

Semantic technologies from ontoprise

OntoStudio 3

Professional tool for knowledge architects

OntoStudio is a professional development environment for building, testing and maintaining ontologies. OntoStudio also enables the semantic integration of multiple heterogeneous data sources by mapping them to ontologies. Data in various formats can be imported.

Open and extensible architecture

OntoStudio is based on the well-known Eclipse open-source framework. Therefore, OntoStudio has a modular design that is familiar to a large community of developers. Its rich set of features can be easily extended by writing new plug-ins that integrates via well-defined extension-points.

Ontology editing

With OntoStudio it is possible to edit OWL, RDF(S), RIF and ObjectLogic ontologies. It also provides special graphical means for editing the elements of the chosen language. A comfortable text editor with advanced features like highlighting, navigation and auto-completion can be used for ObjectLogic editing.

Collaborative development

To set up a collaboration environment, ontoprise offers a CollaborationServer which enables collaborative ontology development. Ontology developers can use OntoStudio to connect to the CollaborationServer and create, edit and share ontologies with others.



OntoStudio 3 – Highlights

- Comprehensive language & standards support for RDF(S), OWL, SPARQL, RIF, ObjectLogic
- Collaborative ontology development by using the CollaborationServer
- Converting ontologies between different modeling languages with drag & drop
- Web service deployment for the integration of ontology queries into an existing SOA environment
- Easy Information integration and data mapping by connecting database information to your ontology

Rules and explanations

Expressive rules leverage the full power of ontologies. Therefore, OntoStudio provides comprehensive rule editing and managing functionalities. Rules can be edited in the text editor or in the easy-to-use graphical rule editor by dragging and dropping and linking the ontology elements graphically. To understand the results that were influenced by a rule, explanation templates can be attached to rules. These templates can be edited in the explanation editor.

Queries

OntoStudio allows querying of ontologies by using SPARQL or ObjectLogic queries. A graphical query builder provides convenient means for creating ObjectLogic queries. Queries can be executed and tested immediately, since OntoStudio has embedded reasoning capabilities.

Testing and debugging

To test an entire ontology, sets of test queries and their expected results can be compiled and used for regular consistency and compliance checks. If the test queries do not yield the expected results, the OntoStudio debugging tools can be used to track down how the results were derived.

Validation

The consistency of ontologies can be checked by using predefined as well as customized consistency rules.

Information integration

OntoStudio comes along with a set of connectors to databases, documents, file systems, and other applications. The very convenient mapping tool facilitates the semantic integration of heterogeneous data sources by mapping their schemata to ontologies. Advanced features like filters, value transformations and conditional mappings are available.

Technical information

System requirements

- Processor: Intel/AMD, min. 2 GHz
- RAM: min. 1 GB
- Hard-disk: min. 500 MB
- Operating system: Windows XP, Windows Vista, Windows 7, Windows Server 2003, SUSE Linux 10.x

Import filter

- Database systems: Microsoft SQL Server 2000, 2005, and 2008; Oracle 10g and 11g; DB2 8.1.2, 8.2, 9.0 and 9.5; JDBC drivers can be embedded by configuration
- Microsoft Excel 2003, 2007

Supported languages

OWL, RDF(S), RIF, ObjectLogic, SPARQL

Screenshot: database mapping view

The screenshot displays the 'Mapping' view in OntoStudio. On the left, the 'Ontology Navigator' shows the 'Genealogy' ontology with classes 'Person' and 'Man'. The 'Mapping' view shows a mapping from the 'person' table in a MySQL database to the 'Man' class in the ontology. The 'person' table has columns 'father', 'mother', and 'person'. The 'Man' class has properties 'hasName', 'hasFather', and 'Properties from Persc'. A filter is applied to the mapping: 'The 'person' to 'Man' mapping only applies if: source property is person_gender = value M'. The 'Instances' panel shows a list of instances for 'person' and 'Man'.