



# D9v01. WSMO Editor

## WSMO Working Draft 27 May 2004

This version:

<http://www.wsmo.org/2004/d9/v0.1/20040527/>

Latest version:

<http://www.wsmo.org/2004/d9/v0.1/>

Previous version:

<http://www.wsmo.org/2004/d9/v0.1/20040419/>

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# 1. Introduction

This prototype is intended to enable interested parties to experiment with the formal description provided by WSMO. It is based on the Flora Query Tab [\[Sintek, 2001\]](#) written by Michael Sintek.

## 2. Download

There are two download options:

- [Full](#) WSMOTab including Flora
- [Core](#) only the WSMOTab library (updates only)

The latter is intended for people who want to upgrade to a newer version of the plugin, in which case there is no need to reinstall the Flora engine.

## 3. Installation

The WSMOTab is a plugin for Protege [\[Crubézy et al., 2004\]](#) (build 85, compiled for Protégé 2.0 or above).

### Full Installation (first install)

- Get the recommended [build](#) of Protege (see above)
- Download this [zip file](#) and unzip its file to e.g.: "C:\WSMOTab" (make sure that your path does not contain spaces, since it was reported that xsb does not work properly in that case)
- Copy the "WSMOTab.jar" and "antlr.jar" into your protege plugin directory (e.g. "C:\Program Files\Protege\_2.0\plugins")
- Add the following configuration parameters to your protege.properties file:

```
flora.directory=C:\WSMOTab\tmp\  
flora.xsb.command=C:\WSMOTab\XSB2.2-stderr\config\x86-pc-  
windows\bin\xsb  
flora.xsb.stderr=true
```

Adapt the paths to your system if necessary.

- Start Protege and open the WSMO\_Lite project ("C:\WSMOTab\examples").

### Minimal Installation (Core - updates only)

- Download this [zip file](#) and unzip it into your existing WSMOTab directory (e.g. "C:\WSMOTab") and copy WSMOTab.jar and antlr.jar into your protege plugin directory (e.g.: "C:\Program Files\Protege\_2.0\plugins")

## 4. Documentation and Example

The current version of the Editor implements WSMO-Standard V02 [\[Roman et al., 2004\]](#). Please note that this is a early release, a lot of improvements are needed.

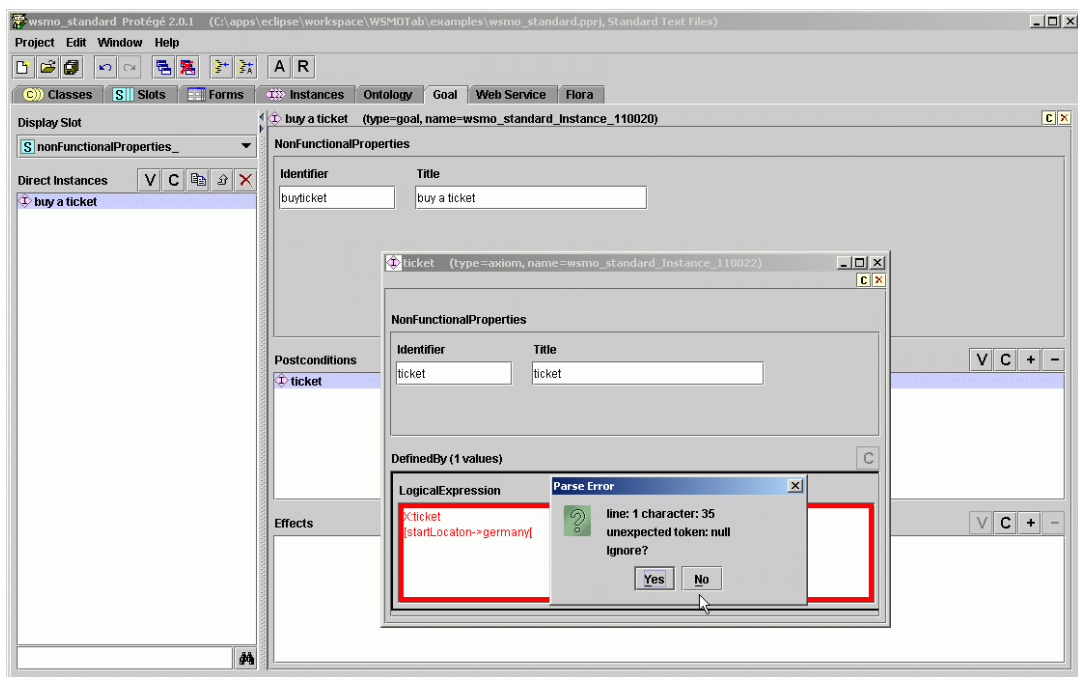
**Limitations:** The meta model for the ontology is simplified (according to the OKBC compliant meta model of Protege). It is currently not possible to modularize ontologies. All information (WSMO, domain ontology and instance data are exported to Flora).

**Usage:** After starting Protege load the WSMO ontology that came with the zip file ("C:\WSMOTab\examples"). In the classes and instances Tab you can maintain your domain ontology. Within the Web Service Tab you can create the annotation for your service. Note, that all instances will be exported into a separate file (when invoking flora), so you can browse through the relevant F-logic syntax.

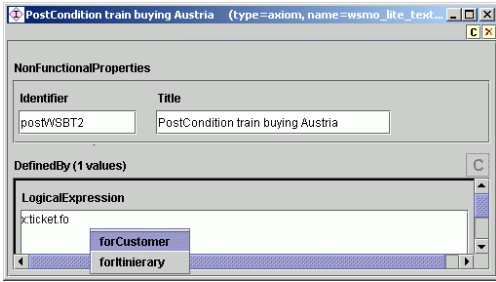
Within the Flora Tab, you can add additional axioms to the knowledgebase and execute specific queries. For a more detailed presentation on this feature, please refer to the explanations given at [\[Sintek, 2001\]](#) of the Flora Tab by Michael Sintek.

### Screenshots:

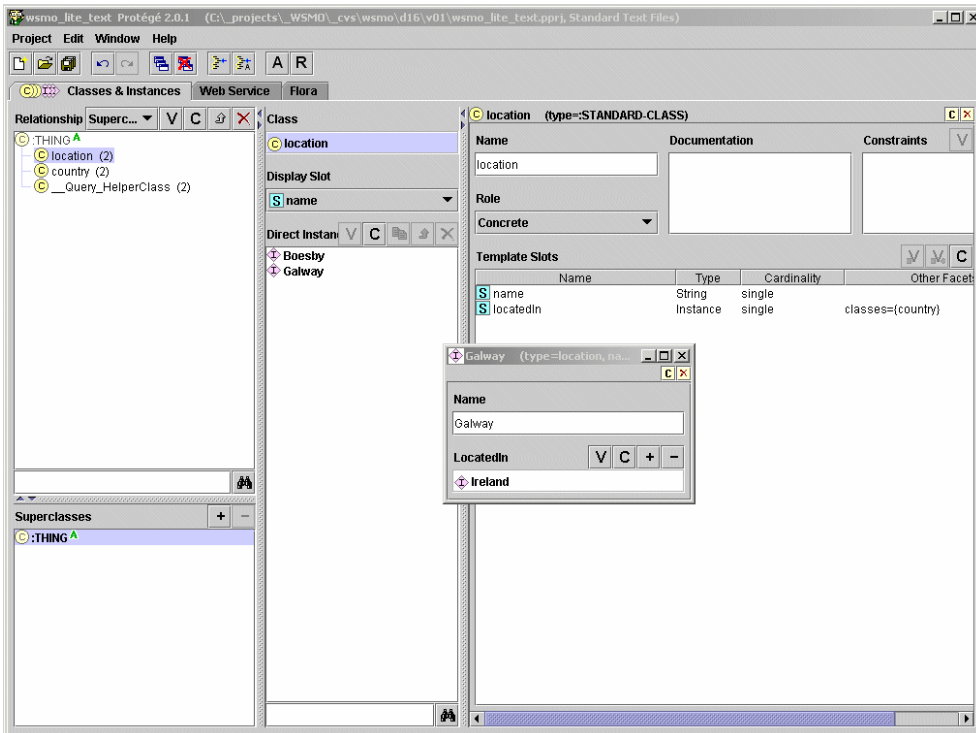
- (syntax check)



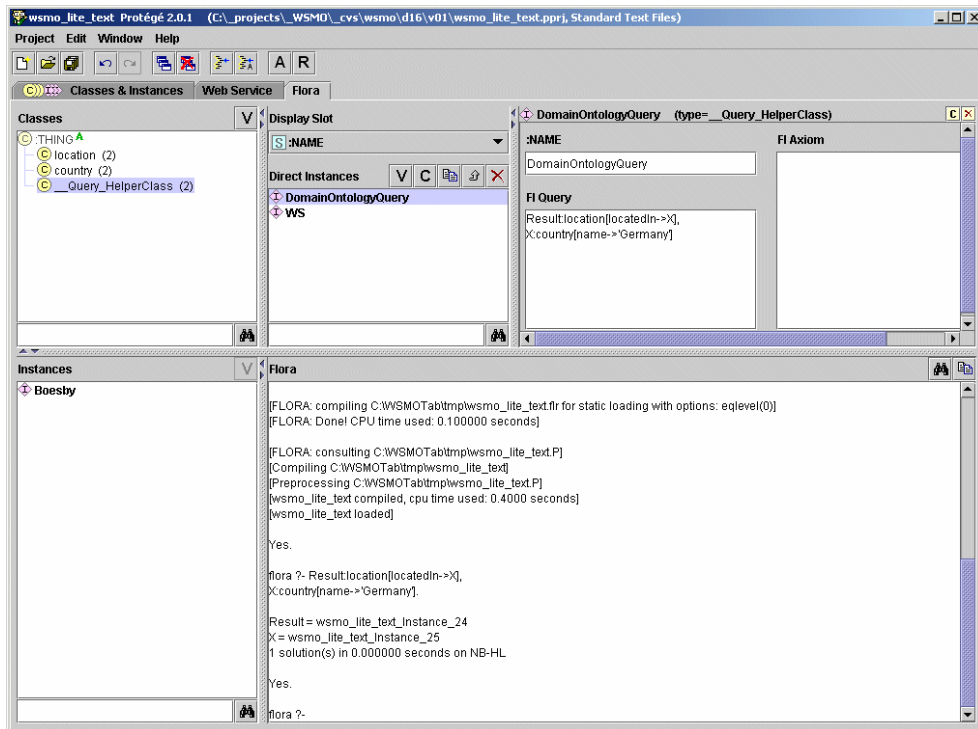
- [Syntax Completion](#)



- [Ontology](#) and instance construction



- [Interface](#) to Flora



**Development:** A short documentation on the development environment.

## Development Notes of Protege-2000 Plugins with Eclipse

This document is about the development of Protege-2000 Plugins in Java on the Eclipse platform. To show how the development works in principle, a tab-widget plugin, the simplest type of plugin, is developed

See Protege-2000 Programming Development Kit [\[Crubézy et al., 2004\]](#) for information for information about programming Protege-2000 plugins and Eclipse platform [\[Eclipse, 2004\]](#) for information about the implementation of Java projects on the eclipse platform

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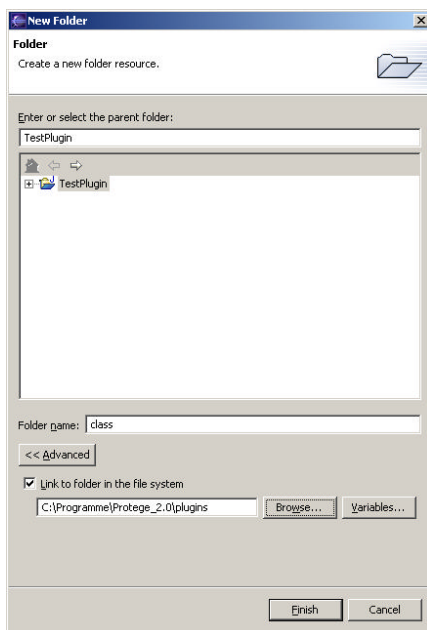
The integration of Protege plugins into Protege is very simple in principal. There are only two steps which need to be done for the integration of new plugins:

1. Copy the compiled .class or .jar file(s) of the plugin to the Protege "plugins" directory
2. Add the new plugin to the plugins directory manifest by editing the file "plugins/meta-inf/manifest.mf"

Eclipse allows one to automatise and integrate these steps with the implementation of the plugin itself

## Class-based Integration of plugins

1. Create a folder for the source files, e.g. "src", and a separate folder for the binary class files, e.g. "class", and link it to the plugins folder of Protege as shown in the following screenshot

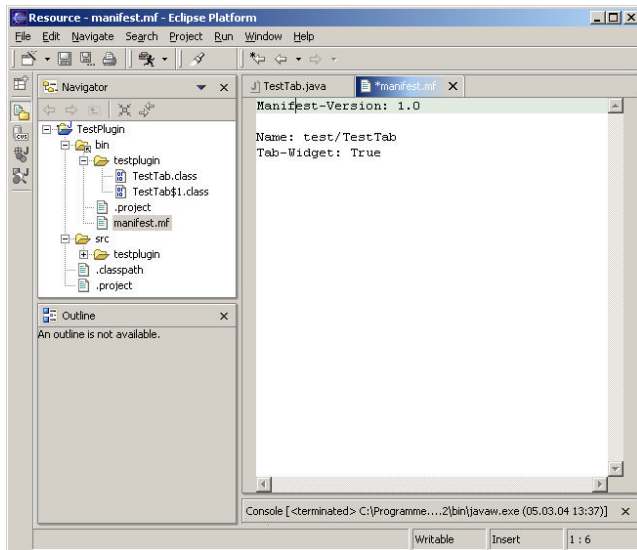


2. Set the new output file to the created directory by changing the "default output folder" in Project/Properties/Java Build Path.

**NOTE:** Because updating the output folder **overwrites the actual contents** of the plugin file, backup the contents of **Proteges plugins folder** (at least the meta-inf subdirectory) and copy it back after linking the output folder.

3. Develop your plugin as explained in the Protege-2000 Plugin Tutorial [[Crubézy et al., 2004](#)] by adding the protege.jar library to Project/Properties/Java Build Path/Libraries and implementing the source code of your plugin into the source folder.

4. To register the plugin, it must be added to OWL manifest file. This can also be done within Eclipse by restoring the manifest.mf file (see the following screenshot):



5. Compile and run the plugin from within Eclipse

**JavaDoc:** The Java Documentation can be found at <http://www.wsmo.org/2004/d9/v0.1/20040527/docu/>

## 5. Change Log

The following changes have been made with respect to the version 0.1 from the 19th of April 2004:

- Included source code and java documentation

## 6. References

[Crubézy et al., 2004] Monica Crubézy, Olivier Dameron, Ray Ferguson, Holger Knublauch, Mark Musen, Natasha Noy, Daniel Rubin, Samson Tu, Jennifer Vendetti. *Protege Ontology Editor*, the Stanford University School of Medicine, available from <http://protege.stanford.edu/>.

[Sintek, 2001] M. Sintek. *The Flora Query Tab*, German Research Center for Artificial Intelligence, available from <http://www.dfki.uni-kl.de/~sintek/FloraTab/>.

[Roman et al., 2004] D. Roman, U. Keller, H. Lausen (eds.): *D11v02. Web Service Modeling Ontology - Lite (WSMO-Lite)*, version 0.2 available at <http://www.wsmo.org/2004/d11/v02/20040305/>

[Eclipse, 2004] *Eclipse Universal Tool Platform.*, available from <http://www.eclipse.org/>.

[Crubézy et al., 2004] Monica Crubézy, Olivier Dameron, Ray Fergerson, Holger Knublauch, Mark Musen, Natasha Noy, Daniel Rubin, Samson Tu, Jennifer Vendetti. *Protege Programming Development Kit*, the Stanford University School of Medicine, available from <http://protege.stanford.edu/doc/pdk/index.html>.

## Acknowledgement

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