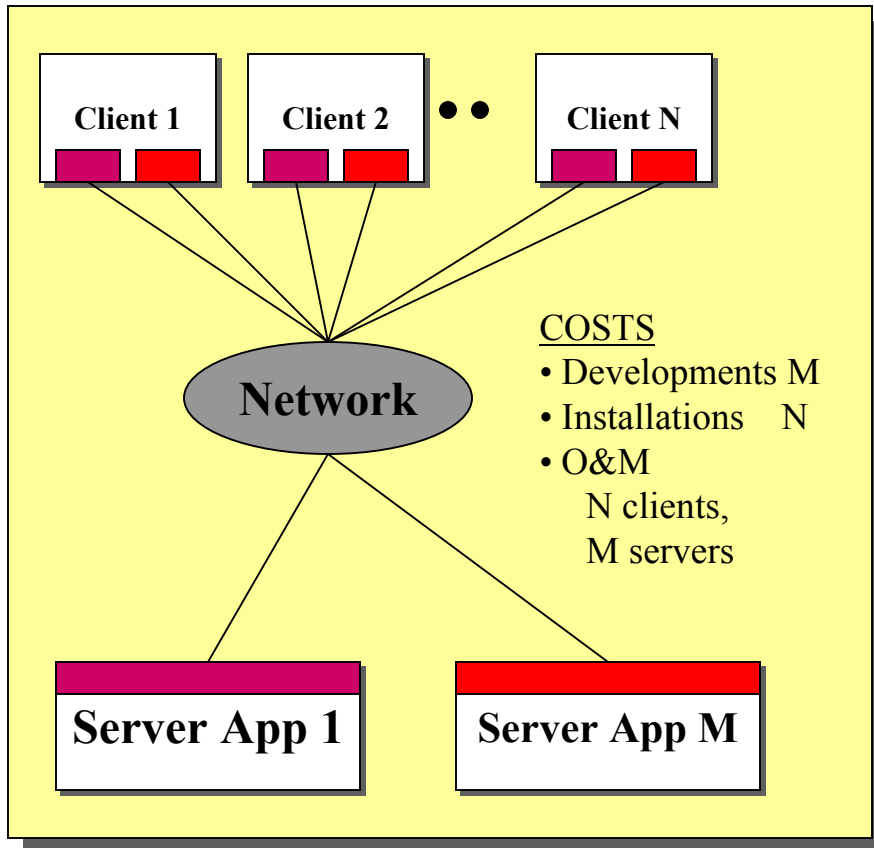
- **Presentation Layer**
 - Multimedia access to web services.
 - Common Look and Feel with User Persistence.
 - Single-Sign-On, Single Access Capability.
 - Display and user device independence.
- **Application Layer**
 - Web Services abstraction from different Portal Products.
 - Content and Services Registration.
- **Content**
 - Exposed Data.
 - Enterprise Service Taxonomy.
 - Replication & Synchronization.
- **Information Assurance**
 - SSO
 - PKI / CAC
 - Enterprise-wide Directory Service.



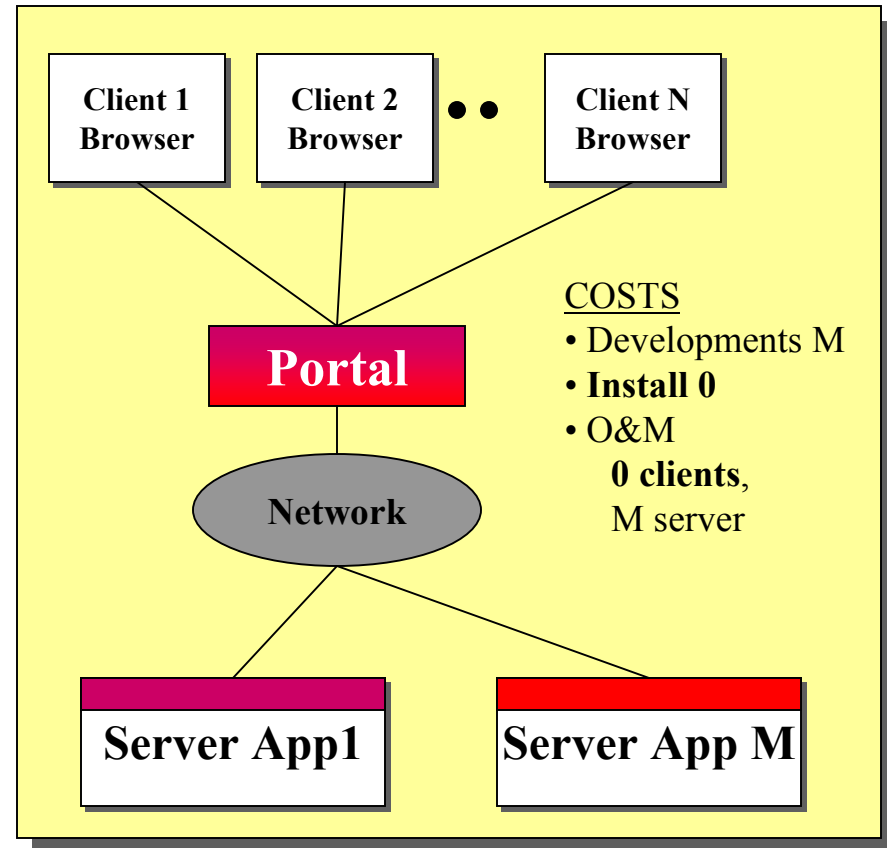


Reduced installation and O&M costs for fielding systems

Traditional Client Server



Web Services/ Portals





Enterprise Issues

- Requirements for IT-21, NMCI, BLII & MCTDN networks:
 - Common directory with replication of user objects
 - Common user authentication procedures
 - Common service registry schema with replication of service objects
 - Common service registration procedures
 - Common content management procedures
 - Network trust relationships for replication and synchronization
 - Shared hosting resources (ASP model)

Industry Opportunities



Status to Date

- **TFW Portals installed at CFFC; CPF & CNE installation planned for June 2003 (NIPRNET & SIPRNET)**
- **TFW Portals installed on USS THEODORE ROOSEVELT Strike Group; Commander 2nd Fleet**
- **SPAWAR planning to field Portals overseas in 2004**
- **Joint compliance testing (DCTS) in progress**
 - **Leverages Collaboration at Sea**
- **TFW Portal architecture aligned to fully support DON CIO NMCP implementation**

Back ups



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Functional Area Managers

- **ASNs, CNO, and CMC designated Functional Area Managers to DON CIO in May 2002.**
- **FAM is responsible and accountable for:**
 - **Oversight of reduction and consolidation of applications and associated databases.**
 - **Authority to direct migration, consolidation, or retirement of applications and associated databases.**
 - **Manage development of applications and database portfolios.**
 - **Ensure that technology strategies are aligned with the business and administration processes and warfighter requirements.**
 - **Work closely with the DON CIO and DON Information Executive Committee (IEC) Service Representatives (Navy IO and USMC CIO).**



Functional Data Managers

- **Functional Data Managers Designated**
 - **CNO & CMC accomplished in accordance with SECNAVINST 5000.36**
- **FDM is responsible and accountable for:**
 - **Functional processes to produce and monitor the use of data within and across functional activities, information systems and communications infrastructures.**
 - **Assisting Program Managers and other system developers in registering system/ application (Metadata) & data exchange formats & maintaining the Metadata baseline.**
 - **Developing/maintaining functional area views of the DON Data Architecture.**
 - **Developing candidate DoD standard data elements in coordination with the respective DoD Functional Data Administrator (FDA).**
 - **Coordinate with applicable stakeholders to ensure DoD proposed Data Standards are useable by DON systems.**
 - **Designate Authoritative Data Sources for their respective functional areas and maintain the designation in the DMI Repository (DMIR)**



Current Web Standards

- Currently published by recognized standards body, e.g., OASIS, W3C, and ISO
- Expected to be used for portal content integration, when appropriate

Standard

HyperText Transfer Protocol (HTTP) 1.1

HyperText Markup Language (HTML) 4.01

ECMAScript (Javascript)

Cascading Style Sheets, level 1 (CSS1)

Extensible Markup Language (XML) 1.0

Namespaces in XML

Extensible Stylesheet Language (XSL) 1.0

XSL Transformations (XSLT) 1.0

Simple Object Access Protocol (SOAP) 1.1

Web Services Description Language (WSDL) 1.1

Body / Latest Specification

IETF, June 1999

W3C, December 1999

ECMA, December 1999

W3C, January 1999

W3C, October 2000

W3C, January 1999

W3C, October 2001

W3C, November 1999

W3C, May 2000

W3C, March 2001



Emerging / Future Standards

- **Emerging or currently in development by standards bodies**
- **Probably will be used for portal integration in the future**

Standard

Web Services for Remote Portals (WSRP)

Extensible HyperText Markup Language (XHTML) 1.0

Scalable Vector Graphics (SVG) 1.1

Cascading Style Sheets, level 2 (CSS2)

Simple Object Access Protocol (SOAP) 1.2

Body / Latest Specification

OASIS, n/a

W3C, June 2002

W3C, April 2002

W3C, May 1998

W3C, June 2002