AEROSPACE INDUSTRIES ASSOCIATION

PRODUCT SUPPORT COMMITTEE

NetCentric Information Systems
Common Data Environment Project

NDIA SED Conference
October 26, 2006

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President RLEngwall & Associates
AGENDA

- Review Project Goals
- Review Project Accomplishments to Date:
  - Phases 0/1 Concept of Operations and Project Planning
  - Phase 2 Situational Assessment
  - Phase 3 Business Strategy Development
- Status and Issues Summary
Key Leaders

- ADUSD Logistics Policies and Plans – Jim Hall
- ADUSD Material Readiness & Maintenance Policy- Dave Pauling
- AIA Director Product Support Committee- Rusty Rentsch
- AIA PSC NI CDE Project Leader- Suzanne Schwitalla
- Multi-Association/Organization Participation
Industry Coordination Scope

- Aerospace Industries Association (AIA)
  - Electronic Business Steering Group (eBSG)
  - Procurement and Finance Committee (Proc&Fin)
  - Engineering Management Committee (EMC)
  - Technical Operations Committee (TOC)
- National Defense Industry Association (NDIA)
  - The Association for Enterprise Integration (AFEI)
  - Logistics Division
  - Systems Engineering Division
- Government Engineering & Information Association (GEIA)
- Network Centric Operations Industry Consortium (NCOIC)
- The Air Transport Association of America, Inc. (ATA)
- Council of Aerospace and Defense Industry Association (CODSIA)
CDE Project Concept

- **AIA Involvement:**
  - Partner with DoD to Construct Strategies and Operational Models
  - AIA to define a functional boundary for Government/Industry NetCentric Information Services Common Data Exchange
    - Collaborative scope to assist the DoD to point of departure
    - Interface of Proprietary systems and competencies
    - Plan to include a set of ground rules and assumptions

- **Risk Mitigation**
  - Buy-in
  - Ownership and Funding
  - Data Security
Product Data Definition

- All Data Associated with a Product During its Life Cycle to include Performance Data of All Stakeholders
  - Requirements Data
  - Engineering/Technical Data
  - Manufacturing/Supply Chain Data
  - Supportability Data
  - Disposal Data
  - Contracts Data
  - Training Data
  - Mission Support Data
  - Etc.
Vision: Common Data Transmission and Translation Capability

- A Product Data Exchange Capability
  -- i.e. Pull up the Data on any Screen

- Partnership

- IOC: Exchange & Interoperability

- Value Proposition

- DOD and Industry Recognized Solution
Value Proposition

- Must have ROI
  - Cost Avoidance: Lower Capital Investments with Lower Operational Costs
  - Improved Return on Capital Invested (ROCE)
- Improved mission assurance
- Data integrity
  - Source of Data
  - Data Accuracy
  - Data Completeness
- Responsive

... A Life Cycle Perspective
Project Phases

CONOPS and Project Plan

Industry Situational Assessment

Business Model Recommendations

Operational Implementation
Key Dates / Milestones

- Kickoff: June 29, 2005
- CONOPS Development: July 20, 2005
- Deliverable to OSD: Sept 13, 2005
- Situational Assessment: December 8, 2006
- AIA Proc&Fin Review: January 17, 2006
- Deliverable to OSD: February 28, 2006
- Business Rules / Strategy Development II: June 5, 2006
- Report Out to OSD: November 8, 2006
- Request for Pilot Program: November 2006
- Project Close-out: December 2006
Phase 0/1: CONOPS and Plan

- **CONOPS Development Complete**
  - Meeting held July 20, 2005
  - Strong Meeting Attendance
    - Gov’t: DLA/OSD, DLA/DLIS, Joint Staff
    - Industry: 10 executives / 7 companies

- **Key Points**
  - Strategic Context
  - Operational Context
  - Security
  - MOE and Assumptions
  - Challenges and Obstacles
Phase 2: Situational Assessment

- **Activity:** Sep 14 thru Jan 31, 2006
- **Participants:** Industry (19 Companies)

**Scope of Assessment**
- DoD funded programs
- Commercial / Industry funded programs / activities
- Industry association - related initiatives
- Technical / Infrastructure initiatives
- Standards initiatives
- Process based initiatives
- Internationally sponsored initiatives
- Relevant DoD policy, directives, laws, instructions
Technical Standards Assessment - 1

• Technical standards are available, some usage of these standards occurs on multiple major programs

• The complete standards solution set for product data is not yet defined

• Multiple industry associations and collaborations (both for-profit and not-for-profit) recognize the need for common data standards and are applying resources towards a solution
Most currently existing solution sets are focused on operational data or transactional data, not product data.

Risk focused on data access and security measures.

Technical infrastructure, i.e. pipes and software for data movement, exist as COTS and can be readily adapted to any reasonable implementation solution.
The Radar Screen – Standards

- **Adopt existing standard**
- **Monitor external development**
- **Participate in external development**
- **Guidelines**

**Business Rules**

- Adopted
  - S1000D
  - PLCS
  - STEP AP 210
  - ISO 10007
  - EIA-649
  - EIA-836
  - UDEF
  - ISO 10032

- Candidate
  - STEP AP 232
  - STEP AP 212
  - STEP AP 203
  - STEP AP 215/6/8

- Track
  - STEP AP 239
  - STEP AP 233
  - STEP AP 210
  - STEP AP 212
  - STEP AP 215/6/8

- Active Project
  - EIA-859
  - MEIIM
  - DOD registry
  - SCORM
  - ebXML

As of Feb 28, 2006
Where We Are Going …-1

- OSD’s vision is rapid and accurate product data movement from the warfighters and systems all the way back to the depots, manufacturers, the program offices, and OSD.

- Product data includes any information related to the operation, delivery and sustainment of products and services to support the warfighter.

- The scope of the immediate problem is: how to manage product data to minimize time, cost, and efficiency of moving a data file or piece of data from one organization or tool to another organization or tool.
Where We Are Going …-2

• Often significant non-interoperability exists between organizations and the tools used to manage data.
• Industry must deal with non-interoperability issues both within the commercial and the government side of the defense business.
• There is value to be extracted by all participants in streamlining and adding more transparency to data management.
• The idea is not to duplicate or eliminate useful activities currently being accomplished by either the government or industry, but to streamline and offer an easy alternative for fast and inexpensive data management as a public service to the DOD community.
Phase 3: Business Strategy

- Defining the Issue: Business Implementation Strategies for the Common Data Transmission and Translation Capability
  - Recommendations from Industry to Gov’t
  - Partnership with OSD for Development
  - Participants represent wide cross-section of Industry

- Business Rules and Business Strategies Development Schedules

- Research / Homework for Follow-up Meeting:
  - Teams to present “If I Were King” business rules for operating under a common data environment scenario
  - Specific issues / roadblocks in contracts, finance, accounting, or technical areas
Characteristics of Business Rules

- Data must be available, affordable, accurate, secure, reusable, and relevant.
- Allowing that technical and business approaches are similar across companies, but with tailoring/customizing that reflects competitive advantage.
- Opportunity for both large and small business to participate.
- Addressing of both structured and non-structured data.
- Extensibility of the capability to other Government departments and commercial industry where applicable.
Current FAR/DFAR rules don’t explicitly cover interoperability and data exchange issues – all are subject to customer/contractor negotiations.

- DFAR 227.7103-2 Acquisition of technical data – access and license rights by government. *What’s the reciprocal ruling for industry?*

With wide ranging interoperability, how to generically value data to facilitate contracting among hundreds of stakeholders: it’s product data.

Use commercial contracting procedures (FAR Part 12) when it makes sense – FFP inclusive of service contracts.
Issues won’t necessarily be around contracting, but around data assurance (DOD Dir 8500.1) that goes “to the edge” of data management, i.e. sense & respond

Contract type shouldn’t be an issue for interoperability capabilities

Every contract is strongly encouraged to have an IDE associated with it (esp. performance based contracts) … now it’s a matter of linking contracts to the existing interoperability framework (DoD 5000.2-R)

Assumption that standard industry flow-down clauses are applicable

There are no observed current FAR/DAR obstacles for contracting in a common data environment
Phase 3 Summary

- Recommendations to Government on Business Operational Strategies
- Assuming that Capability will be “Green”
- Risks and Mitigation for New Policy
  - Industry Buy-in with Customer-led Direction on Data Standards
  - Funding and Ownership Issues worked out
  - Data Security Measures Identified more specifically
- Coordination
  - Ensuring “no one is left out”
  - Acceptance and Adoption
  - Agreement on Standardization
- 8 month effort w/ report out in Nov 2006 (PSC Fall Conference)
Proposed: Solution Architecture

Common Operational Picture

Role-based Single Sign-on

Enterprise Portal, Collaboration, Business Intelligence, Wireless

Resource Management
QASP Compliance
Program Management
Knowledge Management

Applications

Multi-Level Label Security

Program Info Sharing Partners
CPM iHub

Multi-Level Label Security

Users

Presentation

Connected Legacy Systems

Standards-Based Integration

Central Repository

Data Warehouse
ETL
OLAP
Data Mining

Finance
PDM
SCM
HR
CAD
CDE Steps Forward

- Vetting of proposed CDE not-for-profit activity throughout the Defense Community
- DOD to give “go-ahead” and select nonprofit provider as secretariat
- Nonprofit provider to establish not-for-profit common data environment activity
- Board seats filled
- MOA’s/MOU’s established with community technical associations
- Acceptance of the operational cell systems integrator
- Systems integrator establishes operations
Questions

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