

XBRL META-METADATA MODEL



Student: Jorge Valencia Martínez

Tutors: Ignacio J. Santos
Elena Castro

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INTRODUCTION

- Introduction and project objectives
- XML
- XBRL
- XBRL Meta-Metadata Model
- Conclusion

PROJECT TARGET

- XBRL Knowledge base
- Semantic and syntactically XBRL language is analyzed
- Financial reporting language
- Information exchange
- Agencies, financial institutions, companies
- XBRL Architecture (Instance document, Taxonomy)

XML

- Structured markup language, standard, flexible, extensible
- Based on GML, SGML, HTML
- Hierarchically ordered data
- Origin of new languages, file sharing
- DTD -> XML Schema
 - Elements, simple types, complex types, attributes...
 - Relations
- Tools
 - Xpath
 - Xpointer
 - Xlink
 - XQuery

XBRL INTRODUCTION

- Language for electronic communication of business and financial data.
- Globalization and Standardization
- Financial scandals (ENRON, Worldcom, Tycon Intnal.)
- 2001, Charles Hoffman.
 - XML for financial reports → XFRML → XBRL
- Strong institutional and business support
- Validation at source
- Strong semantic content
- Syntactic definition

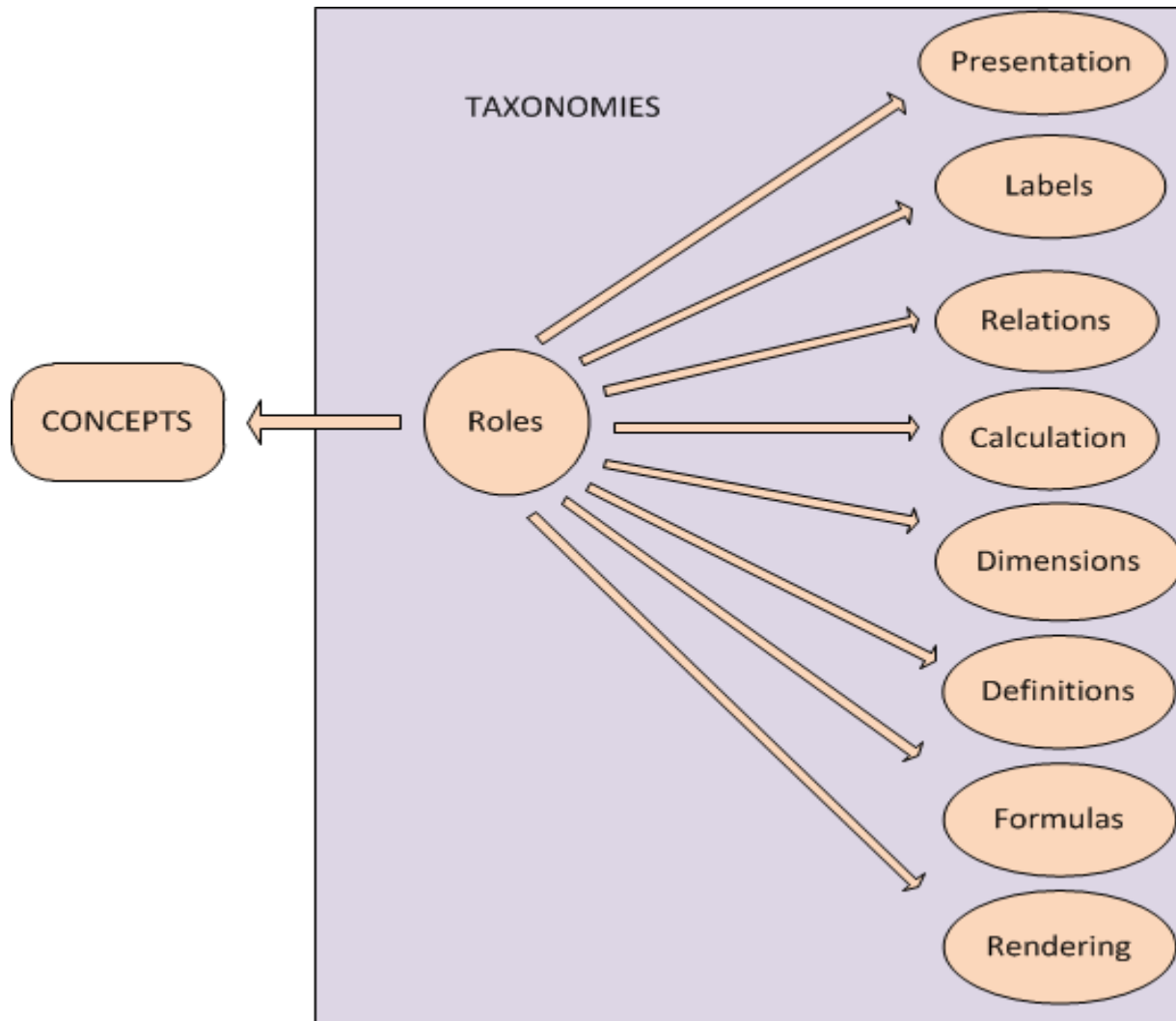
XBRL AROUND THE WORLD PROJECT

- Europe
 - Central banks (Belgium)
 - National banks (France)
 - Small and medium business (Germany)
 - Major projects to reduce overall costs (Holland)
 - Widespread deployment in bank sector (Spain)
 - Progressive growth (United Kingdom, Hungary, Reino Unido, Austria, Cyprus...)
- North American
 - FED (“Federal Reserve System”), SEC (“U.S Security and Exchange Commission”), FDIC (“Federal Deposit Insurance Corporation”).
- Asia
 - Stock exchanges (China, Singapore, South Korea...)
 - Public campaigns (Japan)

XBRL ARCHITECTURE

- Instance document
 - Content of the report
 - Facts
 - Roles that give meaning to the concepts
- Taxonomy
 - Set of documents that define the concepts and relationships between them.
 - Roles associated with schemes
 - Semantics
 - Inheritance (IFRS → Central Banks → BdE)

XBRL ARCHITECTURE II



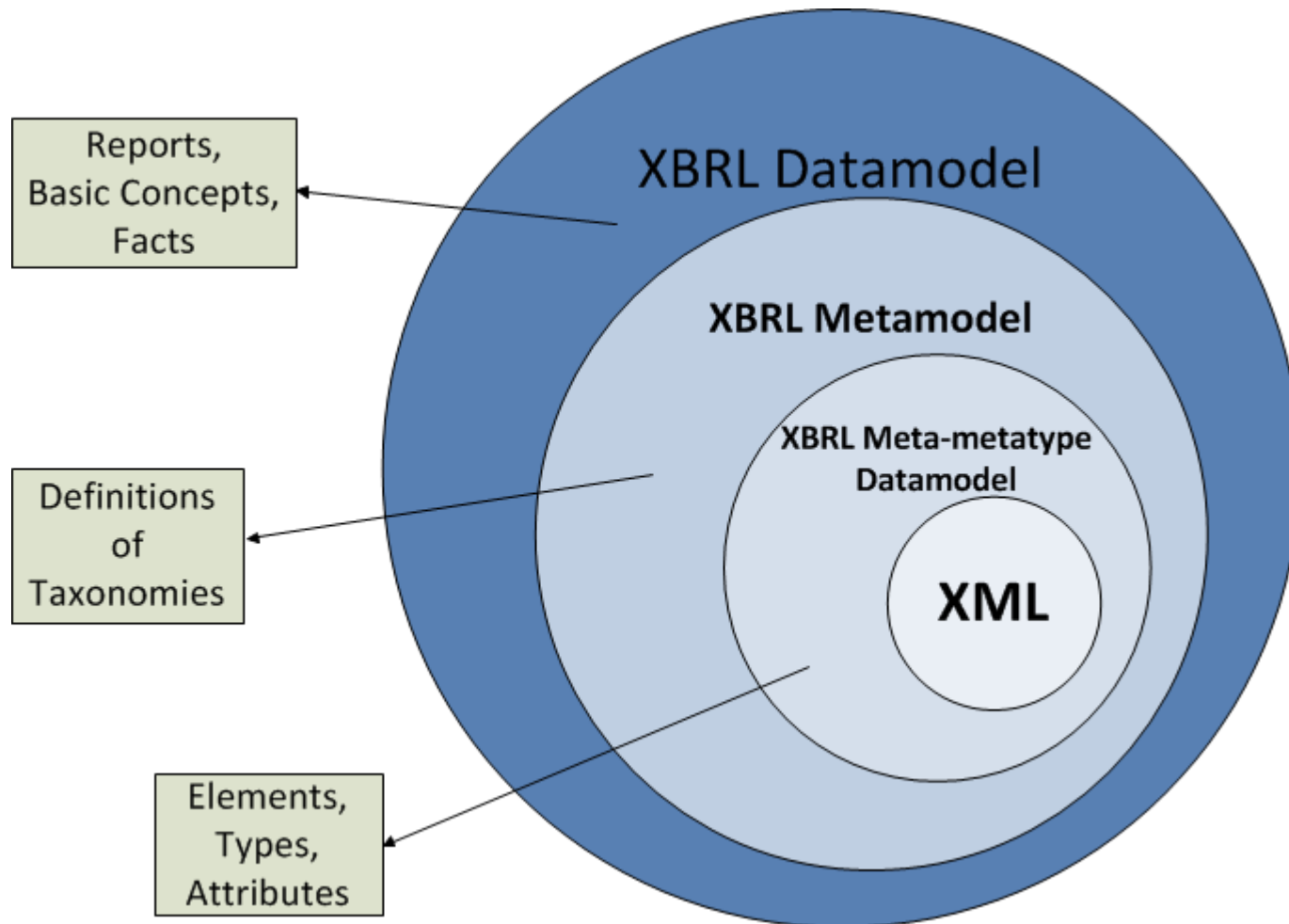
BASE OF XBRL

- XBRL
 - Dimensions
 - Constraints
 - Basic concepts (“Primary Items”) → Facts

XBRL META-METADATA MODEL INTRODUCTION

- Different levels:
 - XML central core
 - XBRL Meta-metadata model
 - XBRL Metamodel (Taxonomies)
 - XBRL Datamodel (Reports)

XBRL META-METADATA MODEL INTRODUCTION



INSTANCE DOCUMENT

```

<?xml version="1.0" encoding="UTF-8"?>

<xbrli:xbrl xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="http://xbrl.org/2006/
xbrldi http://www.xbrl.org/2006/xbrldi-2006.xsd" xmlns:dCU="http://www.eurofiling.info/dCU"
xmlns:dCT="http://www.eurofiling.info/dCT" xmlns:dTI="http://www.eurofiling.info/dTI" xmlns:dEC="http://
www.eurofiling.info/dEC" xmlns:dBA="http://www.eurofiling.info/dBA" xmlns:xbrldt="http://xbrl.org/2005/
xbrldt" xmlns:nonnum="http://www.xbrl.org/dtr/type/non-numeric" (...) xmlns:xbrldi="http://xbrl.org/2006/
xbrldi" xmlns:dMA="http://www.eurofiling.info/dMA" xmlns:xbrli="http://www.xbrl.org/2003/instance">
  <link:schemaRef xlink:type="simple" xlink:href="entry.xsd"/>
  <xbrli:context id="e_x7_x20_x14_eq0d_x11_x1">
    <xbrli:entity>
      <xbrli:identifiler scheme="http://scheme">abc</xbrli:identifiler>
    </xbrli:entity>
    <xbrli:period>
      <xbrli:instant>2011-06-12</xbrli:instant>
    </xbrli:period>
    <xbrli:scenario>
      <xbrldi:explicitMember dimension="dim:AS">dCT:x7</xbrldi:explicitMember>
      <xbrldi:explicitMember dimension="dim:AT">dAT:x20</xbrldi:explicitMember>
      <xbrldi:explicitMember dimension="dim:CS">dSE:x14</xbrldi:explicitMember>
      <xbrldi:explicitMember dimension="dim:DL">dTI:eq0d</xbrldi:explicitMember>
      <xbrldi:explicitMember dimension="dim:PL">dPL:x11</xbrldi:explicitMember>
      <xbrldi:explicitMember dimension="dim:RS">dRS:x1</xbrldi:explicitMember>
    </xbrli:scenario>
    (...)
  <xbrli:unit id="EUR">
    <xbrli:measure>iso4217:EUR</xbrli:measure>
  </xbrli:unit>
  <base:mi1 decimals="0" contextRef="e_x7_x20_x14_eq0d_x11_x1" unitRef="EUR">5</base:mi1>
  <base:mi1 decimals="0" contextRef="e_x7_x20_x14_gt0d_le90d_x11_x1" unitRef="EUR">5</base:mi1>
  <base:mi1 decimals="0" contextRef="e_x7_x20_x14_gt90d_le180d_x11_x1" unitRef="EUR">5</base:mi1>
  (...)
</xbrli:xbrl>

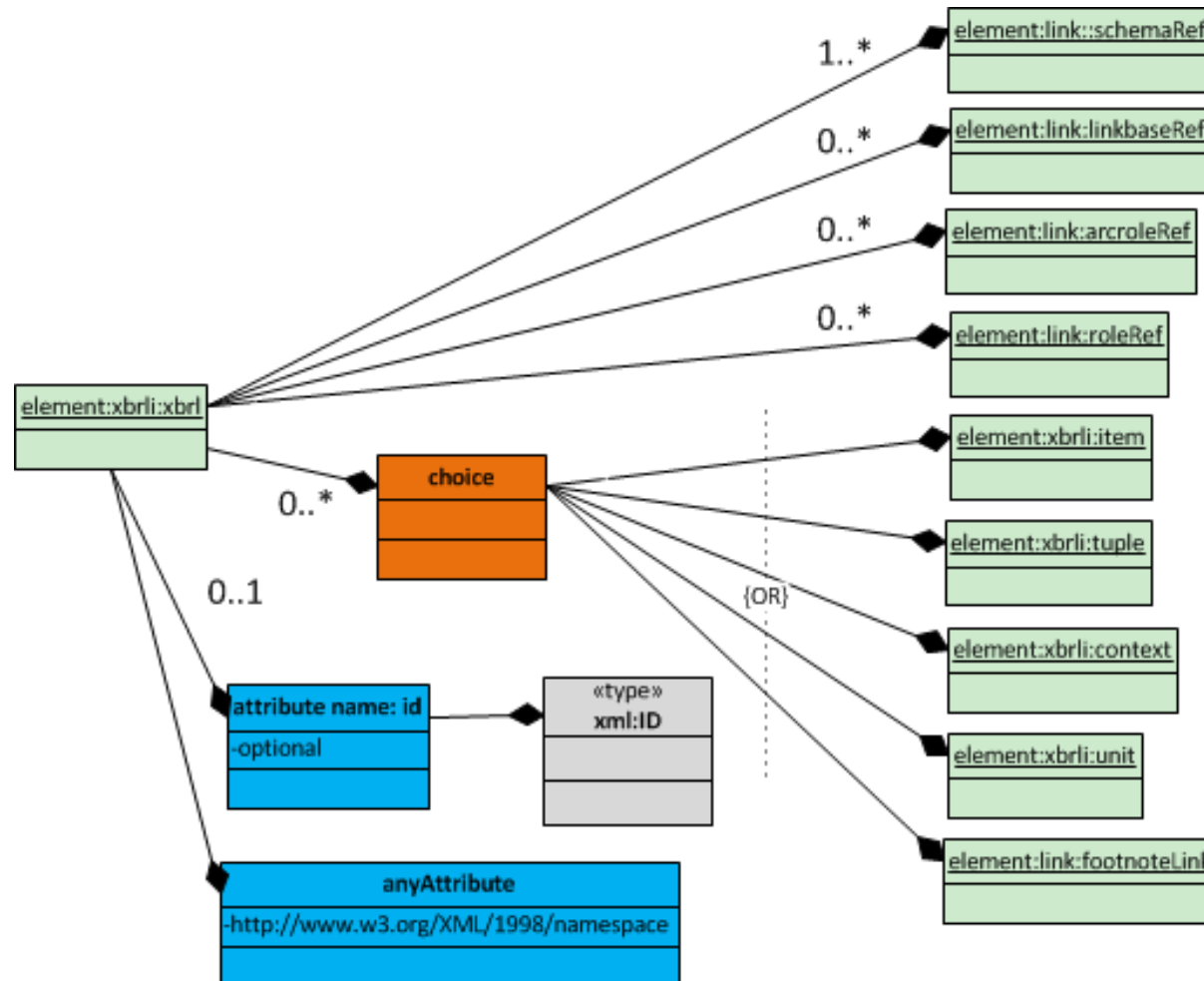
```

HEAD

CONTEXT

ÍTEMS

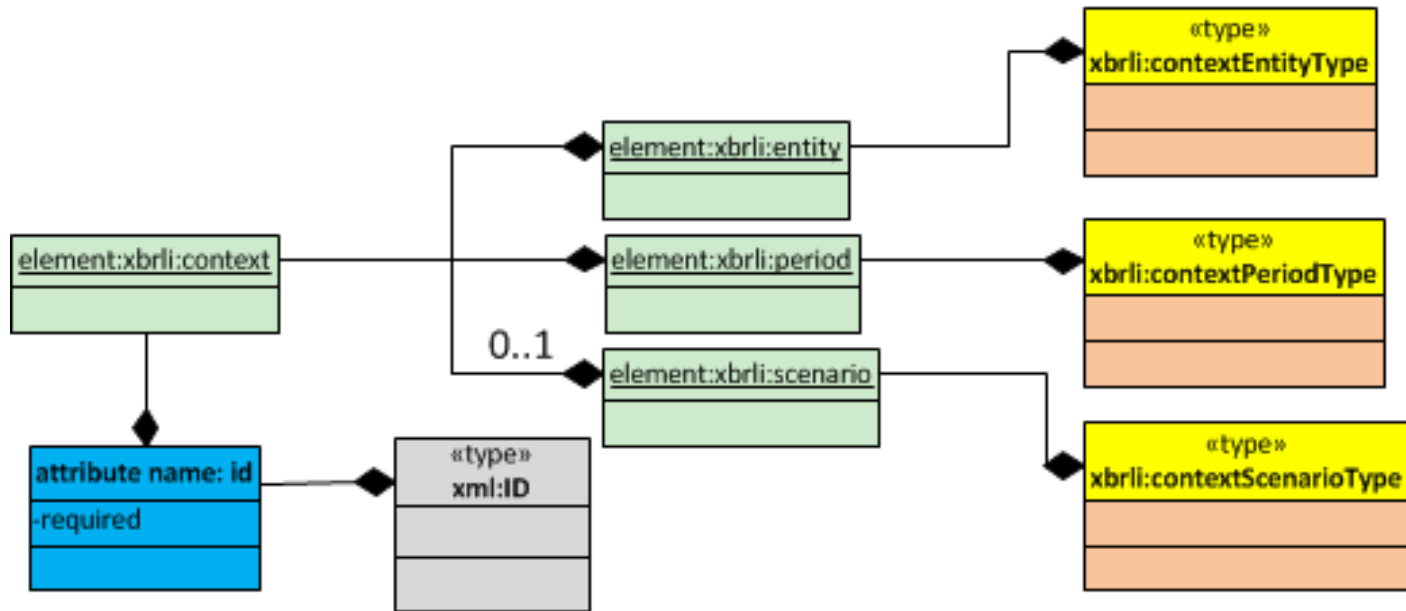
INSTANCE DOCUMENT



“CONTEXT” ELEMENT

- Fact situation
- Entity
- Segment → Business logic
- Stage
- Time period

“CONTEXT” ELEMENT



“CONTEXT” ELEMENT

```
<xbrli:context id="e_x7_x20_x14_gt0d_le90d_x11_x1">
  <xbrli:entity>
    <xbrli:identifrier scheme="http://scheme">abc</xbrli:identifrier>
  </xbrli:entity>
  <xbrli:period>
    <xbrli:instant>2011-06-12</xbrli:instant>
  </xbrli:period>
  <xbrli:scenario>
    <xbrldi:explicitMember dimension="dim:AS">dCT:x7</xbrldi:explicitMember>
    <xbrldi:explicitMember dimension="dim:AT">dAT:x20</xbrldi:explicitMember>
    <xbrldi:explicitMember dimension="dim:CS">dSE:x14</xbrldi:explicitMember>
    <xbrldi:explicitMember dimension="dim:DL">dTI:gt0d_le90d</xbrldi:explicitMember>
    <xbrldi:explicitMember dimension="dim:PL">dPL:x11</xbrldi:explicitMember>
    <xbrldi:explicitMember dimension="dim:RS">dRS:x1</xbrldi:explicitMember>
  </xbrli:scenario>
</xbrli:context>
```


CONCLUSIONS AND FUTURE WORK

- XBRL facilitates the exchange of financial information
- Defined by economists
- XBRL knowledge base (semantic and syntactic content)
- Mapping Multidimensional and relational data models
- Knowledge of the higher levels (XBRL Metamodel, XBRL datamodel)
- Support the developer to the knowledge of XBRL data model
- Development of techniques for mapping models
- Interoperability between languages

QUESTIONS

