The Future Benefits of Utilizing a Web-Based Architecture for DoD IETMs

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Developing a Web-Based Approach to DoD IETMs

**The Joint IETM Architecture
for the Acquisition and
Deployment of DoD IETMs**

Where could it lead us?

The JIA Foundation - What JIA Implementation Will Give Us

- IETM View Packages are Web-Enabled and Installed on JIA Conforming Web Server(s)
- Users have JIA Intranet Access to Server(s)
  - Personal Web Server in User Device
  - Local Intranet using LAN
  - Regional/Theater Intranet using WAN
  - Global Access to Servers using DII & GCSS
- DNS or HOSTS Mapping Files Available to Implement JIA Addressing Model

Benefits to the User

- Common and Familiar Web-Browser Interface to any IETM on the Intranet
  - Only one Software Application to Launch
- Intelligent Search Based on JIA Metadata
  - More likely to get what user is looking for
- No Software Installation for IETM Viewing
  - Any Needed Software Components are Automatically Installed when Accessing IETM

Benefits to Authoring Organization

- Same IETM Packaging Form (View Package) for Any DoD Customer

- Wide Selection of Commercially Available Web Oriented Authoring Tools

- East to Self-Test JIA Compliance

  – Baseline JIA Intranet can be constructed from hardware and software components available at any computer store.

  – JIA Browser Upgrade Plugins Will be Available on DOD Web Sites - Auto Install

Future Expandability

- Easy to Expand IETM Implementation
  - Bridge Local Implementation onto a Regional or Global Network without modifying IETM Applications
- Same Client and Server Software and Data for any Scale Implementation
- Expandability/Contractability is Built into the World Wide Web and Internet Models used as a Baseline for JIA
  - Result of the MILSPEC TCP/IP underpinnings

Ad Hoc Aggregations of IETMs

- Web Servers and Web Server File Bases can easily be combined after the fact on short notice
  - This is a needed capability to support ad hoc Joint Operations
  - C1 and C2 IETM applications require only simple file copies on Server (I.e. Electronic Bookshelf)
  - S2 and S2 IETM Applications on Physical Servers can be collocated with data bases intact - Only IP addresses of servers need changing
  - Standard Web DNS administration does "rewiring"

Freebies Gained by Going Web

- Most needed Viewing Software Plugins are available Free for Web Browsers
  - Graphics (GIFF, JPEG, VRML, Vector Graphics Coming Soon)
  - Multimedia (Animations and Sound)
  - More Every Day
- Browser History Stack
  - Easy to View de facto "Audit Trail"
- Caching Built In - Performance Enhancer

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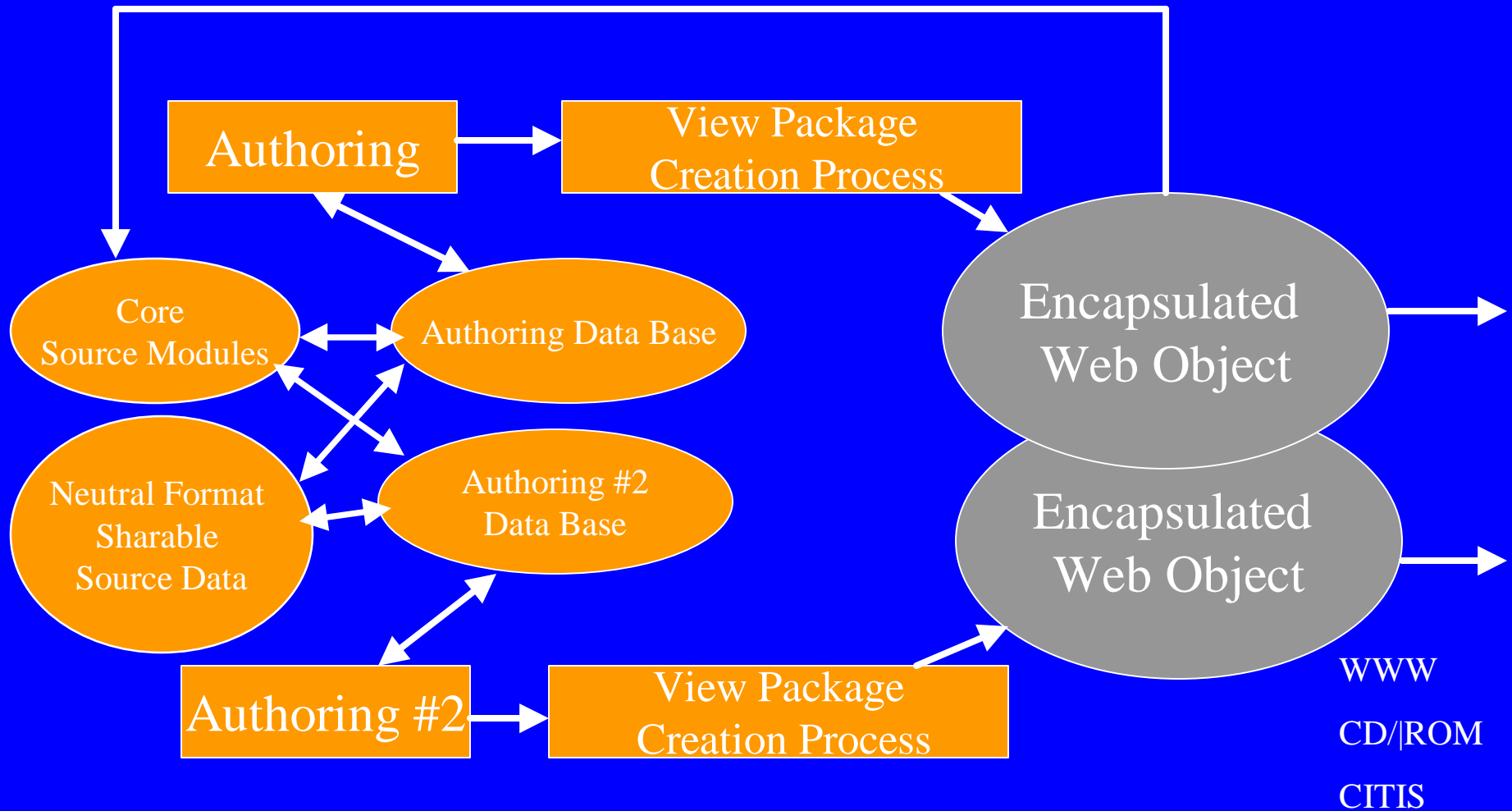
Objective Obtained
IETM Interoperability +

- IETM Architecture Applied to all Fielded Weapon System Support Information
- Ability to Include and Interoperate IETM Data Bases and Additional Functions to Support:
  - Maintenance including Parts Ordering
  - Equipment Operations
  - Job Site Training
- Confederate and Include Existing Legacy Information into Interoperable System

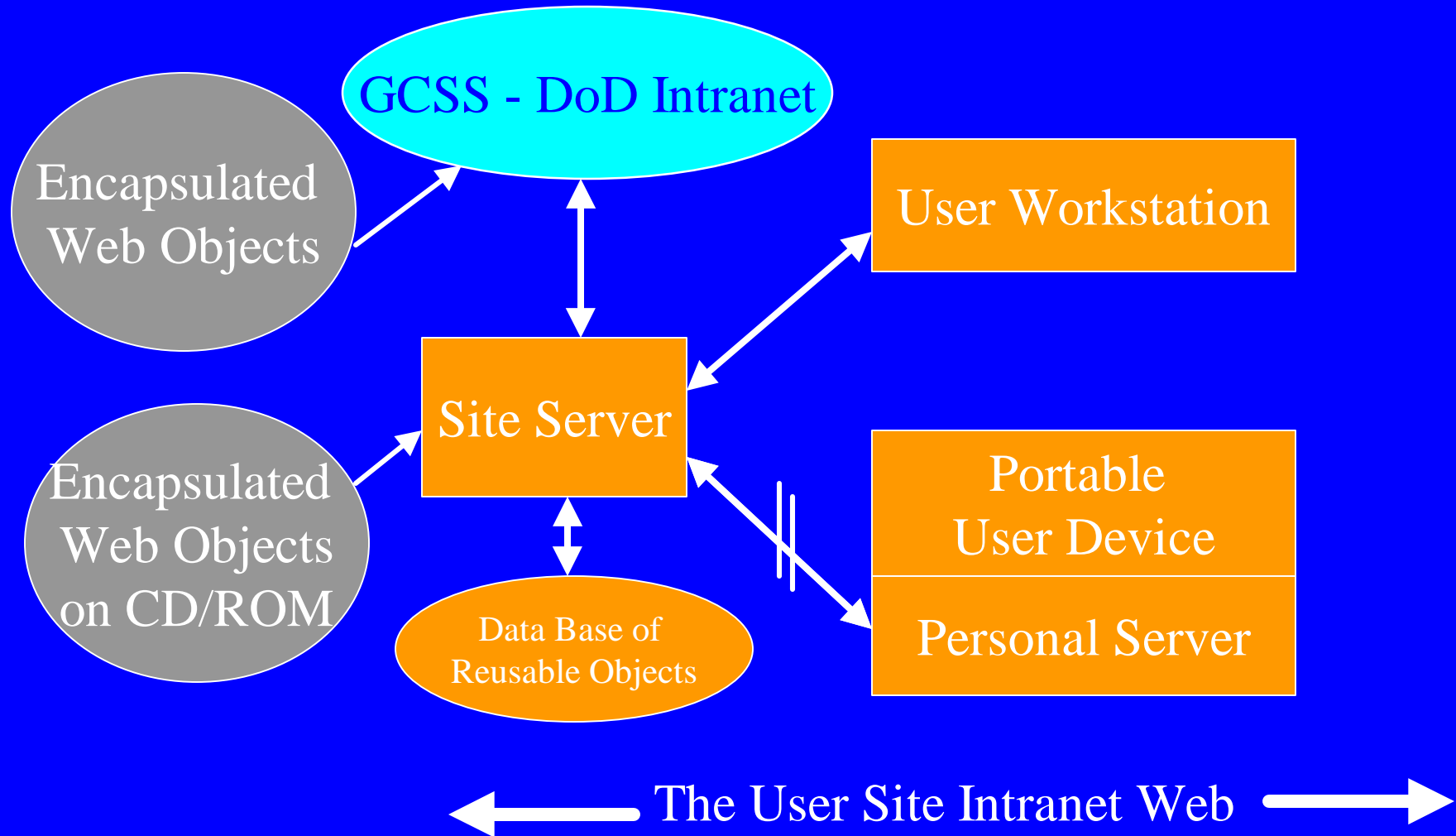# Innovative Concept - Using Web Objects as Source Data

- Basic concept - Objects can contain objects
- Small objects can easily be reused as source in another object
  - Example - Animation using proprietary format can stand alone for display through a Web Browser and also be part of both a Training Module and an IETM
  - This is the way HTTP works in the Web!

Authoring Process

Web Objects Serving as Reusable Source Objects

Authoring

View Package Creation Process

Core Source Modules

Authoring Data Base

Encapsulated Web Object

Neutral Format Sharable Source Data

Authoring #2 Data Base

Encapsulated Web Object

Authoring #2

View Package Creation Process

WWW

CD/|ROM

CITIS

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User Site Process

Encapsulated Web Objects

GCSS - DoD Intranet

User Workstation

Encapsulated Web Objects on CD/ROM

Site Server

Data Base of Reusable Objects

Portable User Device

Personal Server

The User Site Intranet Web

This New Architecture is Not Just Applicable to IETMs

DoD Can Use the New Web-Based IETM Architecture to Build an Integrated Data Environment at the Operation and Maintenance Site

Web-Based Concept of Single Product Support Data Base

- Include All Information Needed to Maintain, Train, and Operate Weapon System

- Accessible On-Line at Equipment Site

- Does Not Require Monolithic System

- Need Capability to Draw Different Functional Views from Common Data Base
  - (Training, Job Aiding, Technical Reference, Parts Info, Configuration Management, etc.)

Future Expansion - Include Other Job Performance Aids

- Real-Time Link to Information Not Available at Job Site
  - Consult with Shore-based Help desk
  - Communicate with Manufacturer Technical Representative at Factory
  - Order Parts On-Line
- Link to Diagnostic Testers
- Access to a Virtual Environment for Maintenance Training (I.e., Simulation)

Final Thought - Bigger Cost Savings are Available with Global Connectivity

- Much better currency of Information with on-line update - do repair right the first time

- Immediate access to parts data, latest insight from manufacturer, remote diagnostics

- Eliminate need for "security blanket" of mostly unneeded reference data. Eliminate life-cycle cost of the extra information.

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