Role of Open Standards in **Federal IT & Telecommunications**

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Public-Private Partnership on U.S. Standards Strategy

- Background
- Legislative and Policy Requirements
- Value Proposition
- Relevant Federal Examples
- Public-Private Roles
- Reference Material

Background: The Importance of Standards

"The International language of commerce is standards. Adherence to agreed upon product or service specifications underpins international commerce, enabling trillions of dollars of goods to flow across borders, regardless of the spoken language of any business parties. The common acceptance of standards is fundamental to the success of robust, fair and free trade. Without standards, it would be difficult to imagine the tremendous volume and complexity of international trade"

Donald L. Evans, Secretary of Commerce

from *Standards & Competitiveness: Coordinating for Results* (2004)

Background: The Importance of Standards and Use by Federal Agencies

- Voluntary consensus standards are at the foundation of the U.S. economy

- The U.S.-based standardizations system:
  - Promotes the public good
  - Enhances the global competitiveness of U.S. industry
  - Contributes to a liberalized global trading system

- The U.S. Government recognizes the importance of standards in:
  - Achieving federal policy objectives
  - Conducting Federal activities, including procurement and regulation

Socio-economics of Open Standards

Background (continued)

- The new *U.S. Standards Strategy* published by ANSI can be used by all U.S. stakeholders, including the Federal government to:

  - Advance trade issues in the global marketplace,

  - Enhance consumer health, safety and public good,

  - Respond to critical national and global priorities, and

  - Advance U.S. viewpoints in regional and international arenas

Objectives / Guiding Principles

- Federal rulemaking principles share many of the globally accepted standards development principles
  - Transparency
  - Openness
  - Impartiality
  - Effectiveness and relevance
  - Performance based
  - Balanced

Legislative and Policy Requirements

- The National Technology Transfer and Advancement Act of 1995 directs government agencies to use voluntary consensus standards wherever practical
  - OMB Circular A-119 establishes the implementation policy for this law
  - So government avoids the cost of developing duplicate standards
- OMB Circulars A-11 and A-130 and the Federal Acquisition Regulation (FAR) guide agency information technology (IT) investment decisions
- OMB policies are intentionally technology and vendor neutral
- All agency IT investment decisions must be made consistent with the Agency's enterprise architecture and the Federal Enterprise Architecture.
- Agencies must consider the Total Cost of Ownership including lifecycle maintenance costs and reducing risk

Socio-economics of Open Standards
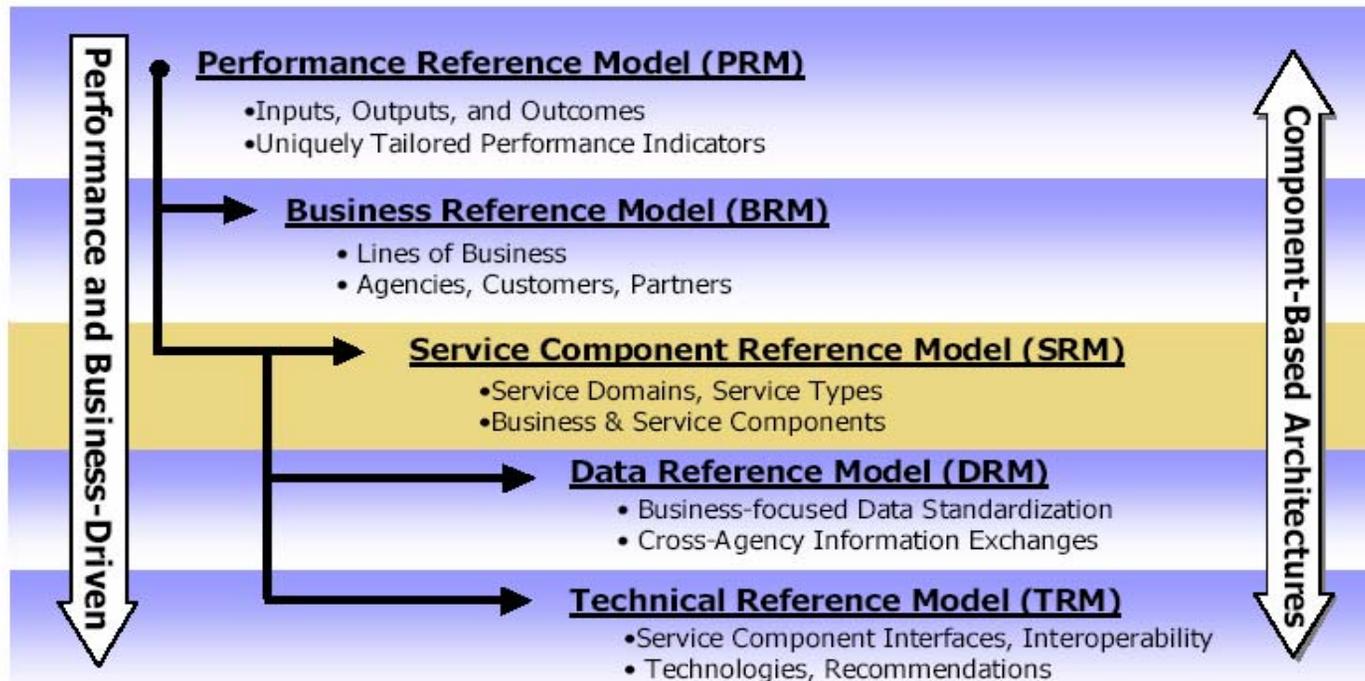
Why Do Federal Agencies Care?

- Legislative requirements

- Improved information sharing

- Ability to sustain operations

- Reduced system cost

- Reduced system risk

- Reliability and interoperability of products, systems and services

- Improved resource sharing

- Ability to respond to changes

- Improved competition

- Just good management!

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IT Investments follow "Raines Rules"

- OMB memo (M-97-02) dated October 25, 1996
- Establishes the critical link between planning and implementation -- information architecture -- to align technology investment with mission goals
- Three key questions:
  - Should the government perform the work?
  - Can another agency perform the function?
  - Has the process been re-engineered?
- Linking IT spending to performance measures
- Specify standards that enable information exchange and resource sharing
- Use commercial solutions to maximum extent possible

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Federal Enterprise Architecture (FEA) - Enterprise View of the Government

- The FEA is a collection of interrelated "reference models" designed to facilitate cross-agency analysis and the identification of duplicative investments, gaps, improved information sharing, and opportunities for collaboration within and across Federal Agencies.

- These models are defined as:

Performance and Business-Driven

Performance Reference Model (PRM)
- Inputs, Outputs, and Outcomes
- Uniquely Tailored Performance Indicators

Business Reference Model (BRM)
- Lines of Business
- Agencies, Customers, Partners

Service Component Reference Model (SRM)
- Service Domains, Service Types
- Business & Service Components

Data Reference Model (DRM)
- Business-focused Data Standardization
- Cross-Agency Information Exchanges

Technical Reference Model (TRM)
- Service Component Interfaces, Interoperability
- Technologies, Recommendations

Component-Based Architectures

Access Standards Address "Public Good" Legislative Requirements

- Section 508 of the Rehabilitation Act covers products and technologies procured by the Federal government

- [Electronic and Information Technology Accessibility Standards](#) published in 2000 address accessibility for people with disabilities

- Over 20% of the population have some functional limitation that potentially benefit and 6% have a sever functional limitation

- Includes computer hardware and software, websites, phone systems, fax machines, and copiers, among others

Geospatial Information Sharing

- Important role of standards reinforce by OMB Circular A-16
  - Provides a government-wide approach to electronic development and management of spatial data, technology, standards, resources, and policies
  - Revision established draft standards to achieve consistency among data sets that describe transportation routes and allow governments to share data
- Geospatial One-Stop completed an inventory of existing Federal data holdings
- By spring 2005, 24 Federal agencies, 27 states, and some local jurisdictions had posted over 90,000 data sets on www.GeoData.gov.
- Submitted harmonized draft Framework Data Standards to the American National Standards Institute (ANSI). Draft standards available at www.geo-one-stop.gov

Disaster Management Interoperability

- Established a relationship with the Emergency Interoperability Consortium (EIC) in OASIS to drive the development of interoperability standards for disaster information exchange.

- National approach for data interoperability through this industry-government consortium

- Defined Disaster Management Interoperability Service to achieve interoperability - https://interop.cmiservices.org

- Provides reference implementation samples:
  - Demonstrate how to connect with DMIS in the simplest terms.

- Common Alert Protocol (CAP) documents:
  - CAP 1.0 - OASIS Committee Specification

Personal Identity Verification Standards and Testing Reduce System Risk

- Agencies must begin issuing identification badges that meet FIPS 201 requirements by October 2006
  - Resist fraud, tampering, counterfeiting, and exploitation
  - Federal employees and on-site/network connected contractors
- Conformance, interoperability and common performance tests will reduce the risk of Agency implementation
- Agencies directed to only purchase approved products
- Government-wide acquisition strategy will lower cost of implementation

Roles in Standards Strategy Implementation

- *Industry* need to focus on actions that help to minimize duplication of standards development activities and mitigate technical barriers to trade

- *Standards developers* need to investigate ways to increase efficiencies and broaden participation

- *Government* initiatives need to pursue coordination among stakeholders, including the Interagency Committee on Standards Policy and the Trade Policy Staff Committee

Reference Material

- **www.us-standards-strategy.org**

  Download of the U.S. Standards Strategy, history and background, FAQ, media resources, etc.

- whitehouse.fed.us/omb/circulars/index.html

  OMB Circulars and links to policy memos

- www.egov.gov

  Presidential Initiatives in Electronic Government and Federal Enterprise Architecture