



## ebXML: introduction for HL7

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Title slide for the presentation.



## Preview

- x What is ebXML?
- x ebXML mission, vision, concepts
- x ebXML architectures
- x Other related standards
- x ebXML today (and tomorrow)

Summary of topics discussed in the presentation.



## What is ebXML? (1)

- × Electronic Business Extensible Markup Language
- × Joint initiative of UN/CEFACT and OASIS
  - UN/Centre for Trade Facilitation and Electronic Business
  - Organization for the Advancement of Structured Information Standards
- × Supported by industry and standards world
  - × Sun, IBM, CommerceOne, Iona, webMethods...
  - × RosettaNet, EDI/INT (AS1, AS2), OBI, OTA...
- × <http://www.ebxml.org/>

First of four "What is ebXML?" slides:

This slide describes who launched the ebXML initiative, who is supporting it, and where to go for basic information.



## What is ebXML? (2)

- × A layered framework of specifications for e-business:
  - × Business Process (BP)
  - × Core Components (CC)
  - × Collaborative Partner Profiles and Agreements (CCP/CPA)
  - × Registry/Repository (Reg/Rep)
  - × Message Service (TR&P)
- × Two other important efforts:
  - × Technical Architecture
  - × Quality Review

Second of four "What is ebXML?" slides

This presents the five layers of the ebXML e-business framework, starting at the highest level and descending down to the wire-level. It also mentions the technical architecture description and quality review process, which keep the effort honest.



## What is ebXML? (3)

- × International: membership and plenary meetings in North America, Asia, Europe
- × Many significant endorsements:
  - × RosettaNet
  - × GCI
  - × DISA
  - × ASC X12
  - × Several XML-related companies
  - × Korean government

Third of four "What is ebXML?" slides:

This slide makes the point the ebXML enjoys support and participation from around the globe, and that the effort has garnered several important endorsements.



## What is ebXML? (4)

- × Phase 1: November 1999 to May 2001 to develop family of specifications to Version 1.0
- × Phase 2:
  - × OASIS TCs take over Message Service, Reg/Rep, and CPP/CPA in May 2001
  - × UN/CEFACT takes over Business Process and Core Components in May 2001, creates eBusiness Transition Working Group (eBTWG)

Fourth of four "What is ebXML?" slides:

This provides the phases in which ebXML is delivering its work products. In May 2001, ebXML voted to accept all of its specifications either as full specifications or as technical reports to be developed into full specifications. Since then the ongoing work has been divided between the UN and OASIS.



## ebXML mission

- x Provide an open XML-based infrastructure enabling the global use of electronic business information in an interoperable, secure and consistent manner by all parties*
- x Bring benefits of traditional EDI to SMEs (small and medium-sized enterprises) – social agenda
- x Royalty-free (vs. RAND) availability

## ebXML Mission:

It's important to note that the technical effort is also motivated by a desire to enable second- and third-world economies to participate in the internet economy without having to incur the high cost of EDI. To that end, the notion of royalty-free licensing of ebXML specifications is a key consideration.



## ebXML vision

- × A global electronic marketplace where enterprises of any size, anywhere can:
  - × Find each other electronically
  - × Conduct business through the exchange of XML-based messages:
    - × Using standard message structures
    - × According to standard business-process sequences
    - × With clear business semantics
    - × According to standard or mutually agreed trading partner agreements
    - × Using off-the-shelf purchased business applications

## ebXML vision:

This slide details what should be possible with the deployment of ebXML-compliant applications and services.

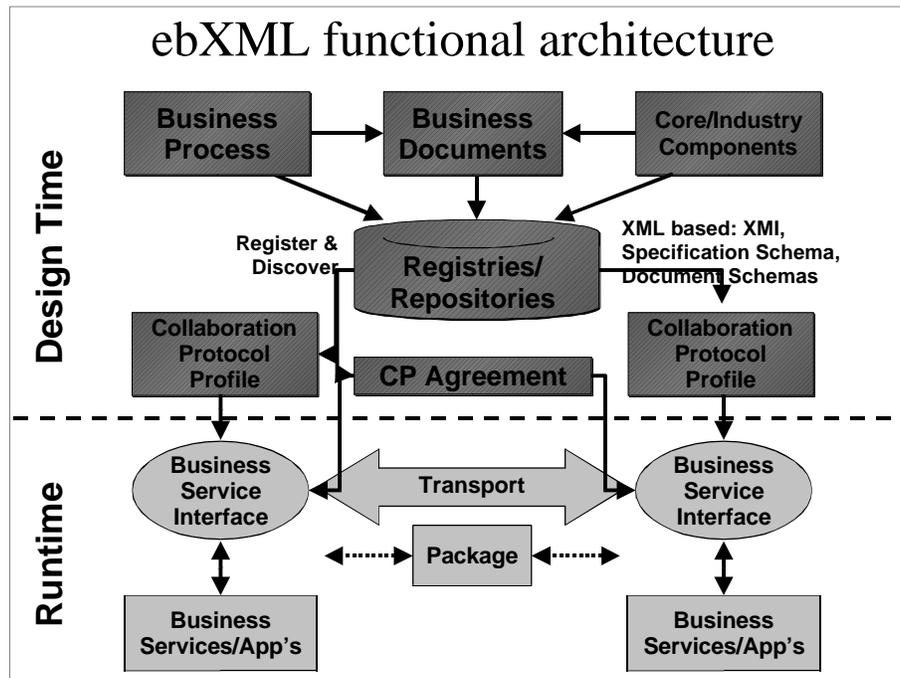


## Main ebXML concepts

- × Business messages – expressed in XML
- × Business processes – defined in UML, expressed in XML
- × Business service interface – handles one role in a business process – expressed in XML
- × Trading partner agreement – specifies protocol properties required for two specific business service interfaces to talk to each other – expressed in XML
- × Transport and routing layer – moves the actual XML data between business service interfaces

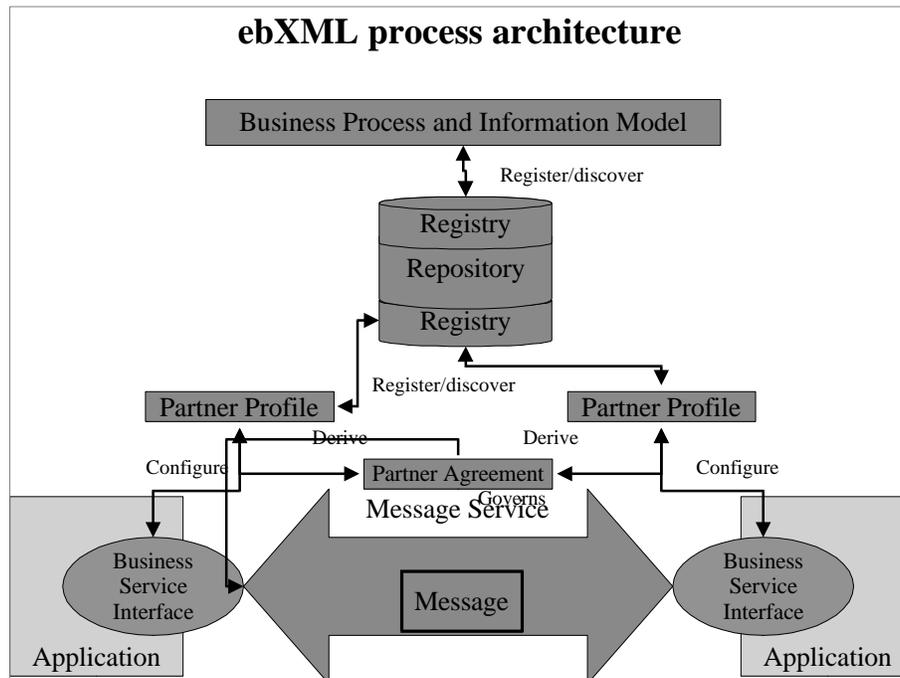
## Main ebXML concepts:

This slide lists the components of ebXML-based enterprise, elaborated in subsequent charts and graphics. Using software and services that conform to ebXML specifications, an enterprise can generate messages that enact business processes. These messages can be sent from and received at standard service interfaces. They can rely on a fully standard transport environment.



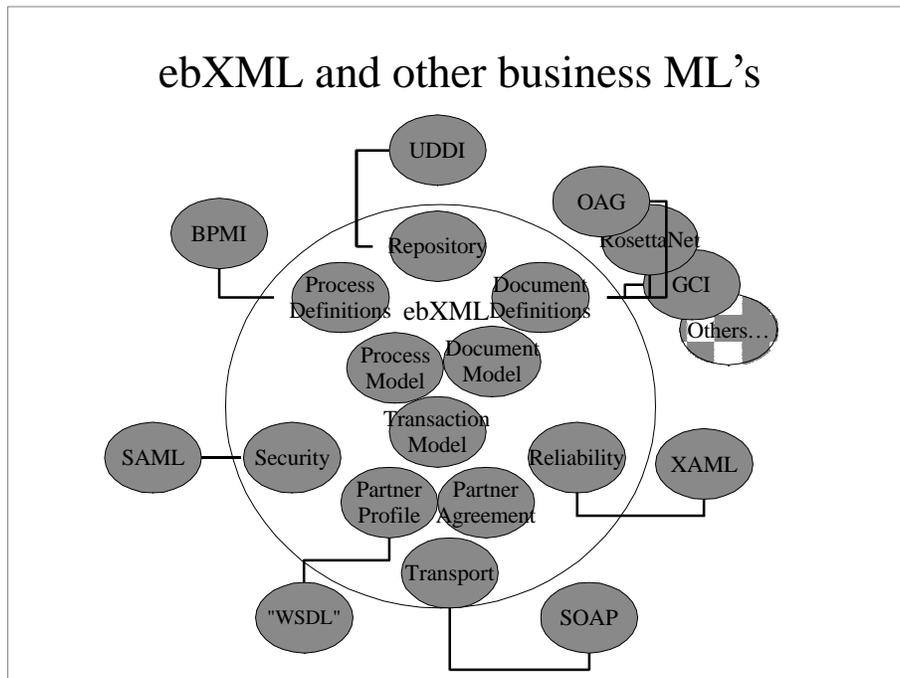
## ebXML functional architecture:

This slide divides the ebXML family into specs for design-time features of services (BP, CC, CCP/CPA, Reg/Rep) and runtime features (TR&P). A business service interface, derived from a CPA, enables services to consume and produce ebXML-compliant messages, even if those business services and applications themselves are proprietary.



ebXML process architecture:

This slide parallels the previous functional architecture diagram but illustrates how information flows among the different components to create necessary parts of an ebXML service.



## ebXML and other MLs:

This slide shows how the ebXML models at the center relate to ebXML service features lined up on the inside of the circle. Those ebXML features in turn parallel other standards efforts being developed in the marketplace:

- ebXML security corresponds to SAML (Security Assertion Markup Language under development at OASIS)
- ebXML reliability corresponds to XAML (Transaction Authority Markup Language)
- ebXML Partner Profiles and Agreements correspond to WSDL (Web Services Description Language proposed at the W3C but not yet a sponsored W3C activity)
- ebXML Process Definitions correspond to the BPMI (Business Process Management Institute) effort and to the newly proposed WSFL (Web Services Flow Language from IBM, also not yet undergoing development as a standard)
- ebXML Registry/Repository complement the UDDI (Universal Description and Discovery Initiative) effort
- ebXML Core Components and Document Definitions correspond to several other efforts, such as RosettaNet, GCI (Global Commerce Initiative) and others.
- ebXML Transport corresponds to and embraces SOAP (Simple Object Access Protocol, which is being developed into XMLP [XML Protocol] at the W3C).



## ebXML alignment with HL7, et al.

BP – BPMI, "WSDL," "WS\*L" – Interaction Model (RIM)

CC – RosettaNet, GCI – HL7 CDA and HMD (RIM)

CPP/CPA – "WSDL," BPMI – Interaction Model (RIM)

Reg/Rep - UDDI – HL7 repository

TR&P – SOAP, XAML – Control/Query

## Another view of ebXML alignment:

This slide demonstrates how the ebXML family of standards corresponds logically to different parts of the HL7 body of standards as well as to other web services standards illustrated in the previous slide..



## ebXML and HL7

- × HL7 delivered the first healthcare track in an ebXML proof-of-concept demo in Vienna, Austria, May 9-10
- × (Sun was pleased to sponsor)
- × HL7 board endorses ebXML Message Service, May 29
- × Will HL7 consider endorsing other ebXML standards ??

### ebXML and HL7 today:

This slide reviews HL7's participation in the ebXML proof-of-concept demo. POC demos are a regular part of ebXML plenary meetings, and HL7 payloads added a measure of variety and seriousness to the demo itself. (Sun was pleased to provide underwriting funds to enable HL7's participation.)



## HL7-ebXML demo scenario

- × HL7 "payload" in ebXML messages:
  - × Remote patient registration
  - × CDA report and registration sent to "portal"
  - × Lab ordered from hospital
  - × Lab results sent to portal
  - × Registration, CDA, lab order and results in clinical database (portal)

## HL7-ebXML demo scenario:

This slide details the different HL7-related transactions in the ebXML POC demo. For more information please consult Liora Alschuler and the HL7 demo team.



## Assessments

- × ebXML provides a business-worthy infrastructure for deploying services
- × HL7 messages include complex content with security requirements that ebXML addresses
- × HL7 & ebXML ... this is a pretty good match!

## Assessments:

This is just my opportunity to express an opinion about the current state and potential of ebXML as an e-business framework. That HL7 was able to build a credible healthcare track for the ebXML POC demo in only a few weeks seems to support these assessments. As HL7 work progresses, I hope there will be future opportunities for ebXML-HL7 collaboration.



Thanks!

Questions?

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Please let me hear from you with your questions and comments.