DDI 4 and Canonical XMI

Transformation to Canonical XMI - UML Tools
2019-03-20

UML 2.4.1/XMI 2.4.1 is the latest version which is mostly implemented. The latest version of UML/XMI is 2.5.1. The major difference between these versions is that the UML documentation is now integrated in a single document.

It seems to be advisable to use UML 2.4.1/XMI 2.4.1 for DDI 4. This has only consequences for the namespaces. A subset of UML items is chosen for the DDI 4 model. There is no difference regarding this subset between the versions 2.4.1 and 2.5.1. This means that just the namespaces can be adjusted in future to a newer version when the tools have implemented the version.

All the mentioned tools (latest versions) can export a model to XMI. The used versions are 2.* for both UML and XMI.

All tools export a custom flavor XMI. This custom XMI can be transformed to Canonical XMI according to "Annex B Canonical XMI" of "XML Metadata Interchange (XMI) Specification Version 2.5.1" (https://www.omg.org/spec/XMI/2.5.1/PDF). All tools can import the Canonical XMI.

Work is in progress to develop a generic XSLT stylesheet for the transformation of the various custom XMI flavors to Canonical XMI.

The plan is that the tool will work for the UML tools (comments in parenthesis) listed below. All tools but Eclipse are commercial.

- Astah Profession 8.1.0 (exporter 0.8.2), issues
- Eclipse modeling 2018-12 (4.10.0) with Papyrus 4.2.0
- Enterprise Architect 14.1 (exporter 6.5)
- IBM Rhapsody 8.3.1
- MagicDraw 19.0 (exporter 19.0 v9)
- Modelio (Eclipse) Open Source 3.8
- Obeo (Eclipse) Designer Community 11.1, some issues
- UModel Enterprise Edition 2019 sp1 (exporter 17)
- Visio Professional 2019 17.0, not tested yet
- VisualParadigm 15.2 (exporter 7.0.2)

The transformation can be done in a second step after saving the custom XMI.

It is possible to combine the transformation and export in Enterprise Architect. The XSLT needs to be imported to Enterprise Architect for this purpose.