Interoperability Summit

XBRL.org and Interoperability
eric.e.cohen@us.pwcglobal.com
Agenda

- Background on XBRL International
- XBRL's taxonomies
- XBRL GL, the link between transactions and business reporting
- Reusing XBRL International's content within other organization's standards
- XBRL's support for Interoperability
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Drivers For Change

- Profession struggling to remain relevant
  - Internet
    - Changing Business Information Environment
    - Expectations
    - Web tools come up short
  - Markets in crisis
    - Adelphia, Andersen, Enron, Rite Aid, Tyco,
    - Need for Transparency
      - Value Reporting
  - Along comes XML ...
Simple problem:
15,000 results in a typical search
(e.g. “IBM Fixed Assets”)

- **WiseTrack: Fixed Asset Tracking Software** - Asset Tracking, Fixed Assets, Asset, IT Asset Management, asset management, Inventory, Tool, Document, Check In/Out, BarCode Reading/Printing, Portable Data Collection System
  --http://www.wisetrack.com/


- **Fixed Assets** - Infinium Fixed Assets For the IBM AS/400 This Infinium business solution: Utilizes the fully interactive capital asset information and management system, designed for multicompany, multidivisional processing and reporting Analyzes assets by..
  --http://www.infinium.com/html/fixed_assets.html

- **Intellitrack Fixed Asset** - Data Index is located near Seattle, WA. We are a manufacturer of ISBN, UPC and other bar code film masters and data files, bar code labels, blank and custom direct thermal and thermal transfer labels, and custom flexographic labels. We also sell and
  --http://www.carnot.com/dataindex/di_fixed.htm
Searching for the word “Mercury” on the Web can provide a wide variety of results—too many—such as:

- The Mercury News
- Mercury Systems, Inc.
- Mercury & WNBA
- The water calls…what does it say to you?
- Cougar
- Content—without Context
## Content in Context

<table>
<thead>
<tr>
<th>Industry</th>
<th>&lt;Symbol&gt;</th>
<th>&lt;Category&gt;</th>
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</thead>
<tbody>
<tr>
<td>Auto Industry</td>
<td><img src="image" alt="Arrow" /></td>
<td><code>&lt;CAR-MODEL&gt;</code></td>
</tr>
<tr>
<td>Chemical Industry</td>
<td><img src="image" alt="Arrow" /></td>
<td><code>&lt;SYMBOL&gt;</code></td>
</tr>
<tr>
<td>Publishing or Mythology</td>
<td><img src="image" alt="Arrow" /></td>
<td><code>&lt;DEITY&gt;</code></td>
</tr>
<tr>
<td>Music Industry</td>
<td><img src="image" alt="Arrow" /></td>
<td><code>&lt;RECORD-LABEL&gt;</code></td>
</tr>
<tr>
<td>Aerospace Industry</td>
<td><img src="image" alt="Arrow" /></td>
<td><code>&lt;PROGRAM&gt;</code></td>
</tr>
<tr>
<td>Astronomy</td>
<td><img src="image" alt="Arrow" /></td>
<td><code>&lt;PLANET&gt;</code></td>
</tr>
</tbody>
</table>
Today over 10,000 US public companies release financial results quarterly...

But the contents are not organized. The data must be reentered into computer applications for interpretation.

What if financial documents included both content ($75,453) and structure ($75,453 = net income for Q1/2001)?
A proposed industry standard for the publishing, exchange and analysis of financial and business reports and data.

- Information is entered only once using an Internet-based tool for preparing and publishing all financial and business documents with automatic conversion to various formats.
- Information may be reliably extracted and analyzed across companies with no manual intervention.
- Supports current and emerging accounting standards.
- External focus is on CONTENT as well as DATA.
“Reuters’ reputation stands on its ability to communicate and the Extensible Business Reporting Language standard it has employed this week to publish accounts online is amongst the most significant of developments in promoting transparency in financial information.”

- Accountancy Age, 1 November 2001
Global Capital Markets

- "NASDAQ joins shoulder-to-shoulder in the effort of the XBRL consortium to adopt this new, freely-available technology because it feels that improving the distribution and analysis of corporate results, especially for the 10,000 companies not covered by Wall Street analysts will broaden the market for NASDAQ’s own trading services."

- Michael Sanderson
  - President, NASDAQ Europe
Different than B2B (Traditional) Supply Chain
Business Reporting Supply Chain

Processes
- Business Operations
- Internal Financial Reporting
- External Financial Reporting
- Investment and Lending Analysis

Participants
- Companies
- Financial Publishers and Data Aggregators
- Investors
- Trading Partners
- Management Accountants
- Auditors
- Regulators
- Software Vendors
The Solution: XBRL in 3 Parts

D14 GRE

Specification
Syntax and semantics of taxonomies and instances
XML, Namespaces, XML Schema, XLink

Taxonomies
us gaap, ias gaap, journal

Community
Accounting profession, developers, regulators, users, financial services, data aggregators … 150+

• Multi-dimensional
• Optimized for business reporting
  • Standardizing
    • Entity
    • Period
    • Scenario
    • Units
    • Calculation and presentation
  • Discoverable
  • Reusable payload
  • Extensible
    • More detail
    • Shared understanding
XBRL International

- XBRL activities occurring in—
  - United States
  - Canada
  - Australia
  - New Zealand
  - Hong Kong
  - China, PRC
  - Taiwan
  - Singapore
  - Japan
  - India
  - Germany
  - Netherlands
  - Denmark
  - France
  - Spain
  - Switzerland
  - Ireland
  - United Kingdom

- And on a global level through the—
  - International Accounting Standards Board
  - International Press Telecommunications Council
  - International Standards Organization
  - International Federation of Accountants
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Bridging eBusiness and eReporting

XBRL BUSINESS REPORTING

XBRL GL
Journal Taxonomy

Accounting Recognition

(e-)Business
X12, EDIFACT, XML INITIATIVES
Consortium – XBRL.org

Processes

- Business Operations
- Internal Financial Reporting
- External Financial Reporting
- Investment and Lending Analysis

Participants

- Companies
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- Attorneys
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- Management Accountants
- Auditors
- Regulators

Participants

Software Vendors

XBRL GL, the Journal Taxonomy

XBRL for Financial Statements

XBRL for Business Event Reporting

XBRL for Audit Schedules

XBRL for Tax Filings

XBRL for Regulatory Filings
Overall World of XBRL – Industry and Function

Agreement on data fields
Agreement on CONTENT
Taxonomy Roadmap: Jurisdictional

Financial Reporting Standards - Different jurisdictions

Illustrative Taxonomy Development Matrix

<table>
<thead>
<tr>
<th>Industry Specific Reporting</th>
<th>U.S.</th>
<th>IAS</th>
<th>Germany</th>
<th>Australia</th>
<th>JP</th>
<th>U.K.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commercial &amp; Industrial (C&amp;I) Companies</td>
<td>Done</td>
<td>…</td>
<td>…</td>
<td>…</td>
<td>…</td>
<td>…</td>
</tr>
<tr>
<td>C &amp; I, extended to Mutual Funds</td>
<td>…</td>
<td>…</td>
<td>…</td>
<td>…</td>
<td>…</td>
<td>…</td>
</tr>
<tr>
<td>C &amp; I, extended to Financial Services</td>
<td>…</td>
<td>…</td>
<td>…</td>
<td>…</td>
<td>…</td>
<td>…</td>
</tr>
<tr>
<td>C &amp; I, extended to Agriculture</td>
<td>…</td>
<td>…</td>
<td>…</td>
<td>…</td>
<td>…</td>
<td>…</td>
</tr>
<tr>
<td>Government/Federal Agencies</td>
<td>…</td>
<td>…</td>
<td>…</td>
<td>…</td>
<td>…</td>
<td>…</td>
</tr>
</tbody>
</table>
Unique CONTENT Driven Taxonomies

- Today’s reporting processes
  - Rework and delay
  - Ad hoc and non repeatable
  - No path forward
Lowering Business Reporting Costs

- Common interchange format and storage is good information management practice
  - Reduces redundancies & discrepancies
  - Repeatable processes using tools
  - A platform for continuous reporting

XBRL “Digital Bits”

- Accounting System
- Explanatory Text
- Third Party Information
- Printed Financials
- Regulatory Filings
- Web Site
- Tax Return
- Trade Filings
"We see XBRL as not only the future standard for publishing, delivery and use of financial information over the Web, but also as a logical business choice."

- John Connors, CFO, Microsoft on releasing his company’s financials in XBRL
<table>
<thead>
<tr>
<th>Features</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓ Language based on the World Wide Web Consortium XML and XML Schema standards.</td>
<td>➢ Widespread use of XML makes a low technology adoption hurdle for all parties</td>
</tr>
<tr>
<td>✓ Base language is a framework for attaching meaning and context to financial data items.</td>
<td>➢ General enough for GAAP financials, general ledger interfaces, benchmarking, etc.</td>
</tr>
<tr>
<td>✓ Base language is a framework for linking data items to supporting documents.</td>
<td>➢ Provides of information can incrementally add depth and value to existing reports.</td>
</tr>
<tr>
<td>✓ Reports (instance documents) can be self-contained.</td>
<td>➢ Easy to transport using different e-business protocols.</td>
</tr>
<tr>
<td>✓ Taxonomies (a.k.a. schemas, data dictionaries) approved by authoritative bodies, e.g. IASB.</td>
<td>➢ Accelerated application development, improved data comparability and availability.</td>
</tr>
</tbody>
</table>
### XBRL Value Proposition

<table>
<thead>
<tr>
<th>Features</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓ Multilingual, multicurrency data are not add-ons, but are built into the XBRL base language.</td>
<td>➢ Applications can take advantage of internationalized taxonomies without rewrites.</td>
</tr>
<tr>
<td>✓ Validation of data can be performed at any point in the report transmission cycle.</td>
<td>➢ Consuming parties get lower error rates on e-filings submitted.</td>
</tr>
<tr>
<td>✓ Data in a common XBRL file can be extracted and transformed for many reports.</td>
<td>➢ Producing parties get a lower cost of implementing e-filing submissions.</td>
</tr>
<tr>
<td>✓ XBRL formatted data can be embedded into other XML based standards (e.g. RIXML).</td>
<td>➢ Producers and consumers get re-use of XBRL aware software across the enterprise.</td>
</tr>
</tbody>
</table>
Adoption Stories

- Banking
- Regulatory
- Credit Risk Reporting
Are new accounts properly tagged?
Have old accounts been changed?
Is file internally consistent?

*SME = Small and Medium Enterprises
Australian Prudential Regulation Authority

XBRL@APRA:
Data collection, management, exchange and dissemination using the XBRL e-standard
FDIC Moving toward Real-time Reporting

- Blueprint for Leaner, Stronger FDIC: At a senior retreat, Powell lays out an ambitious agenda
  - Thursday, February 7, 2002 / By Rob Blackwell / American Banker

- WASHINGTON — Federal Deposit Insurance Corp. Chairman Don Powell outlined a vision for his agency on Wednesday that not only consolidated divisions but fundamentally redefined its mission.

- ...

- [O]fficials said that by the end of 2003 they want to be able to release call report data just a day after submission.

- ...

- "What he is doing is bringing in some real world perspective that today's marketplace demands immediate information, not information that is 90 days old," said Diane Casey, the president of America's Community Bankers.
Credit Risk Reporting

- GRE FIS
  - Data providers
  - Insurers
  - Lenders
- From EDI to XML
Looking Into The Crystal Ball

Source: XBRL Liaison representative Zachary Coffin, KPMG
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Turning Old Legacy Data

- Into New Legacy Data???
Turning Old Legacy Data

- Into New Efficiency Tool
Business Facts and Accounting

- Business events (sale, cash receipt)
- Transaction space
  - Interpretation of events (mapping to accounts)
  - Accomplished now through Setup or Master files: moving beyond ERP
    - Results of interpretation (entry of account-oriented info)
    - XBRL for XYZ reporting space
  - Summarization of events (detail to summary)
  - XBRL for XYZ reporting space

- The GAAP GAP
  - Presentation of interpretation of events (print/view/export summary)
  - XBRL for XYZ reporting space
One File, Three Levels
Differences Example

Chart of Accounts
Includes Accounts
And customers, vendors

General Ledger details
Include primary postings
GL

US/UK
Managerial, stockholders, financial reporting

Continental
Government, VAT, cash mgmt

Asia
Bank

Customer, vendor open items
Departmental allocations
"General Ledger" Holds More
XBRL GL: Modular Approach
Your Module Here

- X of XBRL – extensibility
- Logical extensions to category, date, monetary and quantitative amount
- Integration with REPORTING
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Payload for Other Groups

- XBRL model – PAYLOAD ONLY
- Embed in other standards
- Transport with any tool
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XBRL International Reaches Out

- Shared members
- Overlapping interests
- Common needs
- Shared Learning
- Shared Knowledge in Domain Expertise

- Member and Market needs drive technology
  - Standards-based solutions today
  - Merging with other standards as they develop
XBRL and Liaisons

- Financial Transactions
  - MDDL
  - RIXml
  - And others
- UN CEFACT/EDIFACT D14
  - EDIFICAS
  - GRE
- UBL
- Open to work with any recognized de facto or de jure standards
group interested in “agreeing to agree”
Standards-based Solutions Today

- A Challenge (per X12)
  - Approaches
    - One unified approach to XML messaging, development and tagging
    - Interconnected frameworks with reuse of “best” from other groups
  - Vocabularies
    - Core
    - Domain specific
    - Other overlapping
  - FUD
Supported Technical Specification

- Using
  - XML Schema
  - Namespaces
  - XLink

- XLink used for hierarchical relationships instead of XML Schema document content model
  - Reuse of vocabularies with different hierarchies
  - Different hierarchies for
    - Preferred presentation
    - Mathematical relationships
    - Inter-document relationships

- Available for immediate adoption

- Cash external, shared
  - internal Cash in secretary’s shoe
  - internal Cash in manager’s car
  - internal Cash in salesperson’s toupe
XBRL Files

Business data expressed in XBRL

**instance.xml**

validate

taxonomy.xsd

Business terms, definitions and underlying authoritative literature expressed in XML Schema

import

**xbrl-instance.xsd**

Rules for building an instance document

import

**xbrl-linkbase.xsd**

Rules for building a linkbase

import

**xl.xsd**

**xlink.xsd**

Rules for building an XLink file

validate

**linkbase-reference.xml**

1. Cross-reference to underlying authoritative literature
2. Mathematical relationship
3. Default order
4. New - relationships between elements
5. Human-readable labels

validate

**linkbase-calculation.xml**

validate

**linkbase-presentation.xml**

validate

**linkbase-definition.xml**

validate

**linkbase-label.xml**

validate

Specialized files

Non-changing

Rules for building an xml file

Rules for building a linkbase

Rules for building an XLink file

Linkbase files:
1. Cross-reference to underlying authoritative literature
2. Mathematical relationship
3. Default order
4. New - relationships between elements
5. Human-readable labels
Knowledge: Available and Desired

- Domain expertise
- Standards expertise
- XML experience
- Consortium expertise
Emerging Standards For Tomorrow

- Putting the pieces together for reporting
- Core components
- Security model for
  - Direct transfer (B2B)
  - Indirect (A2A2A)
- Technical framework optimized for
  - Discoverability
  - Extensibility
Our Invitation

- Interoperability Pledge
- Business flows down to accounting
- Let’s collaborate
Not the beginning, but _a_ beginning …

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eric.e.cohen@us.pwccglobal.com