

XML in Financial Industries

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OASIS

What is XML?

- A method for structuring portable data; meta-language for defining structured languages
- Designed for information exchange on networked systems
- Allows reuse of content because data is described
- Provides context on how to use data
- XML is international (via Unicode)
- Enables new Web applications
- True subset of SGML, in use since mid 1980s

XML Goals

- Enable internationalized media-independent electronic publishing
- Allow industries to define platform-independent protocols for the exchange of data, especially the data of electronic commerce
- Deliver information to user agents in a form that allows automatic processing after receipt
- Make it easier to develop software to handle specialized information distributed over the Web

XML Goals (cont.)

- Make it easy for people to process data using inexpensive software
- Allow people to display information the way they want it, under style sheet control
- Make it easier to provide metadata -- data about information -- that will help people find information and help information producers and consumers find each other

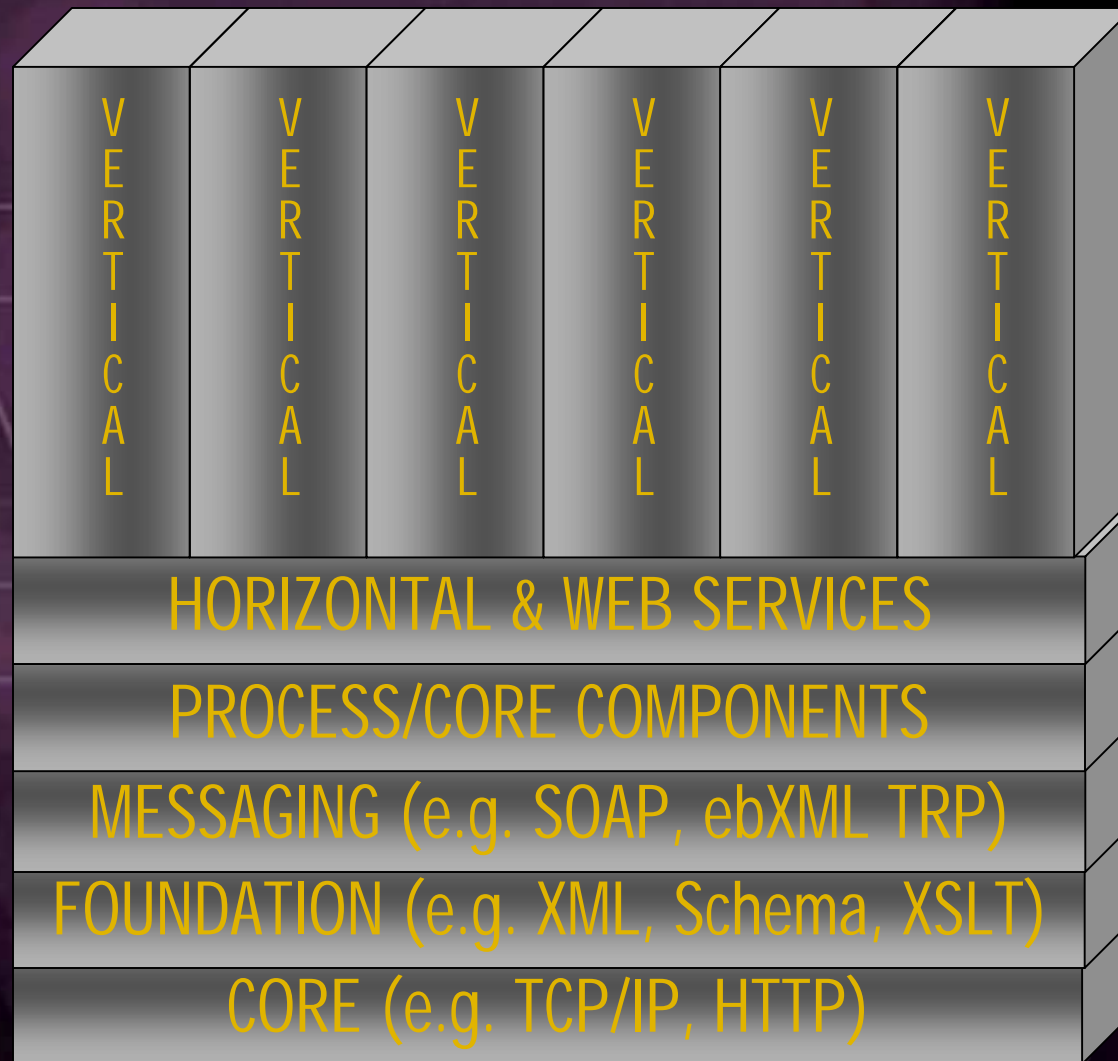
Uses of XML

- Specify data designed to solve specific problems
- Database schemas
- Object interfaces
- Workflow and forms routing
- Transactions
- Multimedia
- Application interoperability

The XML accomplishment

- XML is a huge open standards victory for users
- Freely extensible
- Human-readable
- Machine-comprehensible
- Open standard
- Easy to implement
- Internationalized
- But the work isn't finished....

The Complete XML Picture



Why not HTML?

- HTML is a pre-defined tag set; can't be customized to describe your data
 - (i.e. HTML is not a meta-language)
- HTML is designed to describe format/presentation, not data
 - e.g. how to differentiate between an account number and a price using HTML?

Why not EDI?

- EDI is heavy and costly to implement
 - used mostly by very large organizations
 - too costly for SMEs
- EDI difficult to implement many-to-many information exchange, or to dynamically add new partners
 - biased towards one-to-one mapping between partners

XML Adoption

- Data transfer and electronic commerce are driving XML adoption
- These functions require exchanges within and among trading communities
- Exchanges require common vocabularies (languages defined by the XML meta-language)

Industries Developing XML Applications

(A-C only; see XML.ORG for a complete list)

- Accounting
- Advertising
- Architecture and Construction
- Astronomy and Space
- Automotive
- Aviation and Aerospace
- Banking
- Biblical Scholarship
- Bibliographies
- Business Strategy/Business Intelligence
- Catalogs
- Communication
- Communications: Internet
- Communications: Wireless
- Content Management
- Content Syndication
- Customer Relationship Management
- Customs

Specific XML Initiatives

- Human Resources (HR-XML)
- Purchasing Management (NAPM-USA)
- Insurance (ACORD)
- Contracts Management (CommonAccord)
- Advertising and Media (adXML)
- Electronic Commerce (CBL, ebXML, etc.)
- Energy Trading and Consumption (ESTG)
- Knowledge on the Web (KnowW)
- Travel (OTA)
- (hundreds more....)

Vocabularies for industries

- Data exchange only works if partners agree on vocabulary
- Communities recognize this and are aggressively developing XML vocabularies
- Each vertical industry should have its own vocabularies
 - e.g. Travel and Health Care both sell services, but have different vocabularies: "passenger" and "patient" are the same entity

Industry Cautions

- For XML to be useful in an industry, common, agreed-upon vocabularies must be created
- Each industry should have vocabularies, but not too many
 - How many is too many?
 - When is convergence necessary?

What Could Go Wrong?

- Too many initiatives
- Too few experts
- Incompatible industry vocabularies
- Ill-conceived vocabularies
- De-facto standards or vendor-proprietary implementations and extensions
 - “800 pound gorilla”

Cautions

- Beware of hype
 - You don't "do" XML
 - XML is just a tool; a means to an end, a solution to a problem
- XML by itself is useless; XML doesn't solve problems, but you can use XML in order to solve problems
- XML itself is the smallest part of creating an XML application; topic knowledge and data modeling is most important

Advice

- Get involved in the development of standards and specifications that you will use
 - Do you want government or a large vendor telling you what to do?
- Don't accept standards or specifications that you haven't had a say in the development of
 - "Just Say No" to standards you have no input to

Alphabet Soup – Financial Industry Standards

- ADR
- BIPS
- BITS
- DRA
- ebXML
- FinXML
- FISD
- FIXML
- FpML
- FSTC
- IFX
- IRML
- ISO 15022
- MarketsML
- MDDL
- MDML
- NewsML
- NTM
- OFX
- RIXML
- SDML
- SIIA
- STPML
- SWIFTML
- XBRL

D E S I G N
D E V E L O P
D E P L O Y

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XML In Finance

- Banking Industry Technology Secretariat (BITS)
- Financial Services Technology Consortium (FSTC)
- Digital Receipt Alliance
- Financial Information eXchange protocol (FIXML)
- FinXML
- Financial Products Markup Language (FpML)
- Network Trade Model (NTM)
- S.W.I.F.T. (SWIFTML)

XML in Finance (cont.)

- Straight Through Processing Markup Language (STPML)
- Interactive Financial Exchange (IFX)
- Investment Research Markup Language (IRML)
- XML Business Reporting Language (XBRL)
- Research Information Exchange Markup Language (RIXML)
- Market Data Markup Language (MDML)
- Open Financial Exchange (OFX)

Time for Collaboration/Consolidation?

- Individually these specifications are excellent; collectively they may be too many
- No one specification could or should do everything, but... how many specifications are needed?
- Is it possible to consolidate a few of these?
 - Is there overlap in purpose, use, or users of any of these specifications?

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Industry-Standard Specifications for Interoperability

OASIS

“OASIS provides a framework for XML interoperability that is critical to the future success of electronic business.”

OASIS puts the control of XML specifications firmly in the hands of those who will use them.

Jon Bosak, Sun Microsystems
“Father of XML”

Organizer of the Working Group that Created XML

OASIS

**“The international presence of OASIS,
especially the expertise and resources
that its members bring, is very
significant and accelerates global
development efforts such as ebXML.”**

Ray Walker, United Nations/CEFACT

OASIS

“ Since the dawn of the markup language industry, OASIS has been the vendor-neutral focus for interoperability. It is a vital force for the stability and effectiveness of systems that implement structured information standards. ”

Dr. Charles F. Goldfarb
“Father of Markup Languages”
Editor of ISO 8879 (SGML)

OASIS

**“ Developers of XML vocabularies
and schemas look to OASIS as a
central community resource that is
open and objective. ”**

Lon Pilot
HR-XML.ORG

OASIS

Overview

- OASIS is a member consortium dedicated to building systems interoperability specifications
- We focus on industry applications of structured information standards, such as XML, SGML, and CGM.
- Members of OASIS are providers, users and specialists of standards-based technologies and include organizations, individuals and industry groups.
- International, Not-for-profit, Open, Independent
- Successful through industry-wide collaboration

The Work of OASIS

- Accomplished through Technical Committees (TC) and Member Sections
- Any OASIS member may initiate a new TC, or participate in an existing TC
- Any group of OASIS members, such as those desiring to collaborate on a particular industry application, may be designated as a Member Section

OASIS Value

- Comprehension of and Support for the Standards Process
 - OASIS experts charter the course to rapid development and adoption
- Democratic Process including an Elected Board of Directors and comprehensive Intellectual Property and Anti-Trust Policies
 - Work is guaranteed to be representative of the industry as a whole, not any one vendor's view
- Global Visibility and Critical Partnerships
 - OASIS draws participation from around the world and aggressively promotes the work – to ensure viability and adoption

OASIS Mission

- Educate and create awareness of XML efforts
- Serve as an independent information resource for the XML community
- Identify and resolve interoperability issues
- Facilitate XML application development
- Advise and inform other standards bodies, industry groups and governments

Sponsor Members

- Access360
- Adobe Systems, Inc.
- AND Data Solutions B.V.
- Arbortext, Inc.
- Auto-trol Technology Corporation
- Aventail Corp.
- Baltimore Technologies
- B-Bop Associates
- BEA Systems Inc.
- Bentley Systems
- Boeing Commercial Airplanes
- Bowstreet
- Bridge
- Chrystal Software
- Cohesia Corporation
- Commerce One
- Critical Path
- DataChannel, Inc.
- Dataloom, Inc.
- Deutsche Post AG
- Documentum
- EADS Airbus SA
- empolis
- Enigma Incorporated
- Excelergy Corporation
- eXcelon Corporation
- Extensibility
- Extricity Software
- First Call Corporation
- Hewlett-Packard Company
- IBM Corporation
- Informix Software, Inc.
- Infoteria Inc.
- Innodata Corporation
- Interwoven, Inc.
- IPNet Solutions
- ITEDO Software GmbH
- Jamcracker
- Logistics Mgmt Institute
- Mediaplex
- Mercator Software
- Microsoft Corporation
- Netegrity, Inc.
- Netfish Technologies
- Netscape/AOL
- NextPage, LC
- NII Enterprise Prom. Assoc.
- Nimble Technology
- NIST
- ObjectSpace
- Pearson Education
- Planet 7 Technologies
- Popkin Software & Systems
- Reuters Limited
- Sabre
- SAP
- Sequoia Software Corporation
- Silverstream Software
- SoftQuad Software Inc.
- Software AG
- Sterling Commerce
- StreamServe, Inc.
- Sun Microsystems
- Synth-Bank
- The Tamalpais Group, Inc.
- Thomas Technology Solutions
- U. S. Defense Information Systems Agency
- Virtual Access Networks
- Visa International
- Wavo, Inc.
- webMethods, Inc.
- Whitehill Technologies, Inc.
- Xerox Corporation
- XML Global
- XMLSolutions Corporation
- Xyvision Enterprise Solutions Inc.

D E P L O Y .

ORACLE
BASIS

OASIS standards process

- Standards are created under an open, democratic, vendor-neutral process
 - Any interested parties may participate, comment
 - No one organization can dictate the standard
 - Ensures that standards meet everyone's needs, not just largest players'

Where OASIS fits

OASIS, industry
associations

Vertical industry applications

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Horizontal, e-business framework

W3C, ISO

XML, XSL, namespace, DOM, etc.

IETF

Core protocols, messaging; e.g. HTTP

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What OASIS offers the Financial Industry

- Time to Market: don't waste your time and effort setting up
 - Committee process
 - Infrastructure (web site, mail lists)
 - IPR policy
 - Copyright protection
 - Program Management
 - Marketing/Promotion
 - Anti-trust
- Use your technical expertise on technical work, not on setting up administrative overhead

OASIS

What OASIS offers the Financial Industry (cont.)

- Vendor and industry neutral
 - A neutral environment where competitors can work together
 - No one player can dominate
 - Not restricted to single industry or sub-industry
- Open to all interested participants
- Keep your own identity
 - OASIS Member Section

Technical Competency

- What if it's not your core competency?
- What if you've never done it before?
- How will you get the resources to
 - Research and develop?
 - Publish, Promote?
 - Maintain?
- How can you gain acceptance of the result?

Democratic Process

- Open to all interested parties
- All discussion open to public comment
- One organization/One vote
- Resulting work is guaranteed to be representative of the industry as a whole, not just any one vendor's view

Other OASIS Initiatives

- ebXML
- XML.org
- XML Cover Pages



ebXML

- Joint OASIS, UN-CEFACT Initiative for the creation of an e-commerce framework
- Over 2500 participants from 60 countries
- Collaborated with other initiatives and standards development organizations; built on the experience and strengths of existing EDI knowledge
- Enlisted industry leaders to participate and adopt ebXML infrastructure

ebXML delivers by

- Using the strengths of OASIS and UN/CEFACT and DISA/X12 to ensure a global open process
- Build on business process learned from decades of EDI experience, using lightweight XML syntax
- Creating the technical specifications with the world's best experts
- Collaborating with other initiatives and standards development organizations

ebXML committees

- Requirements
- Business Process
- Technical Architecture
- Core Components
- Transport/Routing and Packaging
- Registry and Repository
- Trading Partners
- Technical Coordination and Support
- Marketing, Awareness and Education
- Proof of Concept

Continuing ebXML Work

- Specifications completed May 2001; available at www.ebxml.org
- Infrastructure work continuing at OASIS
 - Messaging
 - Collaborative Partner
 - Interoperability, Implementation, Conformance
 - Registry & Repository
- Content-related work continuing at UN/CEFACT
 - Business Process
 - Core Components

XML.org

- Central clearinghouse for accessing XML schemas, vocabularies and related documents
- Self-supporting, non-commercial resource created by and for the community at large
- Foster collaboration within and between industries

XML.org

- Features

- XML.org Registry
- XML.org Catalog
- XML.org Portal
- xml-dev mail list

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The XML Cover Pages

- The authoritative resource for XML info
 - News
 - Press Releases
 - Product Information
 - Specifications
 - Whitepapers
- <http://xml.coverpages.org/>

Getting Involved

- Evaluate current related vertical industry XML initiatives
- Determine what benefits OASIS can offer to
 - New efforts
 - Consolidation of existing efforts
- More information about OASIS available on our web page
 - www.oasis-open.org

- www.oasis-open.org
- xml.coverpages.org/
- www.xml.org
- www.ebxml.org

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