# DDI-Views UML Elements – from Model to Bindings

Documentation and Tests

2016-12-12, Joachim Wackerow

A test suite of used UML elements should be developed. This could comprehend a test for each element and combinations of several elements. This can be used for testing the whole production framework including the XMI exported from Drupal, the XMI representation(s) of PIM and PSM, and the representations in XML Schema and RDF-S/OWL.

This would document also the used UML elements. For each element, detailed information could be available like the described items below.

* UML
  + **Reference to element at** [**http://www.uml-diagrams.org/**](http://www.uml-diagrams.org/)**. Includes definition and diagram.**
  + Possibly excerpt from OMG documentation on UML 2.5
  + Possibly diagram in Lucidchart, see: <https://www.lucidchart.com/pages/uml/class-diagram>
* XMI
  + **Canonical XMI expression (XML)**
  + **References to model documentation in NIST XMI validator (2.5 and 2.4.1), see:** [**http://validator.omg.org/se-interop/tools/browse-models**](http://validator.omg.org/se-interop/tools/browse-models)
  + **Validate with 2.5 and 2.4.1, see:** [**http://validator.omg.org/se-interop/tools/validator**](http://validator.omg.org/se-interop/tools/validator)
    - **Header for 2.4.1: <xmi:XMI xmi:version="2.4.1" xmlns:uml="http://www.omg.org/spec/UML/20110701" xmlns:xmi="http://www.omg.org/spec/XMI/20110701">**
    - **Header for 2.5: <xmi:XMI xmi:version="2.5" xmlns:uml="http://www.omg.org/spec/UML/20131001" xmlns:xmi="http://www.omg.org/spec/XMI/20131001">**
* Compatibility with UML Tools
  + Eclipse Modelling Tools (<https://eclipse.org/modeling/tools.php>)
    - MDT UML2 (<https://projects.eclipse.org/projects/modeling.mdt.uml2>)
    - Files with extension „uml2“ are a flavor of XMI.
    - List of UML2-compatible UML Tools (<http://wiki.eclipse.org/MDT-UML2-Tool-Compatibility>)
  + Enterprise Architect (popular in the DDI and GSIM community, <http://www.sparxsystems.com/products/ea/>)
  + MagicDraw (<http://www.nomagic.com/products/magicdraw.html>)
  + Altova UModel (<http://www.altova.com/umodel.html>)
  + IBM Rhapsody (successor of Rational Rose, <http://www-03.ibm.com/software/products/en/ratirhapfami>)
* Bindings
  + XML Schema
    - Equivalent in PSM as XMI
    - XML Schema
    - Possibly generated XML instance
  + RDF-S/OWL
    - Equivalent in PSM as XMI
    - Ontology
    - Possibly RDF instance