

Achieving Interoperability Through a Proposed New Information Architecture for the Acquisition and Use of IETMs

Presented by

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Background

The DoD IETM Specifications were:

- Developed to guide the transformation from paper to interactive electronic medium for TMs/TOs
- Coordinated with Army, Navy, and Air Force
- Formally Issued in 1992 to allow inclusion in contracts
- General specifications designed to encourage innovation
- Used in many implementations and have been successful in meeting original objectives

Issues with IETM Interoperability

- Initial developers had to develop both authoring system and presentation system from scratch
- Leading efforts emerged independently of each other and used their own differing interpretation of the specifications
- Developers could not use or share each others source data because of differing implementation of the IETM DB Spec
- Presentation Systems could only display information specifically authored for that presentation system
- Electronic infrastructure were impeded because no standard was developed for the distributed data package

Proposed Approach to Solving the Interoperability Problem for Suppliers and Users

- Look to Commercial Environments with similar problem and see how they are solving related problems
- Needed environment in which many independent information suppliers use electronic distribution and presentation to common users
- Needed an environment in which a successful transition has been made from paper media to electronic media
- World-Wide-Web/ Internet approach and experience had similar characteristics and Industry is moving quickly to solving interoperability problems

Developments in Web/Internet Technology used in Developing the Proposed New IETM Process

- Standard set of communication protocols to facilitate the all digital electronic flow (i.e., the INTERNET)
- Proven and mature Client/Server Software (e.g., Web servers, web browsers, and emerging distributed object technology)
- Widely accepted standards for interactive document formats (i.e., Web Pages and the various interactive and other display objects that can be displayed on web pages)
- High user population => Many quality products available

Why Web Technology?

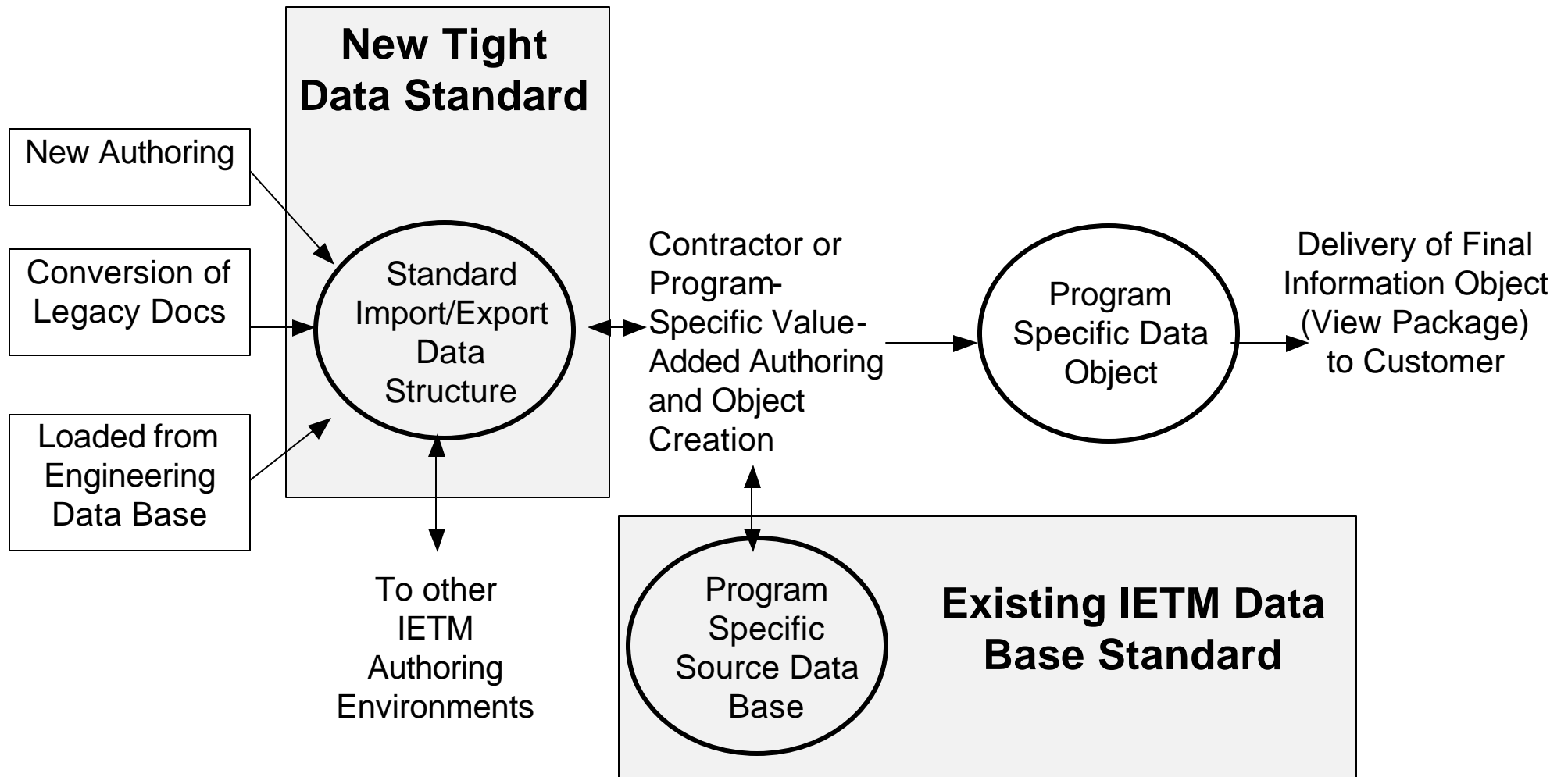
It works - locally, across a local intranet LAN, across a global Internet. Millions of users every day. Not just on the Internet.

Very high user acceptance, more than any other computer product that has ever been developed.

Extensive experience in converting print media to electronic web-page media (e.g., most major newspapers, many trade publications).

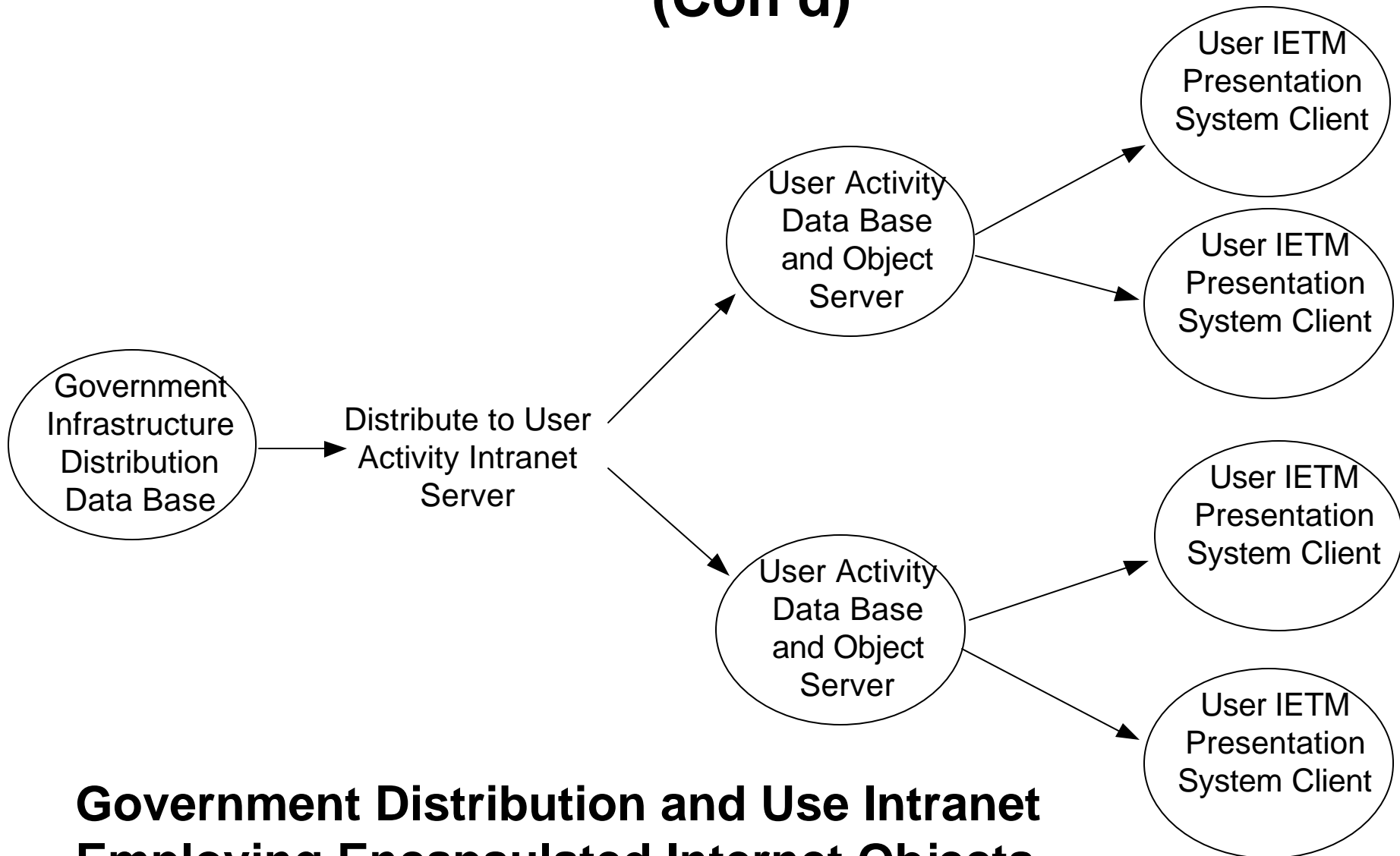
Very high vendor support. Many high quality, low cost authoring/conversion products available.

Overview of the New Proposed IETM Process



Supplier Authoring Environment

Overview of the New Proposed IETM Process (Con'd)



**Government Distribution and Use Intranet
Employing Encapsulated Internet Objects**

How Interoperability is Achieved

Enforcement of Rigid Fixed Import/Export Data Set Standard (using SGML property sets for variability)

Enforcing Interactive Document Object Encapsulation Standards (using commercial Internet standards)

User IETM presentation systems will shell client software based on commercial Internet browser - all user functionality will be passed to browser using Internet objects (e.g., “plug-ins”, Active-x controls)

Develop IETM URLs and URL monikers for IETM Intranet and use those URLs for references and inclusions

Disclaimer

These suggestions and specific recommendations are the professional suggestions of the presenter and do not necessarily reflect the position of or specific programs in the Navy or the DoD at this time.

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