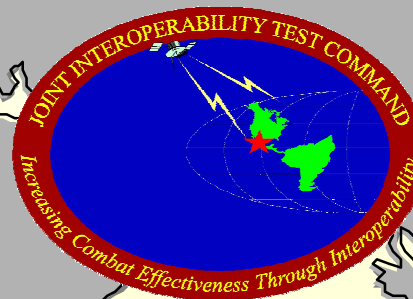# Joint Distributed Engineering Plant Briefing to NDIA 3rd Annual Interoperability & Systems Integration Conference

April 3, 2003

Mr. Frank Holderness

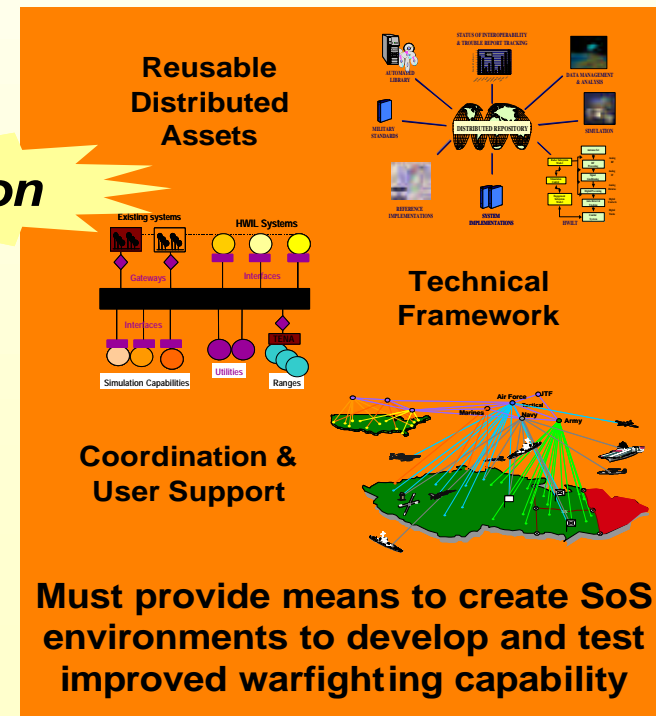**Principal Director for Interoperability**

DISA

JDEP Defined & Motivation

JDEP is DoD-wide capability for Service and Joint engineering, integration, and test resources to provide system of systems (SOS) battlefield representative environments in support of developer, tester, and warfighter requirements

Based on JS/PUSD(AT&L) Letter, JETF Report, PBD 725, DPG, FY02-FY07 PDM, and Transition Memo

Theater Warning
DSP/SBIRS
Long Range Combat Identification
Attack Operations
AW ACS
ABL
JLENS
F-15
E-2C
Single Integrated Air Picture
Integrated Fire Control
THAAD
PATRIOT
TEL
MEADS
SIS(MSCS)
Passive Defense/Early Warning
Automated Battle Management Aids
AVENGER
ATACMS
AEGIS (CEP)
TEL

Doctrine, operations, and acquisitions increasingly dependent on Joint SoS

Reusable Distributed Assets

Technical Framework

Coordination & User Support

Motivation

Must provide means to create SoS environments to develop and test improved warfighting capability

JDEP Vision & Mission

- ## JDEP VISION
  - Improve the interoperability of weapon systems, platforms, and C2 by providing users the capability to create environments to support engineering, integration, testing, and evaluation in a replicated battlefield environment, leveraging service and joint combat system engineering and test sites.

- ## JDEP MISSION
  - Create a capability to federate DOD/Industry laboratories, test sites, and facilities to address and resolve warfighter, systems developer, and tester interoperability and integration issues by:
  - Support users in identifying, accessing, and federating HWIL, simulated, and range-based systems, and supporting tools, under a set of common standards and procedures

JDEP Strategy

- **DOD Enterprise capability for Joint/Service interoperability areas**
  - **JDEP supports three types of users; Developers to engineer interoperability into systems, Testers to test and evaluate interoperability among systems, and Warfighters to assess operational capabilities of forces**
- **Defines JDEP as a 'capability' for use across DOD rather than a standing facility or plant for one group of users**
  - **Distributed/shared use of test sites, laboratories, and facilities**
  - **Based on a common technical framework, standards, and interfaces**
  - **User focused**
  - **Dedicated coordination and engineering support for reuse, improvement, and development of capabilities**

> **JDEP is not a thing, it's a thing we do.**
>
> **It's a way of doing business.**

JDEP Goals

- **Support air and missile defense user federations**
- **Initiate JDEP process implementation to refine products and services to meet both existing and projected customer needs**
- **Establish standard-based technical framework to support cost-effective configuration of JDEP federations and reusable infrastructure investments**
- **Create JDEP alliances & awareness of JDEP capabilities within system development, testing, and warfighter communities**
- **Establish new JDEP application areas that consider priority transformation initiatives**
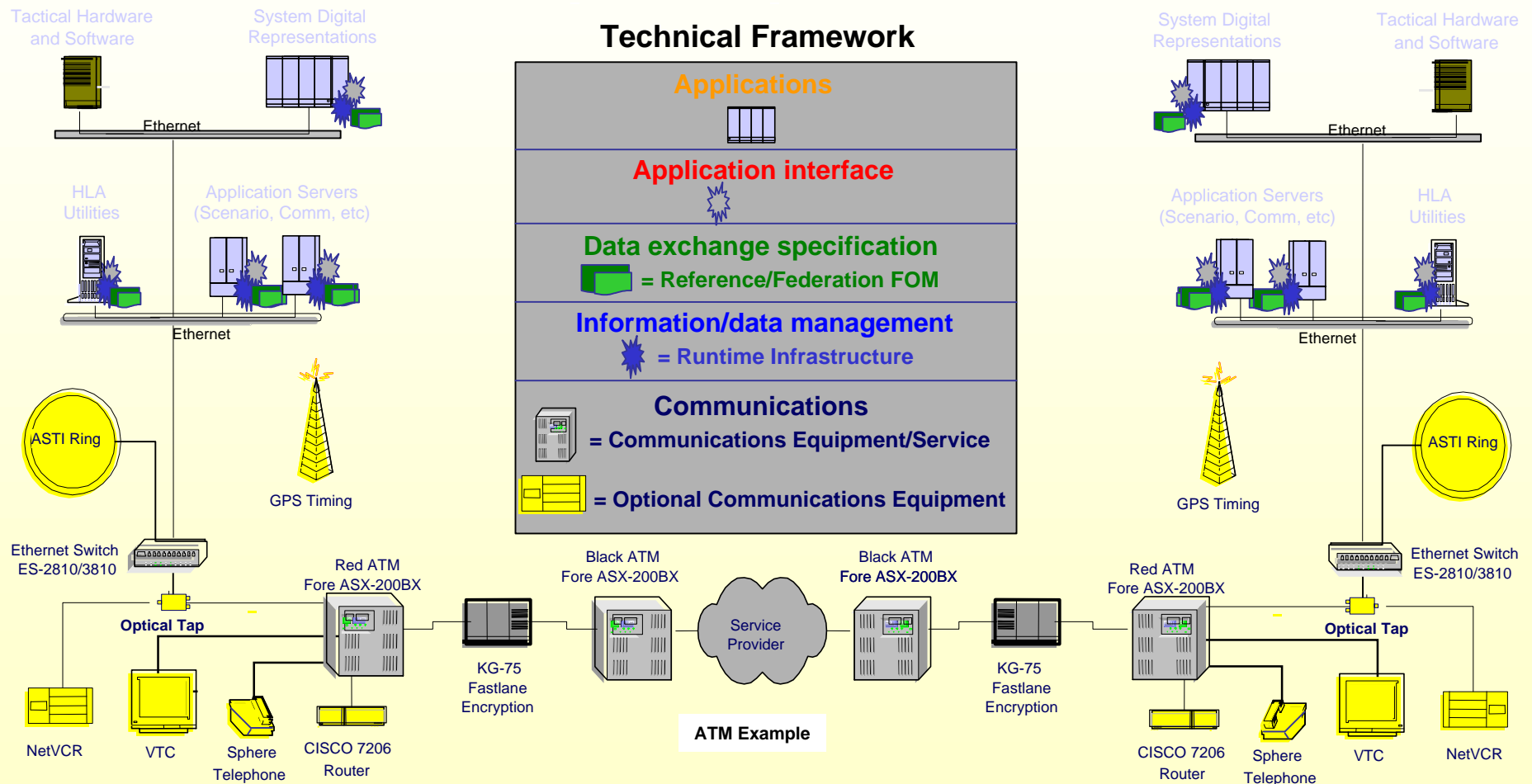- **Establish JDEP management and investment plans for FY03 through FY09**

JDEP Benefits

- **Improved engineering, integration,** and test environment = Improved systems development, analysis, and product to Warfighter
- **Reduced cost and cycle times** for the Development, Test, Experimentation, and Warfighter communities
- **Critical to meeting** the Director, Operational Test & Evaluation requirements for Interoperability and Info Assurance operational testing
- Central coordination and technical support to users
  - Disciplined/coordinated sharing of assets/capabilities
  - Mission area support and coordination for specific events
- Facilitate information sharing/data exchange within DOD and Industry
  - Common & reusable test federations, assets, and processes
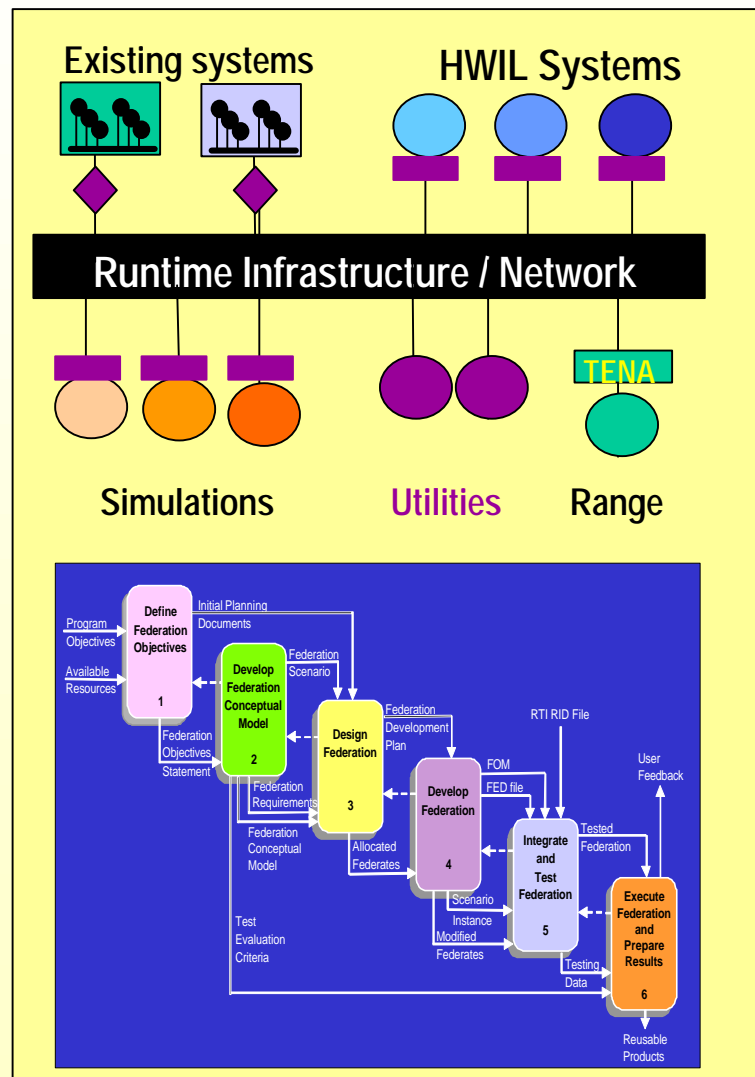 - Define problems to be addressed by JDEP federation & applies results to meet their needs

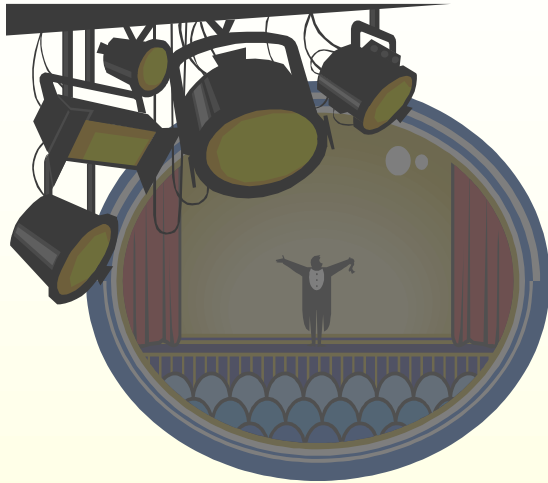# JDEP Technical Framework Application Example

- **Applies standards-based processes and tools**
  - **Federation Execution and Development Process (FEDEP)**
  - **IEEE 1516/High Level Architecture**
- **Support federations of HWIL/SWIL & simulations to meet user needs**
  - **Reusing Services/Agencies and commercially developed capabilities**
  - **Leaving capabilities to be reused by next application**

JDEP – A Stage for Providing an Improved Test Environment

What JDEP can provide:
- Single point capability provider and coordinator
- A standards-based, common technical framework supporting federations to address varied user needs
- Enabler for support for Systems Development, Integration, T&E, Experimentation, & Training
- A flexible infrastructure that provides the environment for quality, repeatable test events, results and data
- Disciplined means to invest in a DOD-wide reusable federated infrastructure

JDEP is not:
- Funding for cradle to grave Interoperability and Information Assurance testing
- Funding for specific test or developmental events
- Mission area systems engineering
- Not a separate technical development program

JDEP Is Structured to Create Environments to Support User Integration and Interoperability Issues

Program Decision Memo

	FY02	FY03	FY04	FY05	FY06	FY07	FY02-07
JTAMDO	$ 10M	$ 10M	$ 10M	$ 10M	$ 10.2M	$ 10.4M	$ 60.6M
Marine Corps	.9M	1.0M	1.2M	1.4M	1.2M	1.2M	6.9M
Navy	5.0M	5.9M	5.2M	5.9M	5.9M	$5.9M	33.8M
Air Force	4.6M	6.4M	6.7M	6.7M	5.0M	5.0M	34.4M
Army	1.7M	3.4M	4.0M	3.7M	3.8M	3.8M	20.4M
DISA	4.2M	4.3M	4.4M	4.5M	4.5M	4.5M	26.4M
Total Requirement	26.4M	31.0M	31.5M	32.2M	30.6M	30.8M	182.5M

PDM add funds as shown in the table to fund the JDEP at levels specified in the Defense Planning Guidance and to transfer the JDEP responsibility to the Joint Interoperability Test Command at Fort Huachuca, AZ.

JDEP Objectives & Planning

JDEP Extension

- **Support Air and Missile Defense (AMD) federation events and node expansion**
- **Review and mature technical framework**
- **Identify needed infrastructure investments**
- **Begin expansion into new application areas and work with international partners**
- **AMD event nomination and review is handled under JTAMD Process**
- **JNIC and JITC now reviewing proposals for technical feasibility, schedule, supportability, and cost as basis for FY04 event plans**

JDEP Expansion

Possible new mission areas

- **Single Integrated Ground Picture (SIG-P)**
- **Strike (TST/Precision Engagement)**
- **Deployable Joint C2 (DJC)**

C/JTF HQ Activation & Augmentation

Extend JDEP through AMD via new systems and sites; Expand JDEP to new Mission Areas