

OASIS ebXML Registry v3.0 Standard

**How to Publish, Manage, Govern, Discover,
and Reuse Artifacts for eBusiness, SOA
and Other Applications**

ebXML Registry Technical Committee

*Defining and managing interoperable registries and
repositories*

<http://www.oasis-open.org/committees/regrep>

Agenda

- Welcome
 - Jamie Clark, Director, Standards Development, OASIS
- ebXML Introduction
 - Kathryn Breining, Chair, ebXML Registry Technical Committee. The Boeing Company
- ebXML Registry overview
 - Farrukh Najmi, Federated Information Management Architect, Sun Microsystems
 - Carl Mattocks, CEO CHECKMi; consultant, Metropolitan Life Insurance
- Demonstration
 - Farrukh Najmi
- Questions and Answers

Who is OASIS?

- OASIS is a member-led, international non-profit standards consortium concentrating on structured information and global e-business standards.
- Over 650 members
- Supports over 60 technical committees producing royalty-free and RAND standards in an open process.

“The largest standards group for electronic commerce on the Web”

The New York Times
ON THE WEB

Best known for standards like

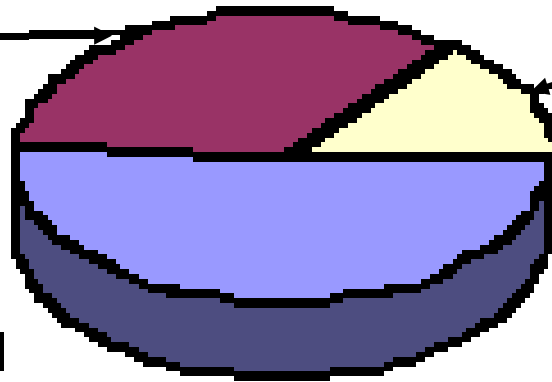
**ebXML WSDM SAML
UDDI WSRP WS-
WSDM CAP Security
XACML**

OASIS Members Represent the Marketplace

35%

Users and influencers

- User companies
- Vertical industry organisations
- Individuals / small consultancies



15%

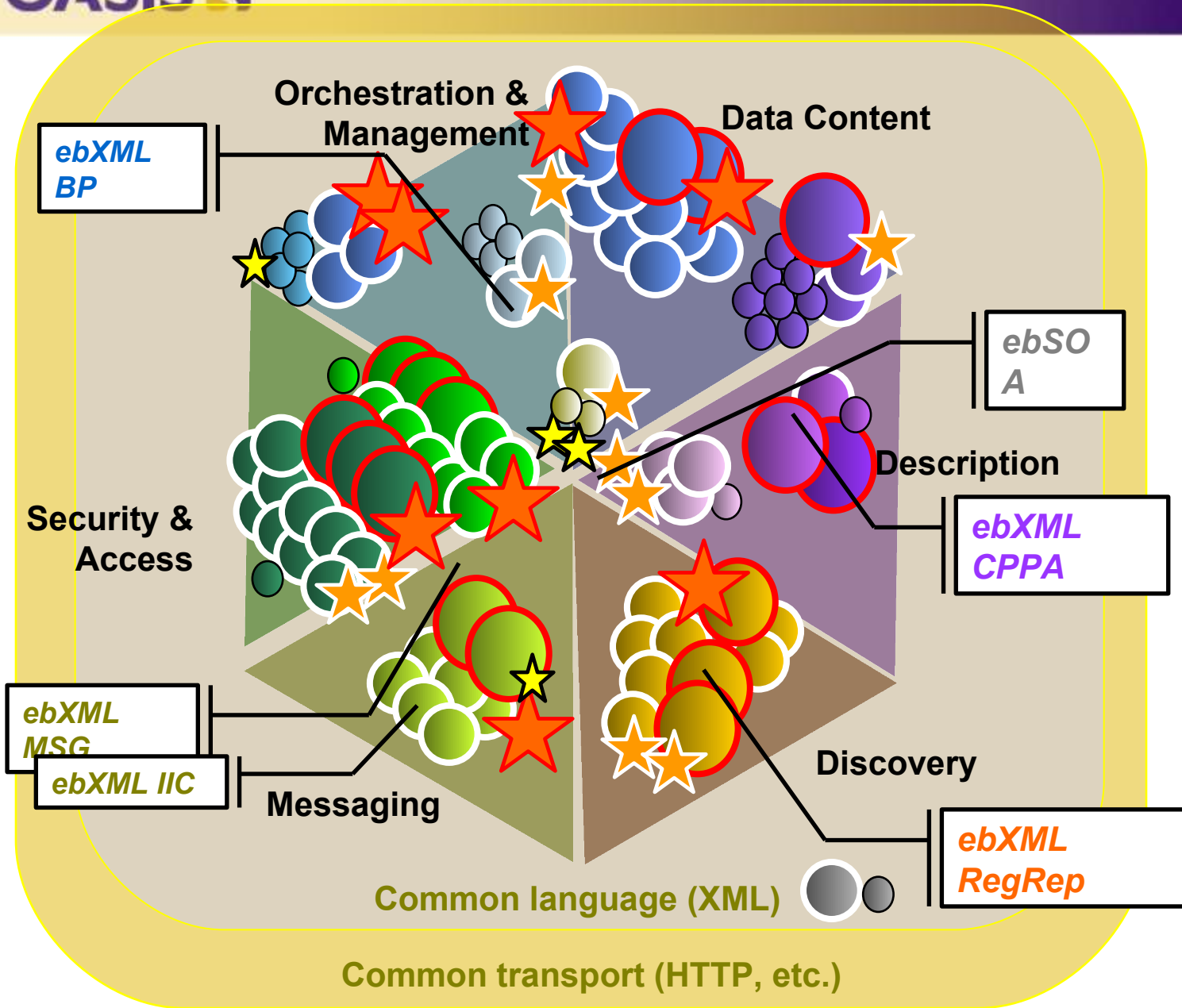
Government & Academic

- Governments
- Universities
- Research centres & related nonprofits

50%

Technology Providers

- Software vendors
- Industry organisations
- Individuals / small developers



**OASIS
work
mapped:
August
2005**






**(Newer
work in
stars)**

What is (“e-business XML”) ?

- **Joint initiative of UN/CEFACT and OASIS**
 - Phase 1: 1999-2001, initial specifications
 - Phase 2: 2001-2003, v2 & deployments
 - Phase 3: 2003-now, enhancements
- **Service-oriented architecture**
 - Built up from user requirements
 - “Next generation” from EDI, leveraging XML and Web technology
 - Designed for B2B transactional reliability and enforceability



5 modular parts to ebXML

- Business Process Specification Schema  OASIS v2 in public review now
- Core Components  v1 from UN/CEFACT in ISO 15000
- Collaboration Protocol Profiles and Agreements (originally “TPA”) 
- Message Service (originally “Transport”)  v2 from OASIS in ISO 15000
- Registry & Repository 

ebXML Registry Technical Committee Members

- *Kathryn Breininger (TC Chair)*
 - *Peter Kacandes*
 - *Matthew MacKenzie*
 - *Duane Nickull*
 - *Sally Fuger*
 - *Joseph Chiusano*
 - *Ivan Bedini*
 - *Richard Martell*
 - *Shin Takagi*
 - *Diego Ballve*
 - *John Gillerman*
 - *Patrick Hogan*
 - *Richard Parent*
 - *Paul Macias*
 - *Carl Mattocks*
 - *Asuman Dogac*
 - *Evan Wallace*
 - *Jeff Pollock*
 - *Matthew Dovey*
 - *Nikola Stojanovic*
 - *Goran Zugic*
 - *Monica Martin*
 - *Farrukh Najmi*
- The Boeing Company*
 - Adobe Systems*
 - Adobe Systems*
 - Adobe Systems*
 - Automotive Industry Action Group (AIAG)*
 - Booz Allen Hamilton*
 - France Telecom*
 - Galdos Systems Inc*
 - Hitachi Systems & Services*
 - Individual Member*
 - Individual Member*
 - Individual Member*
 - Individual Member*
 - LMI Government Consulting*
 - MetLife*
 - Middle East Technical University*
 - NIST*
 - Network Inference*
 - Oxford University*
 - GS1-US*
 - Semantion*
 - Sun Microsystems*
 - Sun Microsystems*

OASIS ebXML Registry TC Work Status

- Two standards developed
 - ebXML Registry Information Model (RIM)
 - ebXML Registry Services and Protocols (RS)
- Version 2.0 approved as OASIS standards May 2002
 - Approved as ISO 15000 parts 3 and 4 March 2004
- Version 3.0 approved as OASIS standards May 2005
- Current work
 - Developing profiles for specific domains
 - Updating Technical Notes
 - Developing Conformance specifications

ebXML Vendor Products

- Sun Microsystems Inc.
- ebXMLsoft Inc.
- CHECKMi
- Digital Artefacts Inc.
- Adobe Systems Inc.
- freebXML Registry (open source)
- Infravio - X-registry
- Xenos Group Inc. – GoXML Registry

Sampling of ebXML Registry Deployments

- Norway, Finland
 - Registry-based environment for XML schemas and electronic forms
- UN/CEFACT Information Content Management Group
 - UN registry to store core component artifacts
- EDIFrance
 - Trial project to manage core components and business information entities
- Korean KIEC federated registry
 - Korean ebXML Central Registry and Repository (www.remko.or.kr)
- XDS initiative founded by NIST and Integrating the Healthcare Enterprise (IHE)
 - Collaborating with industry to define clinical document registries
- Others
 - HL7, RosettaNet, US Department of Defense, etc.

ebXML Registry 3.0: An Overview

Overview

- What is ebXML Registry?
- Use Cases
- Key Features
- ebXML Registry in Action
- Key Benefits
- Future Directions
- Summary

What is ebXML Registry?

- A Service Oriented Architecture registry as well as a repository
 - Classification of any type of information
 - Managing relationships between information
 - Taxonomy hosting, browsing and validation
 - File/folder organization of information

What is ebXML Registry? (2)

- A content management system for secure, federated information
 - Provides services for sharing content and metadata between entities in a federated environment
 - Lifecycle Management (LCM) actions logged in an audit trail
 - Supports automatic versioning of objects

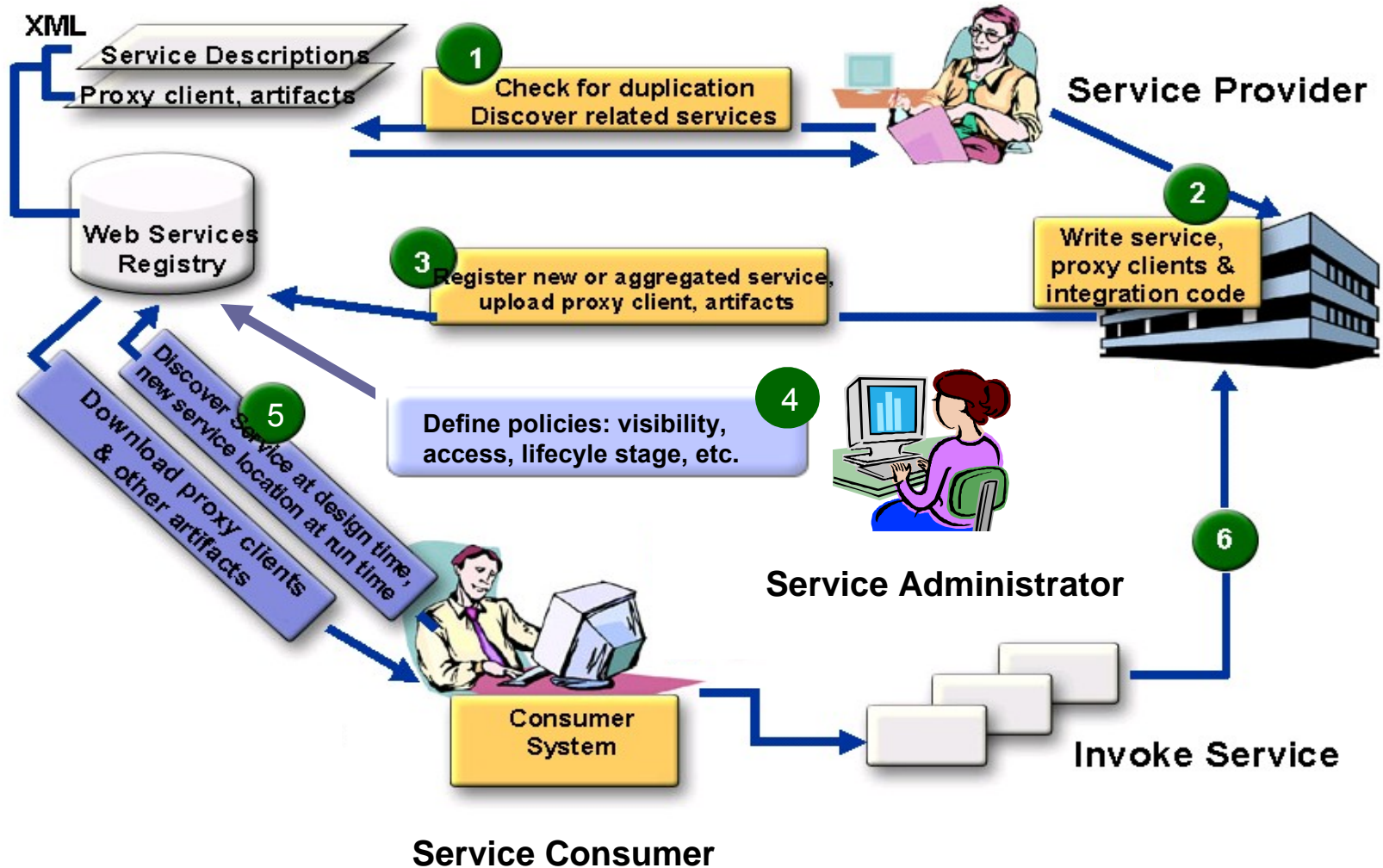
Use Cases

- SOA registry repository
- Web content management
- Controlled vocabulary
- Business process catalog
- Electronic forms
- ebXML core components catalog
- Domain-specific use cases
 - Electronic medical records (IHE-XDS)
 - Geological information systems (Open GIS)
 - Metadata store for grid computing

Why a SOA Registry/Repository

- Rising complexity of SOA deployments
 - Many types of artifacts (WSDL, XML Schema, BPEL, policies, XSLT, WSRP)
 - Many dependencies and relationships
- Need for governance of SOA artifacts
 - Need single point of contact to enforce organizational policies
- An ebXML Registry is the central service that enables SOA governance

SOA Scenario With Governance



Use cases for SOA Registry/Repository

- Automatic validation: key to governance
- Service discovery and reuse
- Composite services
 - Playing Lego™ with services artifacts
- Service artifact dependency management
- Phased deployment of services
 - Role based access control at each stage
- Service evolution and versioning
- Change notification

Need for an Integrated SOA Registry/Repository

- Governance enforced where SOA artifacts are stored
- Registry is not enough – need repository
 - Repository stores the actual artifacts
 - Registry stores metadata about the artifacts
- An integrated registry/repository ensures consistent storage, management and reuse of artifacts according to organizational policies
- ebXML registry provides an integrated registry/repository

Federated Information Management

- Multiple ebXML registries may be federated together to appear as a single virtual registry/repository
 - Seamless information integration and sharing
 - Allows local autonomy over data
- ebXML registry relies on SAML – the federated identity management standard

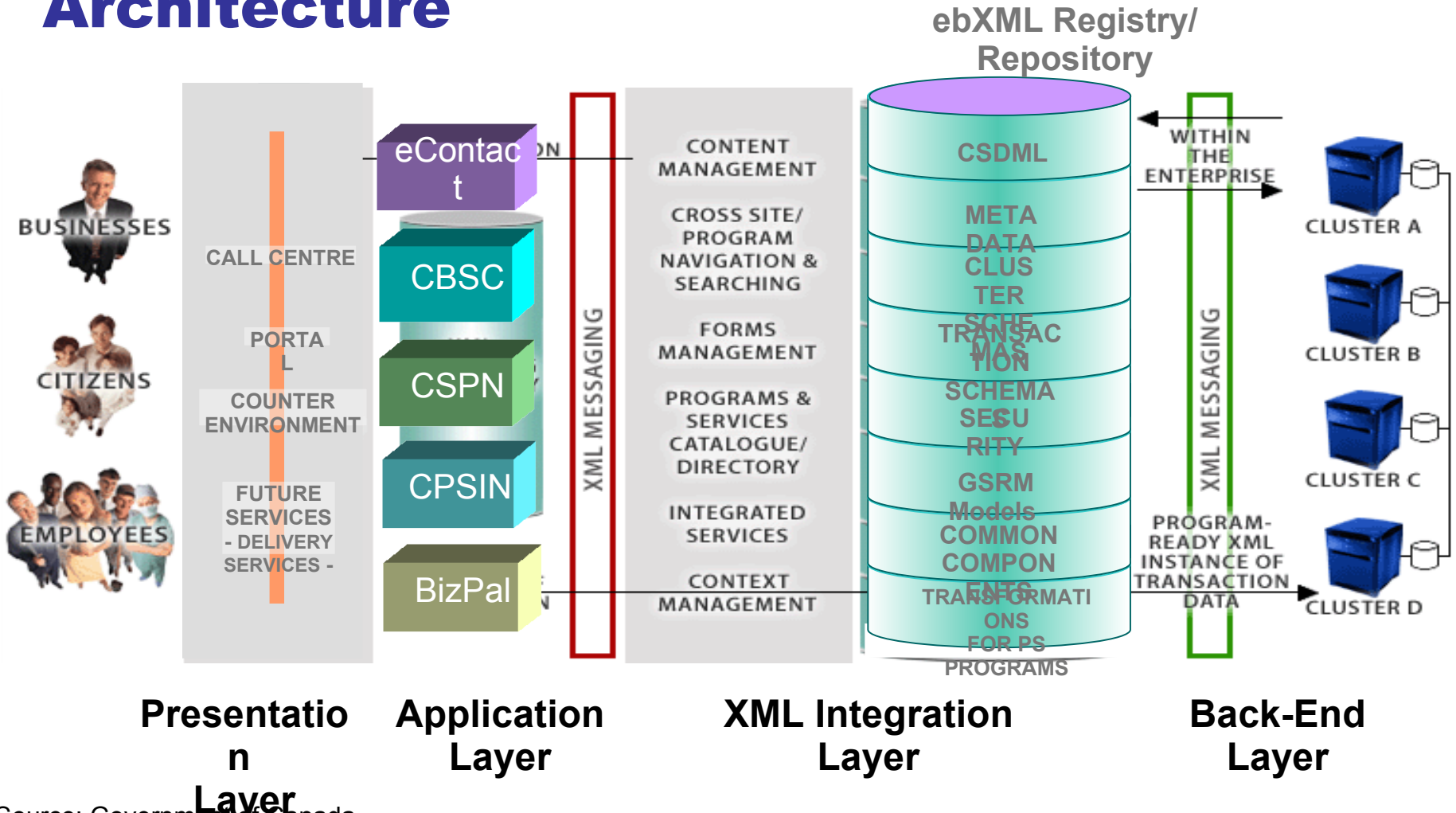
Adoption within Governments

- Governmental bodies are prominent among ebXML Registry adopters for electronic information management and dissemination
 - Finland: XML Schemas and eForms
 - UN/CEFACT, EDIFrance: eBiz reference data
 - US NIST: Clinical documents
 - Taiwan: eGovernment Platform
 - Korea: Central Registry and Repository (REMCO)
 - Canada: Federated SOA Registry

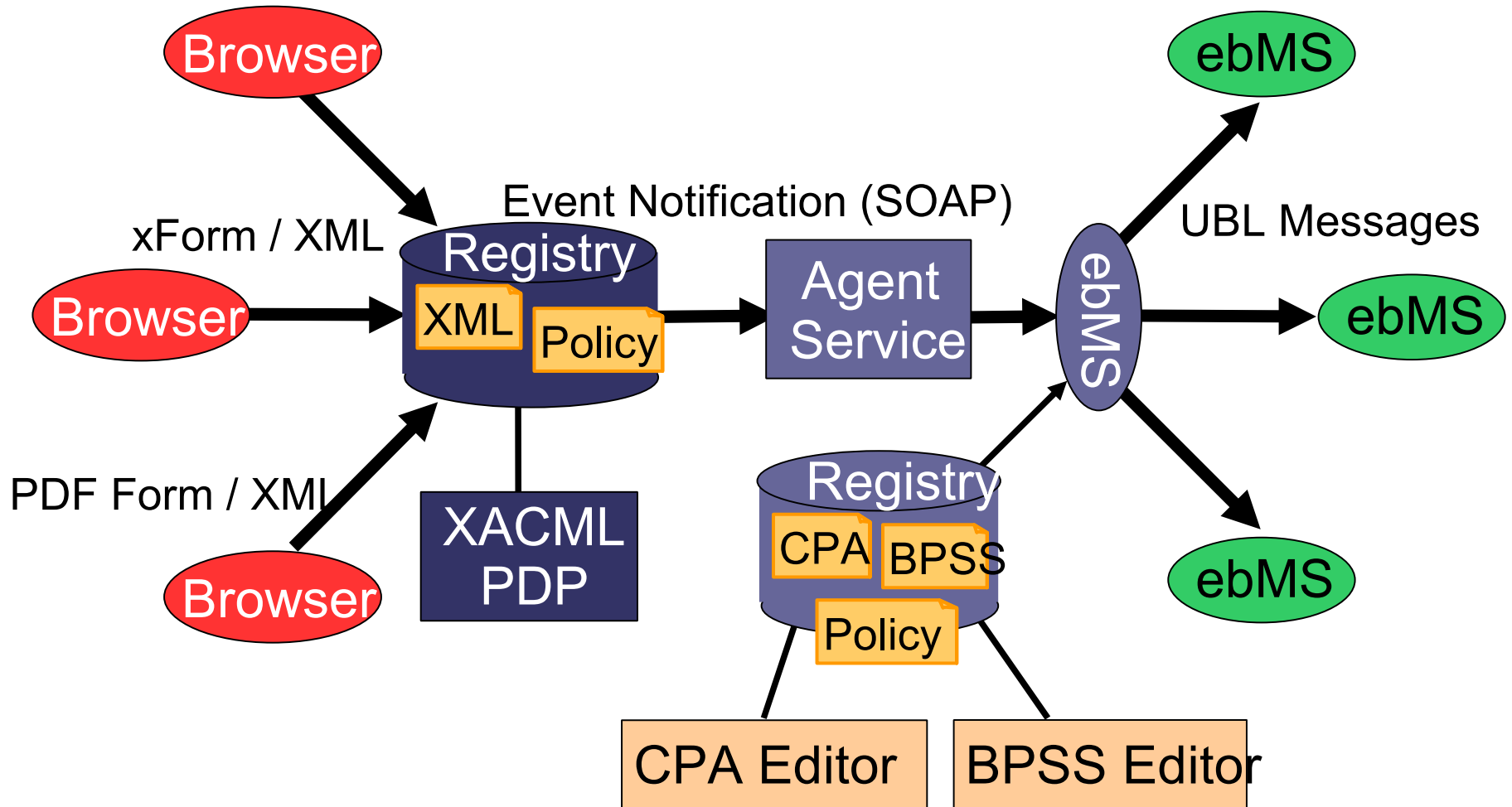
Case Study: Government of Canada/Ontario

- Vision: Improve service quality to Canadian people and businesses through cost-effective eServices at all levels of government
- Target: Leverage the power of XML to deliver those services via collaboration across jurisdictions
- Strategy: Enable service delivery infrastructure by utilizing a federated registry and repository

Government of Canada (2): Registry/Repository enables e-Government Architecture



Epidemic Management: Working With Other Technologies and Standards



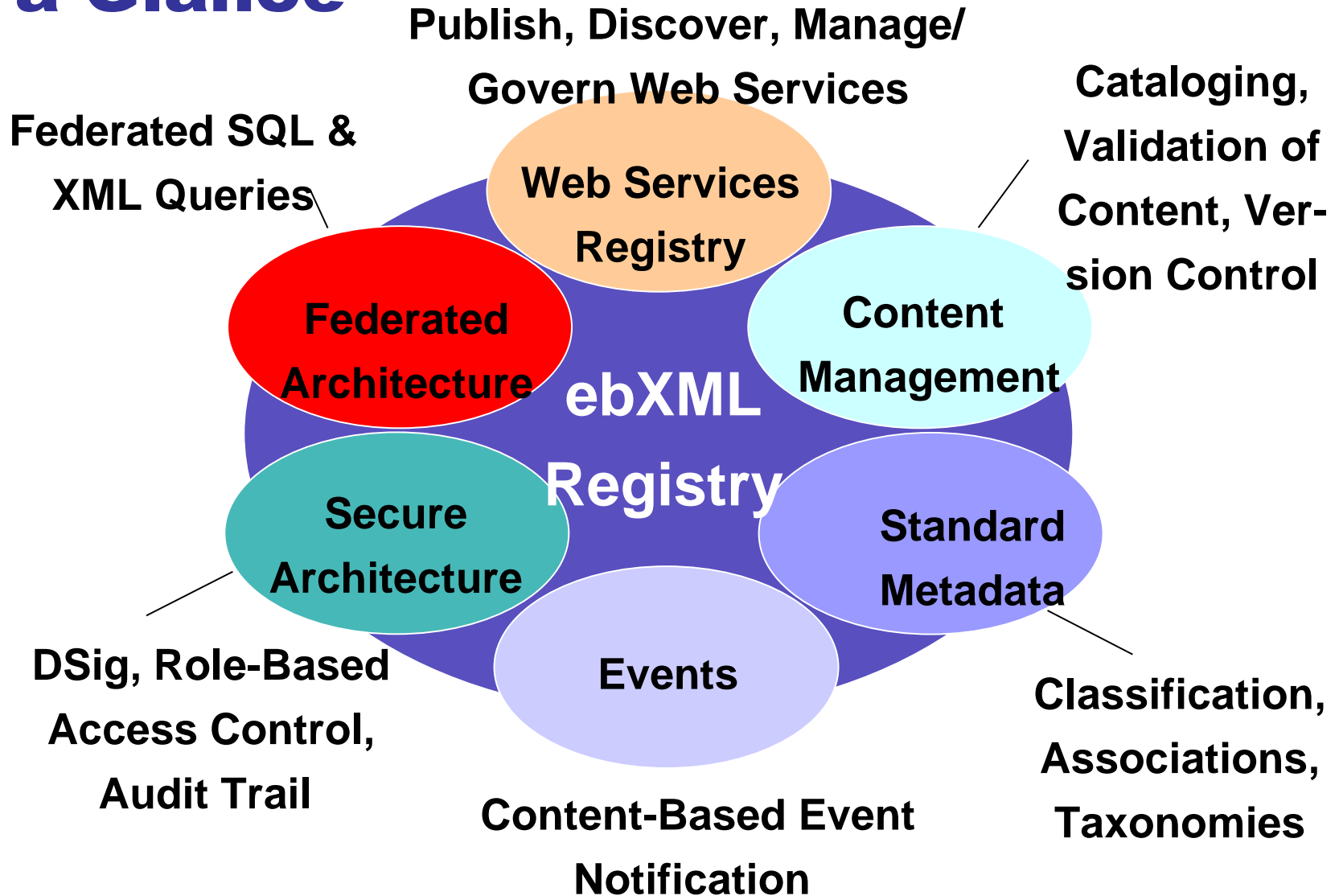
The Specifications

- ebXML Registry Information Model
 - Defines what metadata and content can be stored in the registry
- ebXML Registry Services and Protocols
 - Defines the services and service interfaces provided by the registry
 - Defines the API for accessing the registry
- ISO 15000 Standard, Part 3 and 4

Profiles Implement Business Context

- Enable interoperability within and across domains
- Define restriction/extension requirements of usage
- Current examples of profiles include
 - Web Services Profile
 - WSRP (Remote Portlets) Profile
 - Open GIS Profile
 - HL7 Profile
 - IHE Cross-Enterprise Document Sharing (XDS)
 - ebXML Core Components Profile

Key ebXML Registry Features at a Glance



Key Features and Services

- **Standards:** Provides standards-based way to manage information assets
- **Classification and affiliation:** Manages user-defined organization of and relationships among content and metadata
- **Validation and cataloging:** Enforces conformance of content to user-defined standards
- **Lifecycles:** Governance capabilities for managing information asset lifecycles

Key Features and Services (2)

- **Query:** Provides flexible mechanisms for content discovery
- **Security:** Manages secure access to information assets
- **Event notification:** Facilitates event-based delivery of information to appropriate personnel or systems
- **Federation:** Enables integration of information assets across organizational boundaries

ebXML Registry 3.0: A Brief Demonstration

New Features in ebXML Registry 3.0

<i>Feature</i>	<i>Description</i>
HTTP Protocol Binding	<ul style="list-style-type: none"> ▶ Web Browser client to access to registry using HTTP 1.1 protocol ▶ Simple content retrieval
Registry Managed Version Control	<ul style="list-style-type: none"> ▶ Robust version control mechanisms based on the DeltaV/WebDAV protocol
Query Enhancements	<ul style="list-style-type: none"> ▶ Iterative query support ▶ Parameterized stored queries ▶ Improved Filter Query syntax
Content Management Services	<ul style="list-style-type: none"> ▶ Content validation ▶ Content cataloging ▶ Content-based discovery
Cooperating Registries Support	<ul style="list-style-type: none"> ▶ Distributed content/metadata ▶ Federated queries ▶ Replicated content/metadata ▶ Object relocation
Event Notification	<ul style="list-style-type: none"> ▶ Publish/subscribe capabilities

New Features in ebXML Registry 3.0 (2)

<i>Feature</i>	<i>Description</i>
Security Enhancements	<ul style="list-style-type: none">▶ XACML-Based Access Control Model▶ SAML-Based Federated Identity Management
Improved Extensibility	<ul style="list-style-type: none">▶ Easier to define new types of requests and responses
Improved Identifiers	<ul style="list-style-type: none">▶ Human-Friendly URN-based Identifiers

Key Benefits of ebXML Registry

- Provides standard way to manage information assets
- Manages user-defined organization of and relationships among content and metadata
- Enforces user-defined standards for content
- Includes capabilities for managing and governance of information asset lifecycles

Key Benefits (2)

- Provides flexible mechanisms for content discovery
- Manages secure access to information assets
- Facilitates event-based delivery of information to appropriate personnel or systems
- Enables integration of information assets across organizational boundaries

Future Directions

- Interoperability testing
- Conformance specification
- Semantic content management
- More profiles (e.g. Dublin Core)
- More protocol bindings (SMTP, RM, ebMS, etc.)

Summary

- ebXML Registry is a standard for secure, federated information management
- One registry supporting both SOA and eBusiness use cases
- Extensibility enables domain-specific profiling of Registry capabilities
- ebXML Registry is being deployed in diverse applications by organizations worldwide

Related Links

- OASIS ebXML Registry Technical Committee
 - <http://www.oasis-open.org/committees/regrep/>
 - ebXML Registry Information Model v3.0
 - ebXML Registry Services and Protocols v3.0
- We need your feedback – Send e-mail to:
 - Regrep-comment@lists.oasis-open.org
- Articles on ebXML Registry 3.0 standard
 - <http://xml.coverpages.org/ni2005-02-14-a.html>
 - Searchwebservice article
- ebXML Registry meta-link page
 - <http://ebxmlrr.sourceforge.net/tmp/ebXMLRegistryLinks>

ebXML Registry 3.0: An Overview Finish