Standardization on Business Process and Information Model

22nd of July, 2004

Hisanao Sugamata

Trend of Information Exchange

EDI

Supplier → Maker → Whole Seller → Retailer

Efficiency with a partner

SCM

Traceability

Common Platform (eBXML & EPC)

Material, Parts, Products, Distribution, Retail, Consumer

Business Process & Information Sharing

Business Process Standardization Project


Needs Survey → Business Process Harmonization Committee → Standardization Activity

Industry Project (A) → Industry Project (B)

Modeling Information Process

Modeling Support (UMM)

eBXML Implementation (4 Projects)
BP Standardization Project Summary

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Business Area: Sash Route</td>
<td>BDV Business Operation Map</td>
<td>BRV Business Collaboration Analysis</td>
<td>BTV Business Transaction Design</td>
</tr>
<tr>
<td>Business Area: House Maker Route</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Business Area: Special Order Route</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Business Domain: House Building Material EDI</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Example – House Building Material Order Entry (1)

Business Operation Map
Select the Business Area within the domain.
Define the Business Process.
Business Domain: House Building Material EDI

Example – House Building Material Order Entry (2)

Business Process Activity
Define the relationship between the Business Processes in the Business Area.
Business Area: Sash EDI
Business Process
Estimates
Order Entry [Not Accepted]
Price Negotiation (Negotiable)
Delivery
Payment
Return
Return Goods

Business Process: Start

Business Document XML Schema
Business Process XML Schema
Define the Actors and the Collaborations within the Business Process.

Example – House Building Material Order Entry (3)

Business Process Use Case

Business Process: Order Entry


Example – House Building Material Order Entry (4)

Business Collaboration Protocol

Business Process Order Entry

Define the Actors and the Transactions within the Business Collaboration.

Example – House Building Material Order Entry (5)

Business Collaboration Use Case

Business Collaboration: Firm Order


Example – House Building Material Order Entry (6)

Business Transaction Activity

Business Transaction: Firm Order Issue
Define the Business Information Entities in the Business Document.

**Business Document Class Diagram**

Example – House Building Material Order Entry (7)

**Business Information Entity (BIE)**

And Core Component (CC)

Core Component is Generalized Business Information Entities

Buyer Information

Party

Party ID

Party Name

Address

Zip Code

State

City

Town

Seller Information

Order Form

Order Header

Buyer Information

Seller Information

Order Detail

Order Summary

Business Information Entity (BIE)

**Core Component (CC)**

And Business Information Entity (BIE)

Business Information Entities are derived from Core Component

**UN/CEFACT CC**

1ST Set of Core Component by TBG17

21 ACCs and 163 BCCs / ASCCs

<table>
<thead>
<tr>
<th>Account</th>
<th>Address</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>Country Sub-Division</td>
<td>Geo Coordinate</td>
<td>Organisation</td>
</tr>
<tr>
<td>Location</td>
<td>Person</td>
<td>Communication</td>
</tr>
<tr>
<td>Preference</td>
<td>Period</td>
<td>Contact</td>
</tr>
<tr>
<td>Status</td>
<td>Registration</td>
<td>Relationship</td>
</tr>
<tr>
<td>Event</td>
<td>Tax Fee</td>
<td>Dimension</td>
</tr>
<tr>
<td>Range</td>
<td>Calculation</td>
<td>Communication Number</td>
</tr>
</tbody>
</table>
ACC: Account. Details

A business arrangement whereby debits and/or credits arising from transactions are recorded. This could be with a bank, i.e., a financial account, or a trading partner offering supplies or services ‘on account’, i.e., a commercial account.

Join US!

The next ebXML Asia Committee Meeting will be held in Seoul (Korea)
27th – 29th / October / 2004

Contact Information
E-mail: sugamata@ecom.jp
ebXML Asia Committee Web Site: www.ebxmlasia.org
ECOM Web Site: www.ecom.jp
Using the Universal Business Language for Internet Paperless Trading

by Tim McGrath

APEC Symposium on ebXML

Bangkok, Thailand, July 21-23 2004

Why UBL?

HTTP + HTML = Internet Paperless Publishing (WWW)

ebXML/WS + UBL = Internet Paperless Trading (e-Business)

Objectives of UBL

• Fill the ebXML missing link
  – XML implementation of Core Components
• Apply across all industry sectors and international trade
• Be non-proprietary and free of royalties
• Become an international standard through ISO TC 154
• Follow an open development process
• Leverage experience with EDI and XML

UML and the ebWS stack

UML Translating Services
  - Message presentation
  - Message conversion
UML Core Components
  - ebXML CCM
  - ebXML CPAP
  - ebXML DPSS
  - ebXML aMS

Web Services

OASIS

UBL
UBL 1.0

- Released May 1st 2004
- http://www.oasis-open.org/committees/ubl
- XML Schemas (W3C XSD)
- Basic Procurement Business Process Model
- Information Models based on ebXML Core Component Specification
- XML Naming and Design Rules
- Forms Presentation Mappings
- Links to UBL software tools
- Sample documents

Scope of UBL 1.0

- Basic Procurement - Order to Invoice
  - Re-usable types
    - Party, Address, Item, BuyersID, Tax, etc.
  - ebXML Core Component types
    - Code, Name, DateTime, Amount, etc.
  - Business documents
    - Order, Invoice, Despatch Advice, Receipt Advice, etc.
  - Code Lists
    - Currencies, Countries, etc.
- 80/20 rule applies

Software tools for UBL

- UBLish (Singapore)
  - Generate customized UBL schemas
- EDIFIX (Germany)
  - Develop UBL models and schemas
- Stylesheets (Canada)
  - UN Layout Key
- Open Office (US)
  - Templates
- CECID (Hong Kong)
  - 'Mosaic' browser for UBL
  - ebMail plugin

Work Plan for UBL

- Implementation
  - Promoting interoperability
  - Understand customization requirements
  - e.g. Wheat Export Project
  - Gather experience from real implementations
  - e.g. Certificate of Origin project
  - Improving the library
- Localization
  - Japan
  - China
  - Korea
  - Spain (inc. South America)
  - and now... Thailand
Implementation

- Levels of Interoperability
  - 80/20 rule applies
    - Everyone will want to customize 20%
    - 80% of effort is required (to do it properly)
    - Implementations will choose levels based on their own requirements

- UBL Methodology
  - Develop conceptual models
  - Assemble document models
  - Structures
  - Encode document models into XML

Semantics

- Assemble document models

Syntax

- Components

Structure

Assembled into Document Models

Document Models

<table>
<thead>
<tr>
<th>BL Name</th>
<th>Local Part</th>
<th>BL Name</th>
<th>Local Part</th>
</tr>
</thead>
<tbody>
<tr>
<td>Order</td>
<td></td>
<td>Order</td>
<td></td>
</tr>
</tbody>
</table>

Document Models

<xs:element name="Order" type="OrderType"/>
<xs:complexType name="OrderType">
  <xs:annotation>
    <xs:documentation>
      <ccts:Component>
        <ccts:ComponentType>ABIE</ccts:ComponentType>
        <ccts:DictionaryEntryName>Order. Details</ccts:DictionaryEntryName>
        <ccts:Definition>a document that contains information directly relating to the economic event of ordering products.</ccts:Definition>
        <ccts:ObjectClass>Order</ccts:ObjectClass>
        <ccts:AlternativeBusinessTerms>Purchase Order</ccts:AlternativeBusinessTerms>
      </ccts:Component>
    </xs:documentation>
  </xs:annotation>
</xs:complexType>
**Localization**

- UBL has Regional Localization Subcommittees
- Implementation of UBL in the regional market
  - accommodate local business practices and local laws
  - this means customizing UBL
- Understanding the UBL through local language
  - translation
- Diffusion of the UBL activities into the regional market

**Translation of UBL**

- Translation of UBL documentation
- Developing a controlled vocabulary
  - Is a House a Building? Is a Container a Transport Equipment?
  - UBL Ontology group
    - http://ontolog.cim3.net/wiki/
- UBL Schemas are in Oxford English and should remain so...
  - XML is for Application to Application
  - XML tag names (syntax) doesn't matter to people
  - The meaning of the tag names (semantics) do

**UBL Interoperability**

- UBL “compliance” means...
  - XML Schema validation
  - Syntax agreement
  - ebXML ‘context methodology’
- UBL “conformance” means...
  - Re-using UBL components and/or structures
  - Semantic and/or structural agreement
- Interoperability requires that...
  - Syntax, structure and semantics all agree
  - e.g. `<Order><BuyersID>` means the same thing
Ordering products:

- **BuyersID**
- **IssueDate**
- **PricingCurrencyCode**
- **EarliestDate**
- **ExpiryDate**

**Why UBL?**

HTTP + HTML = Internet Paperless Publishing (WWW)

ebXML/WS + **UBL** = Internet Paperless Trading

**UBL offers Important and Interesting Solutions**

- As a B2B standard
  - User driven, deep experience and partnerships
  - Committed to global trade and interoperability
  - No license or royalties
  - Open and transparent process
- As a Web Service interface
  - Layered on ebXML and other web services
  - Fills missing link for ebXML
- As an e-business vocabulary
  - 80/20 plus customization

**Thank You**

tmcgrath@portcomm.com.au