

# Semaphore - UML semantic mapping tool

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## 1. Datasheet

Solution data	
Name	Semaphore - UML semantic mapping tool
Result type	Mapping tool
Description/functionality	<ul style="list-style-type: none"> <li>• Semaphore is a tool that aids in creating mappings or transformations between two different structural data formats at the Platform Independent level. The definitions of the actual data formats are reverse engineered into UML PIMs. The tool represents these models as two class diagrams on the screen. The user can then define mappings between the input and the output model graphically. Different types of mappings are supported such as copy, concatenate, split etc. The tool also has support for automatic matching between models, currently using name matching through string comparison.</li> <li>• When completed the mapping definition it self is viewed as a PIM. The mapping PIM is then transformed to code that performs the actual data transformation. For instance; if the input and output platforms are XML the generated data transformation code that is generated is XSLT.</li> <li>• In summary this tool provides mapping capabilities using standard MDA technologies.</li> <li>• Using Semaphore an architect or developer can create mappings between data structures at the Platform Independent level, and have the technical implementation of the actual data transformation code generated to suit the needed platform.</li> </ul>
Benefits to interoperability	Using Semaphore an architect or developer can create mappings between data structures at the Platform Independent level, and have the technical implementation of the actual data transformation code generated to suit the needed platform.
Supported models/methodologies	<ul style="list-style-type: none"> <li>• UML</li> <li>• XSD</li> </ul>
Supported input interfaces	<ul style="list-style-type: none"> <li>• UL</li> <li>• XSD</li> </ul>
Supported output interfaces	<ul style="list-style-type: none"> <li>• XSLT</li> </ul>

Validation/demonstration	Semaphore has been used to develop a mapping between a subset of the AIDIMA order format and the UBL order format.
Standards compliance	-
Availability	<ul style="list-style-type: none"> <li>• Binary download</li> </ul>
License	Eclipse Public License
Status	Prototype
Requirements/dependencies	Semaphore is developed as an Eclipse plugin, and needs Eclipse 3.1 to run. Detailed requirements for other plugins is provided in the installation guide.
Web references	<ul style="list-style-type: none"> <li>• Website: <a href="http://modelbased.net/semaphore/">http://modelbased.net/semaphore/</a></li> <li>• Eclipse update site: <a href="http://www.modelbased.net/semaphore/update/">http://www.modelbased.net/semaphore/update/</a></li> <li>• Installation guide: <a href="http://www.modelbased.net/semaphore/SemaphoreInstallGuide.pdf">http://www.modelbased.net/semaphore/SemaphoreInstallGuide.pdf</a></li> <li>• User guide: <a href="http://www.modelbased.net/semaphore/SemaphoreUserGuide.pdf">http://www.modelbased.net/semaphore/SemaphoreUserGuide.pdf</a></li> </ul>
<b>ATHENA metadata</b>	
Contact person	Andreas Limyr, SINTEF
Contributors	SINTEF
Provided by project/activity	<ul style="list-style-type: none"> <li>• A6 – Model-driven and Adaptive Interoperability Architectures</li> </ul>
Deliverables representing result	-
Contribution to key result	<ul style="list-style-type: none"> <li>• 13. Model-driven and Adaptable Interoperability Framework and Infrastructure</li> </ul>
Used in pilot	-
Deliverable providing evaluation	-