

Protégé-OWL Screens Introduction*



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*Summarized from various examples from the Protégé web site (<http://protege.stanford.edu/>) and interacting with the tool.

Active Ontology Tab

The screenshot shows the 'Active Ontology Tab' interface. At the top, there is a navigation bar with tabs: 'Active Ontology', 'Entities', 'Classes', 'Object Properties', 'Data Properties', 'Individuals', 'OWLViz', 'DL Query', and 'OntoGraf'. The 'Active Ontology' tab is selected. Below the navigation bar, there is a section titled 'Ontology annotations:'. It contains a list of annotations, with one visible: 'comment' with the text 'A pizza ontology that describes various pizzas based on their toppings.' Below this, there is a red text overlay: 'Ontology annotations like title, description, comment, ...'. At the bottom, there is a section titled 'Imported ontologies:'. It contains a list of imported ontologies, with one visible: '0.1 (http://xmlns.com/foaf/0.1/)'. An arrow points to this entry, and a red text overlay says: 'Imported Ontologies (note: 0.1 is the default shortcut name for foaf)'. At the very bottom, there is a status bar with the text 'No Reasoner set. Select a reasoner from the Reasoner menu' and a checkbox labeled 'Show Inferences' which is checked.

Active Ontology Tab

Navigation tabs: Active Ontology, Entities, Classes, Object Properties, Data Properties, Individuals, OWLViz, DL Query, OntoGraf

Ontology annotations:

Annotations +

comment

"A pizza ontology that describes various pizzas based on their toppings."

Ontology annotations like title, description, comment, ...

Imported ontologies:

Direct Imports +

0.1 (http://xmlns.com/foaf/0.1/)

Imported Ontologies
(note: 0.1 is the default shortcut name for foaf)

Indirect Imports

No Reasoner set. Select a reasoner from the Reasoner menu ☒ Show Inferences

Class Editor



The screenshot shows the Class Editor interface with the following components and annotations:

- Top Bar:** Includes navigation arrows, a version dropdown set to "0.1 (http://xmlns.com/foaf/0.1/)", and a search bar.
- Tab Bar:** Contains tabs for "Active Ontology", "Entities", "Classes", "Object Properties", "Data Properties", "Individuals", "OWL Viz", "DL Query", and "OntoGraf".
- Left Panel (Class hierarchy):**
 - Buttons for "Class hierarchy" and "Class hierarchy (inferred)".
 - Class hierarchy tree for "Agent" with sub-classes: "Class", "Document", "Image", "'Online Account'", "Person", "Project", and "'Spatial Thing'".
 - Annotation: "Add sub-class or sibling" with an arrow pointing to the "Add" button (a circle with a plus sign).
 - Annotation: "Select Class for details to show on the right" with an arrow pointing to the "Agent" class in the hierarchy.
 - Annotation: "NOTE: hover mouse over class to see IRI!" pointing to the "Agent" class.
- Right Panel (Annotations and Description):**
 - Annotations: Agent** tab is selected.
 - Annotation: "Show what uses it like domain, range, disjoint, subClassOf, etc." with an arrow pointing to the "Usage" sub-tab.
 - Annotations list:
 - comment:** "An agent (eg. person, group, software or physical artifact)."
 - label:** "Agent"
 - Annotation: "Annotations associated with the Class" with an arrow pointing to the list.
 - Description: Agent** tab.
 - Equivalent classes, Superclasses, Inherited anonymous classes, Members, Keys, and Disjoint classes sections, each with a "+" button.
 - Annotation: "Equivalent classes, super-classes, etc" with an arrow pointing to the "Equivalent classes" section.
 - Class **Document** is listed under "Equivalent classes".

At the bottom, a status bar reads: "No Reasoner set. Select a reasoner from the Reasoner menu" and a checked checkbox for "Show Inferences".

Add View of the Ontology File

The screenshot shows the Protege OWL editor interface. The title bar indicates the file path: 0.1 (http://xmlns.com/foaf/0.1/) - [C:\Documents and Settings\sbeida\My Documents\IRAD_2011\SemWebCourse_Fall2011\LabSupport\Protege-owl_4]. The menu bar includes File, Edit, View, Reasoner, Tools, Refactor, Window, and Help. The 'Window' menu is open, showing a 'Views' submenu. The 'Views' submenu lists various view options, with 'Ontology views' selected. The 'Ontology views' submenu is also open, showing a list of views including 'Classification results', 'DL metrics', 'Imported ontologies', 'Manchester syntax rendering', 'Navigation subject', 'Navigation view', 'OWL functional syntax rendering', 'OWL/XML rendering', 'OWLViz Imports Graph', 'OntoGraf Import View', 'Ontology annotations', 'Ontology metrics', 'Ontology prefixes', 'RDF/XML rendering' (which is highlighted), and 'Rules'. The main workspace displays the 'Class hierarchy' for the 'Agent' class, showing a tree structure with classes like 'Group', 'Organization', 'Person', 'Class', 'Document', 'Image', 'Online Account', 'Person', 'Project', and 'Spatial Thing'. The 'Description' pane on the right shows the 'Equivalent classes', 'Superclasses', 'Inherited anonymous classes', and 'Members' for the 'Agent' class.

0.1 (http://xmlns.com/foaf/0.1/) - [C:\Documents and Settings\sbeida\My Documents\IRAD_2011\SemWebCourse_Fall2011\LabSupport\Protege-owl_4]

File Edit View Reasoner Tools Refactor Window Help

Views

- Annotation property views
- Class views
- Data property views
- Datatype views
- Individual views
- Misc views
- Object property views
- Ontology views

- Classification results
- DL metrics
- Imported ontologies
- Manchester syntax rendering
- Navigation subject
- Navigation view
- OWL functional syntax rendering
- OWL/XML rendering
- OWLViz Imports Graph
- OntoGraf Import View
- Ontology annotations
- Ontology metrics
- Ontology prefixes
- RDF/XML rendering
- Rules

Active Ontology Entities Classes Object Properties

Class hierarchy Class hierarchy (inferred)

Class hierarchy: Agent

- 'A thing'
- Agent
 - Group
 - Organization
 - Person
- Class
- Document
- Image
- 'Online Account'
- Person
- Project
- 'Spatial Thing'

Description: Agent

- Equivalent classes
- Superclasses
- Inherited anonymous classes
- Members

Add View of the Ontology File



The screenshot displays the Protégé ontology editor interface. The top navigation bar includes tabs for 'Active Ontology', 'Entities', 'Classes', 'Object Properties', 'Data Properties', 'Individuals', 'OWL Viz', 'DL Query', and 'OntoGraf'. The 'Classes' tab is active, showing a 'Class hierarchy: Agent' view on the left and a 'Usage: Agent' view on the right. The 'Usage: Agent' view shows the 'made' and 'maker' properties. Below the 'Usage' view is the 'Description: Agent' view, which shows 'Equivalent classes' and 'Superclasses'. At the bottom is the 'RDF/XML rendering' view, which displays the RDF/XML code for the 'Person' class. A red arrow points from the 'Person' class in the 'Class hierarchy' to the corresponding RDF/XML code in the 'RDF/XML rendering' view. The text 'Entire ontology file' is written in red next to the RDF/XML code.

0.1 (<http://xmlns.com/foaf/0.1/>)

Active Ontology | Entities | **Classes** | Object Properties | Data Properties | Individuals | OWLViz | DL Query | OntoGraf

Class hierarchy | Class hierarchy (inferred)

Class hierarchy: Agent

Annotations | Usage

Usage: Agent

Show: ☒ this ☒ disjoints ☒ named sub/superclasses

made

made Domain Agent

maker

Description: Agent

Equivalent classes +

Superclasses +

RDF/XML rendering:

```
<owl:Class rdf:about="&foaf;Person">
  <rdfs:label>Person</rdfs:label>
  <rdfs:subClassOf rdf:resource="&contact;Person"/>
  <rdfs:subClassOf rdf:resource="&wgs84_pos;SpatialThing"/>
  <rdfs:subClassOf rdf:resource="&foaf;Agent"/>
  <owl:disjointWith rdf:resource="&foaf;Project"/>
  <vs:term_status>stable</vs:term_status>
```

Entire ontology file

No Reasoner set. Select a reasoner from the Reasoner menu ☒ Show Inferences

Object Property Editor

The screenshot shows the 'Object Property Editor' window. The top bar includes navigation icons and a version indicator '0.1 (http://xmlns.com/foaf/0.1/)'. Below this are tabs for 'Active Ontology', 'Entities', 'Classes', 'Object Properties', 'Data Properties', 'Individuals', 'OWL Viz', 'DL Query', and 'OntoGraf'. The 'Object Properties' tab is active.

On the left, the 'Object property hierarchy: 'AIM chat ID'' is displayed. It shows a tree structure starting with 'topObjectProperty', followed by several properties including 'AIM chat ID', 'ICQ chat ID', 'MSN chat ID', 'Yahoo chat ID', 'account service homepage', 'based near', 'current project', 'depiction', 'depicts', 'funded by', 'holds account', 'interest', 'interest_topic', 'jabber ID', 'knows', 'logo', 'made', 'maker', and 'member'. An arrow points from the text 'Select Class for details to show on the right' to the 'depiction' property in this list.

On the right, the 'Annotations' tab is selected for the 'AIM chat ID' property. It shows two annotations: 'comment' with the value 'An AIM chat ID' and 'isDefinedBy' with the value '<http://xmlns.com/foaf/0.1/>'. A red annotation 'Annotations associated with the Property' points to this section.

Below the annotations, the 'Characteristics' tab is visible, showing various flags such as 'Functional', 'Inverse function' (checked), 'Transitive', 'Symmetric', 'Asymmetric', 'Reflexive', and 'Irreflexive'. A red annotation 'Type flags' points to this section.

At the bottom right, the 'Description: 'AIM chat ID'' tab is shown. It displays the domain 'Agent' under 'Domains (intersection)'. A red annotation 'Domain or range of property, etc' points to this section.

At the bottom of the window, a status bar indicates 'No Reasoner set. Select a reasoner from the Reasoner menu' and a checked box for 'Show Inferences'.

Annotations associated with the Property

Domain or range of property, etc

Type flags

Select Class for details to show on the right

NOTE: hover mouse over property for IRI

Data (i.e. Datatype) Property Editor

The screenshot shows the 'Data Property Editor' window for the 'Surname' property. The left pane displays a 'Data property hierarchy' tree with 'Surname' selected. The right pane shows 'Annotations' and 'Description' for the selected property. Red annotations are overlaid on the image to guide the user.

Annotations associated with the Property

Domain or range of property, etc

Select Class for details to show on the right

Hover mouse over property for IRI

Characteristics: Surname

Description: Surname

Annotations: Surname

Annotations:

- comment**
"The surname of some person."
- isDefinedBy**
⬢ <http://xmlns.com/foaf/0.1/>

Domains (intersection):

- Person**

Ranges:

- Literal**

Equivalent properties:

Super properties:

Disjoint properties:

Functional

No Reasoner set. Select a reasoner from the Reasoner menu ☒ **Show Inferences**

Individuals Editor – Ready to Add/Select Instance

The screenshot displays the Individuals Editor interface for the ontology 'pizza' (http://utdallas/semclass/pizza.owl). The interface is divided into several panels:

- Class hierarchy (inferred):** Shows a tree of classes. The 'Person' class is selected, highlighted in blue. A red box labeled 'Instances of the selected class' points to the 'Person' class.
- Members list (inferred):** Shows the list of individuals belonging to the selected class. The individual 'StevenSeida' is listed. A red box labeled 'Empty of Name' points to the 'Members list' header.
- Annotations:** A panel for adding annotations to the selected individual. It is currently empty.
- Description:** A panel for adding descriptions to the selected individual. It contains options for 'Same individuals' and 'Different individuals'.
- Property assertions:** A panel for adding property assertions to the selected individual. It contains options for 'Object property assertions', 'Data property assertions', 'Negative object property assertions', and 'Negative data property assertions'.

At the bottom of the interface, there is a status bar that reads: 'No Reasoner set. Select a reasoner from the Reasoner menu' and a checkbox labeled 'Show Inferences' which is checked.

Individuals Editor – Editing an Instance

The screenshot shows the 'Individuals Editor' window for the ontology 'pizza' (http://utdallas/semclass/pizza.owl). The interface is divided into several panels:

- Class hierarchy (inferred):** A tree view on the left showing the hierarchy of classes. The 'Person' class is selected.
- Members list (inferred):** A list of individuals belonging to the selected class. 'StevenSeida' is the only member listed.
- Annotations:** A panel for adding annotations to the instance. A red box highlights this panel with the text: "Panel to add annotations to instance."
- Description: StevenSeida:** A panel showing the types of the instance. 'Person' is listed as the type. A red box highlights this panel with the text: "Class memberships of individual".
- Property assertions: StevenSeida:** A panel for adding property assertions. It shows object property assertions (e.g., 'firstName "Steven"', 'Surname "Seida"') and data property assertions. A red box highlights this panel with the text: "Add object or datatype properties."

At the bottom of the window, there is a status bar that reads: "No Reasoner set. Select a reasoner from the Reasoner menu" and a checkbox for "Show Inferences" which is checked.