XWand – Bridging the gap between business and XBRL technology

Bolagsverket Event, Stockholm
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Center of Excellence of Interstage XWand for EMEA region
Fujitsu at a Glance

- **Headquarters:** Tokyo, Japan
- **Established:** June 1935
- **Consolidated revenue:** US$47 billion
- **Employees:** Over 156,000 worldwide
- **Sales and support operations in over 100 countries**
- **Fujitsu Limited shares are listed on:** the Tokyo Stock Exchange, as well as the Osaka, Nagoya and London exchanges
- Leading Japanese information and communication technology (ICT) company offering a full range of technology products, solutions and services.
- We use our experience and the power of ICT to shape the future of society with our customers.
Fujitsu’s Leadership Position

- Leadership in XBRL Consortium
  - Large member – XBRL International Consortium
  - Europe, Spain, Finland, Poland, US, Australia, Korea and Japan
  - Chaired XBRL 2.1 Specification Working Group since 2003
  - At-Member of Best Practice Board
  - Participation in European Filing Rules WG and XBRL European Business Register (xEBR)

- Leading XBRL Specification Efforts
  - Specification – XBRL 2.1/2.0
  - Best practices – FRTA, FRIS
  - Conformance Suite
  - Dimensions, LRR
  - Latest activities – Formula, Versioning, Rendering

- XBRL International Sustaining Partner

- Leading XBRL tools provider
  - 200+ downloads / month
  - Extensive experience with designing and implementing XBRL based solutions (ECB, EIOPA, SBR Australia, SBR Finland, SBR Netherlands, NCA’s, Tokyo Stock Exchange, US SEC)
Interstage XWand – Market Tested Solution

Adopted by 300 + customers in over 50 countries

**EMEA**
- Sweden, Norway, Finland, Denmark
- France, Spain, Germany, Italy, Switzerland, Netherlands, Belgium, Denmark, Ireland, Poland, Finland, South Africa, Israel...

**Interstage XWand**

**APAC**
- Korea, Japan, Thailand, Singapore, New Zealand, Australia

**Americas**
- U.S., Canada, Brazil, Chile

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Fujitsu XBRL Products Overview
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XWand Toolkit
- Taxonomy Editor
- Instance Creator
- Instance Dashboard
- Formula Editor
- Sheet Mapping Designer
- Word Tagger

WebPortal

Integration Components

XWand API
- Runtime Execution Env.
- Application Developer
XBRL services delivered by Fujitsu

- Consulting related to XBRL technology and implementation of XBRL platforms,
- Building taxonomy extensions for reporting frameworks (e.g. IFRS, GAAP, CRDIV, Solvency II),
- Workshops about XBRL standard, Data Point Methodology (DPM), taxonomy development,
- Architecture design for enterprise submission platforms,
- Definition of functional and technical requirements for XBRL platforms,
- System integration services,
- Development of “tailor made” XBRL solutions on top of XWand API,
- XBRL processing optimization in production environment,
- Hands-on trainings for market-recognized XBRL tools,
- XBRL engine delivery and deployment,
- Interstage XWand – product related trainings.
Live Demo

- Taxonomy Development
- Taxonomy and Instance Validators
- Conversion/Rendering
Taxonomy Development Process

Overview

Stage

1. Requirements
2. Design
3. Building
4. Testing
5. Publication & Recognition
6. Maintenance & Usage

Output

1. Taxonomy Requirements
2. Data Model
3. Taxonomy Working Draft
4. Taxonomy Exposure Draft
5. Taxonomy Final Version

Phase

- Pre-development
- Development
- Post-Development
Tools for development of Taxonomies

- Powerful Taxonomy Editor application used by many regulators in EU
- Views based on
  - Schema (concepts)
  - Linkbases (relationships)
- Graphical taxonomy browser
- Powerful search capabilities
- Intuitive and simple user interface
  - Discoverable Taxonomy view
  - Color coded elements
  - Drag and drop enabled
  - Context aware menus
- Manage element and link attributes
Tools for operations on Instances

- Interactive XBRL Instance Editor
- Intuitive and simple user interface
  - Multiple views (schema, linkbases, facts, contexts)
  - Drag and drop enabled
  - Powerful search and filtering
  - Context aware menus
- CSV import and export of data
- Custom reports in HTML
- Multiple validation methods
  - XBRL, Dimensions, Calculations, Formulas, custom queries, FRIS, SEC, HMRS, EFR (European Filing Rules), ...
Multi-step XBRL validation done by Interstage XWand

- Level 1: XML Syntax
- Level 2: XBRL Syntax
- Level 3: Common Modeling Principles and Filing Manuals
- Level 4: SE-specific Modeling Principles and Filing Manuals
- Level 5: Business rules

Interstage
Conversion/Rendering
Toolkit – Generating Excel templates

Excel spreadsheet for filing
empty template XBRL instance
mapping file in XML

DEMO
Incorrect cells are highlighted in Excel

Additional tabs with validation summary are generated in Excel reporting templates

Summary tabs contain clickable links to facilitate tracking of errors by business users

Output in HTML can be further used in implementation of more integrated web service environment
DB Integration
DB Integration component

- Provides framework-independent object-relational (O/R) mapping
- Extracts XBRL data through SQL-like syntax (built-in XWand Query)
- Shreds instance documents into predefined DB table structures
Business Rules Generation
What is the problem with XBRL Formula?

- Formula syntax is one of the most powerful features of XBRL and has clear advantage over:
  - Schematron (validation at XML level)
  - SQL-based workaround (validation at DB level)
- Consulting fees are high
- Maintenance costs are high
- Formula syntax is quite sophisticated and has steep learning curve
Formula Generator

Goal
- conversion of Excel worksheet containing business rules definitions to XBRL Formulas format

Interfaces
- Input
  - Excel worksheet with definition of business rules
  - syntax similar to the one currently used by EBA / EIOPA
- Output
  - set of files containing formula definitions
  - files architecture compatible with EBA/EIOPA taxonomies

Normalized RC-code notation

\[
\begin{align*}
\{C \, 01.00, \, r015,\, c010\} & = \{C \, 02.00, \, r010,\, c010\} * \{C \, 03.00, \, r030,\, c010\} \\
\{C \, 03.00, \, r040,\, c010\} & = \{C \, 01.00, \, r015,\, c010\} - \{(C \, 02.00, \, r010,\, c010) * 6\%\} \\
\{C \, 01.00, \, r010,\, c010\} & = \{C \, 02.00, \, r010,\, c010\} * \{C \, 03.00, \, r050,\, c010\} \\
\{C \, 03.00, \, r060,\, c010\} & = \{C \, 01.00, \, r010,\, c010\} - \{(C \, 02.00, \, r010,\, c010) * 8\%\} \\
\{r050,\, c010\} & = \{r060,\, c010\} + \{r070,\, c010\} \\
\{r100,\, c010\} & = \{r110,\, c010\} - \{r140,\, c010\} \\
\{r110,\, c010\} & = \{r120,\, c010\} + \{r130,\, c010\} + \{r131,\, c010\} \\
\{r230,\, c010\} & = \{r240,\, c010\} + \{r270,\, c010\} + \{r291,\, c010\}
\end{align*}
\]
Formula Generator

Demo Video
Interstage XWand – More „Fika” every day?
Why partnering with us

■ FUJITSU Advantages
  ■ The XBRL leading vendor
  ■ Extensive customer base of regulators and filers in terms of XBRL Projects delivery
  ■ Proven quality of the product, improved over 14 years of development and enhancements
  ■ Market tested solution proven by experiences, actual solutions in use
    ■ Best Practice Template
    ■ Professionals who work around the world
  ■ Taxonomy-agnostic engine working on any XBRL-compliant taxonomies/instances
  ■ Rapid custom-made development
    ■ Less programming
    ■ Ease of integration

■ Customer Benefits
  ■ Everything you need can get all at once
  ■ Challenging the XBRL, reducing the risk to fail in project
  ■ Saving more costs than hand made and implementation of end-to-end platform
  ■ Improving alignment between business side and IT side
For more information please contact

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