Owl To SMC V1.0

Documentation

2014/2015

Subject SEMbySEM Owl To Smc Converter
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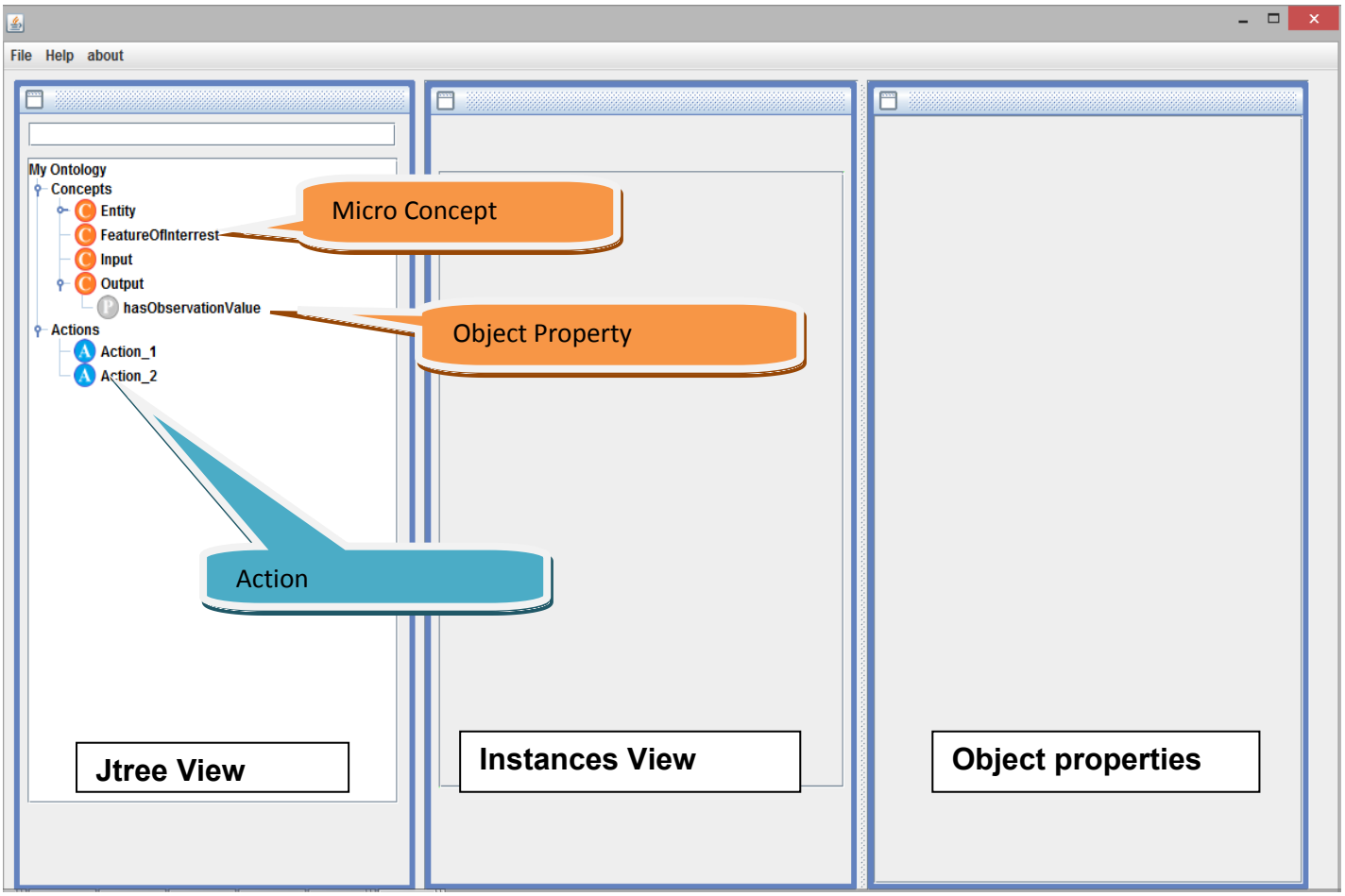
Authors HADDAD Riadh
Version V1.0

In the SEMbySEm project, a Micro-Concept refers to a semantic description of manageable objects (MO) sharing common characteristics. Those Manageable Objects represent a physical (device) or an abstract (service) entity which is a source of information from the real world.
The Micro-Concept are used to define the characteristics of the MO, to declare the command (action) that can be applied on them and to be able to reason on them.
This document contains a tutorial of the Micro-Concept Editor allowing the creation of the semantic micro-concept model.

Owl To Smc Editor Version 1.0 editor represent a tool that convert owl file to Smc File and enable creating, browsing, and modifying

OWLToSMC Version 1.0

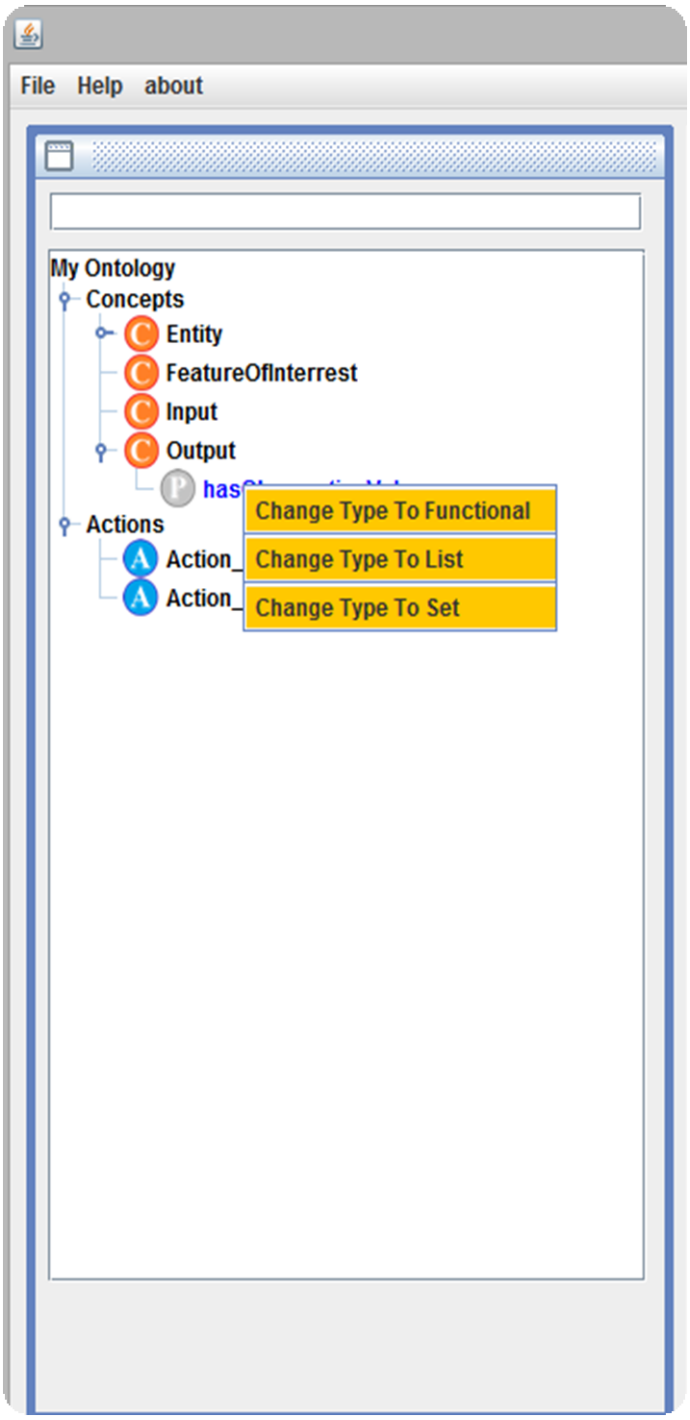
Owl To Smc Version 1.0 is editor who takes an OWL file and converts it into smc (µConcept) with the possibility of change.



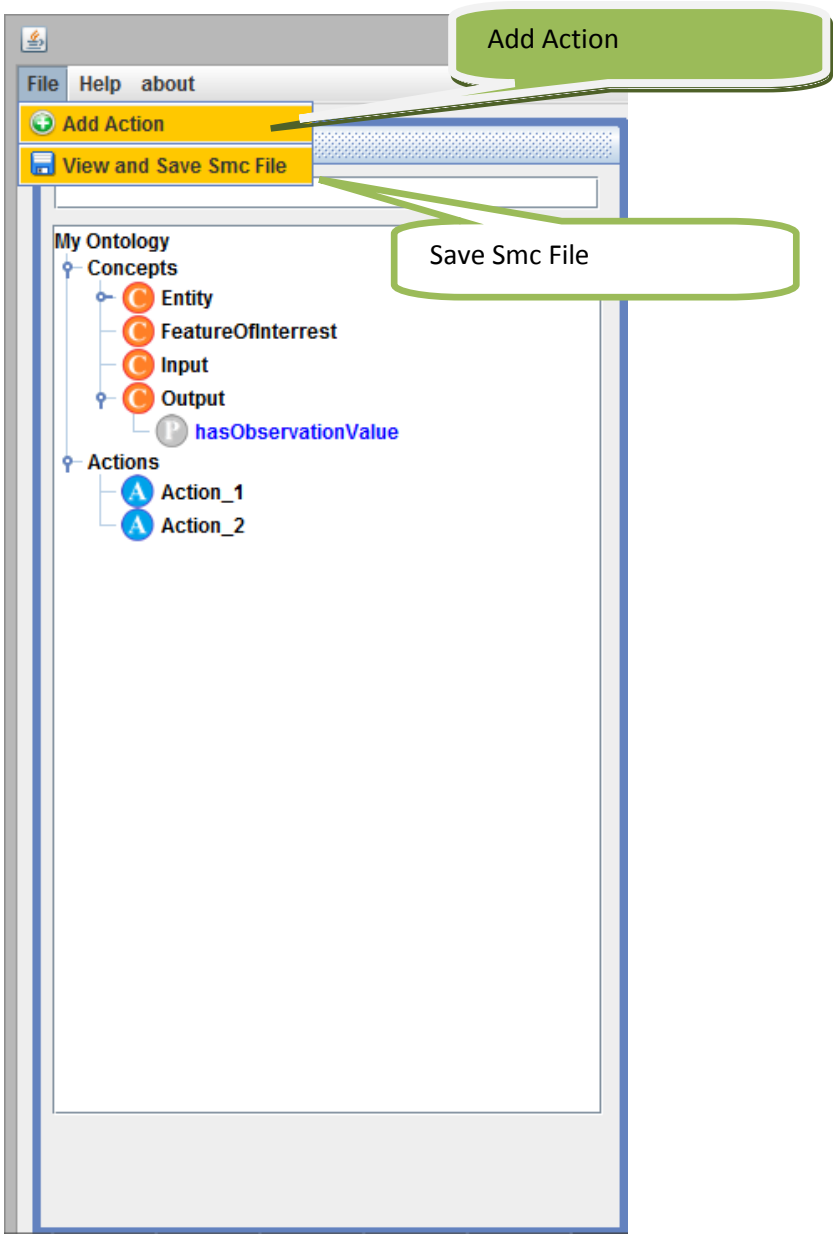
Jtree View: allows user to view end edit concepts, properties and actions, defines the description of each action and its parameters. This view allows via the tree to see the structure of the different actions , concepts ,properties created by the user.

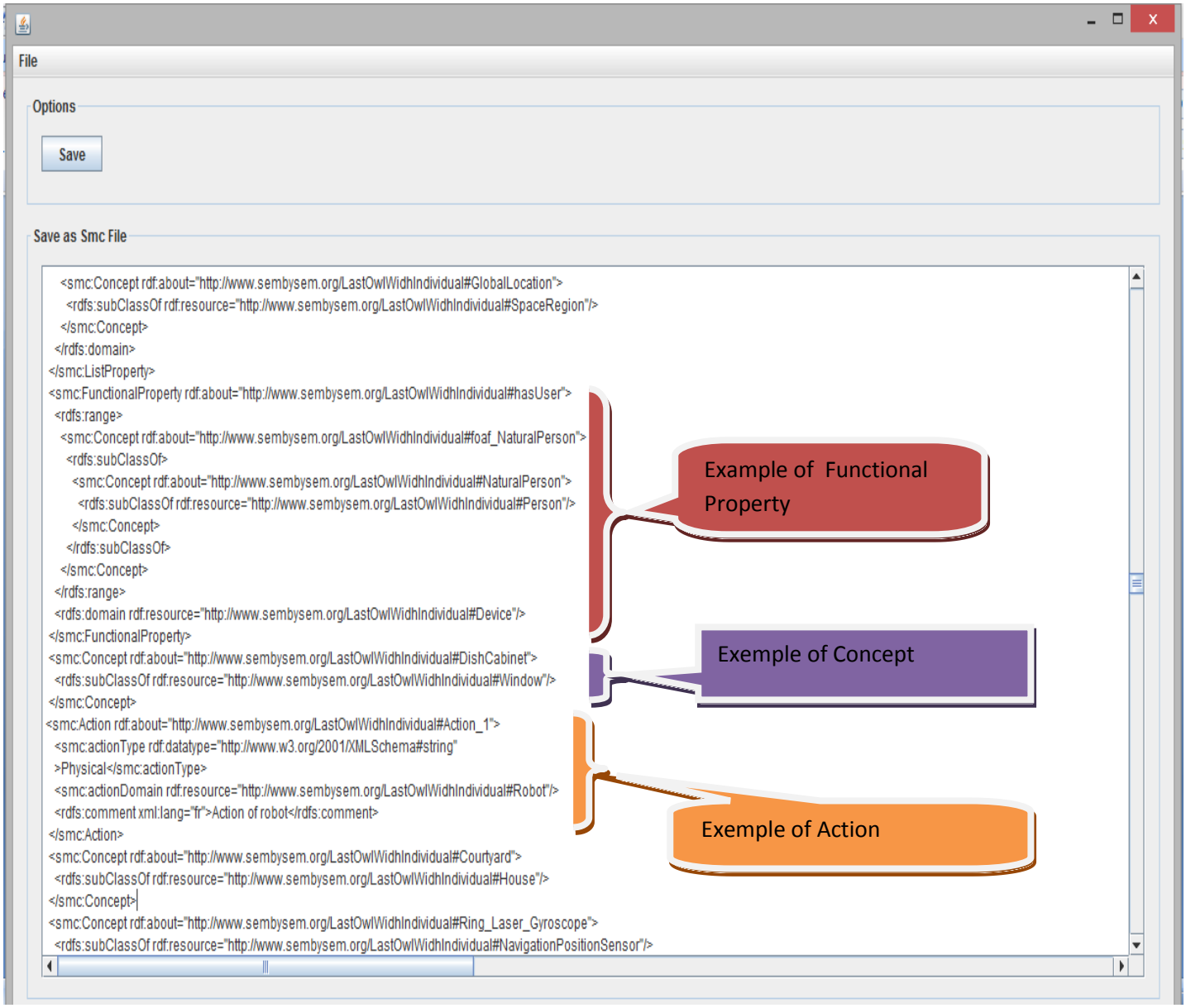
Instance View: allows user to view all instances of the selected concept in Jtree View.

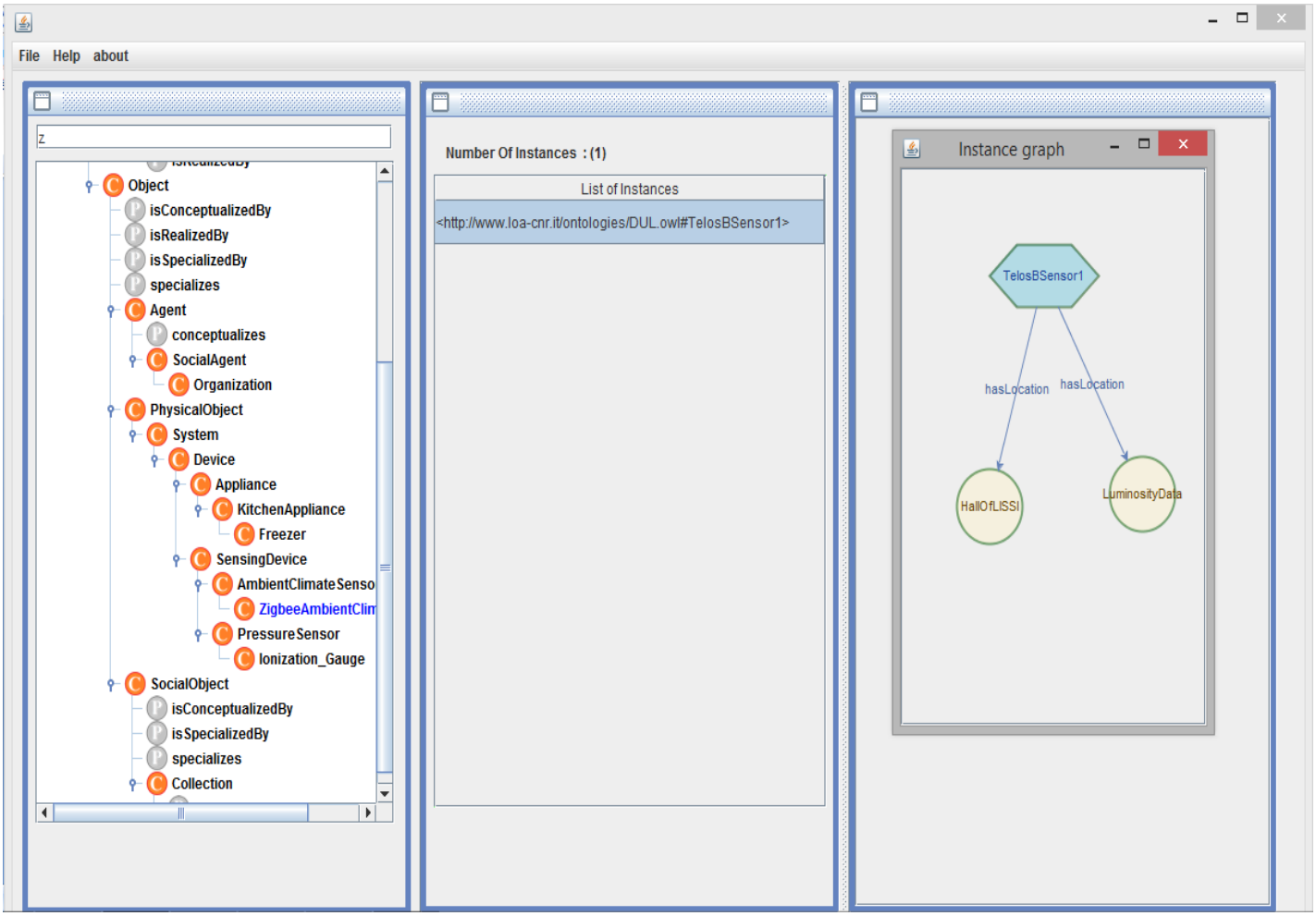
Properties View: allows user to view all object properties of the selected instance in Instance View.

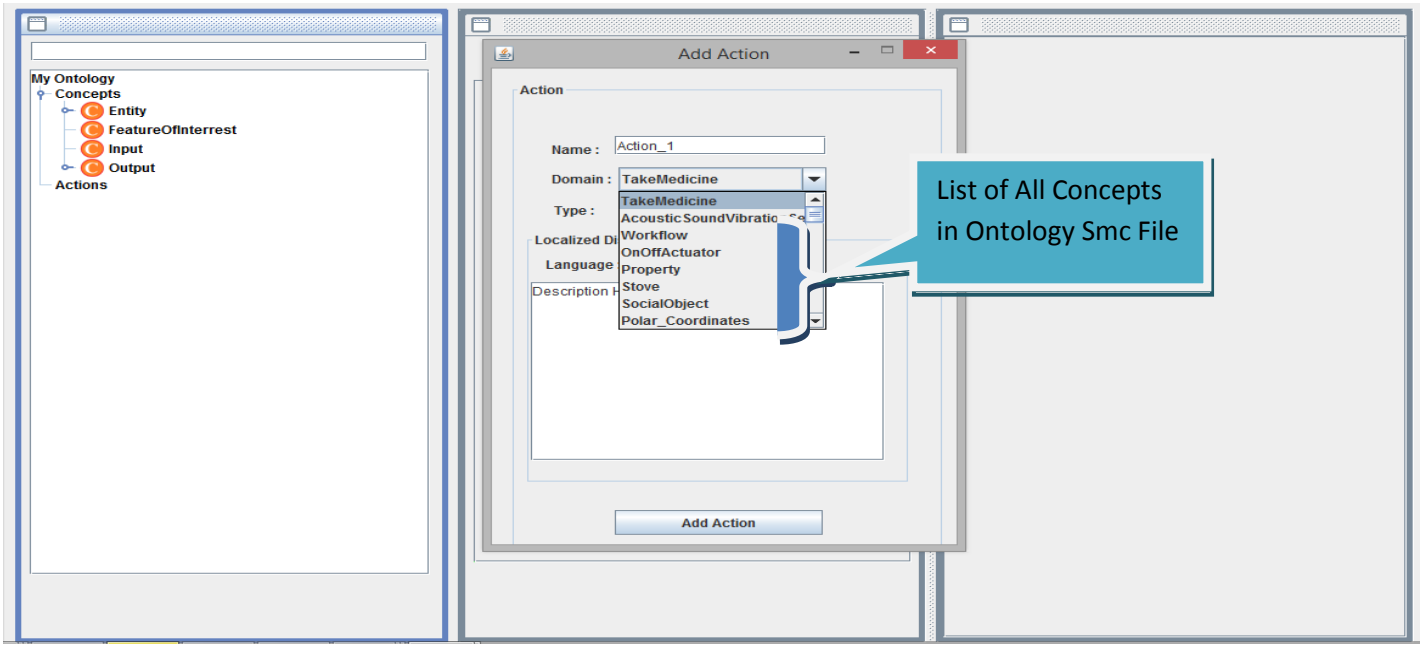


On right click ,user can change the type of property to functional ,List or SetType


Add Action
File
Help
about
Add Action
View and Save Smc File
Save Smc File
My Ontology
Concepts
Entity
FeatureOfInterrest
Input
Output
hasObservationValue
Actions
Action_1
Action_2


File
Options
Save
Save as Smc File
<smc:Concept rdf:about="http://www.sembysem.org/LastOwlWidhIndividual#GlobalLocation">
<rdfs:subClassOf rdf:resource="http://www.sembysem.org/LastOwlWidhIndividual#SpaceRegion"/>
</smc:Concept>
</rdfs:domain>
</smc:ListProperty>
<smc:FunctionalProperty rdf:about="http://www.sembysem.org/LastOwlWidhIndividual#hasUser">
<rdfs:range>
<smc:Concept rdf:about="http://www.sembysem.org/LastOwlWidhIndividual#foaf_NaturalPerson">
<rdfs:subClassOf>
<smc:Concept rdf:about="http://www.sembysem.org/LastOwlWidhIndividual#NaturalPerson">
<rdfs:subClassOf rdf:resource="http://www.sembysem.org/LastOwlWidhIndividual#Person"/>
</smc:Concept>
</rdfs:subClassOf>
</smc:Concept>
</rdfs:range>
<rdfs:domain rdf:resource="http://www.sembysem.org/LastOwlWidhIndividual#Device"/>
</smc:FunctionalProperty>
<smc:Concept rdf:about="http://www.sembysem.org/LastOwlWidhIndividual#DishCabinet">
<rdfs:subClassOf rdf:resource="http://www.sembysem.org/LastOwlWidhIndividual#Window"/>
</smc:Concept>
<smc:Action rdf:about="http://www.sembysem.org/LastOwlWidhIndividual#Action_1">
<smc:actionType rdf:datatype="http://www.w3.org/2001/XMLSchema#string"
>Physical</smc:actionType>
<smc:actionDomain rdf:resource="http://www.sembysem.org/LastOwlWidhIndividual#Robot"/>
<rdfs:comment xml:lang="fr">Action of robot</rdfs:comment>
</smc:Action>
<smc:Concept rdf:about="http://www.sembysem.org/LastOwlWidhIndividual#Courtyard">
<rdfs:subClassOf rdf:resource="http://www.sembysem.org/LastOwlWidhIndividual#House"/>
</smc:Concept>
<smc:Concept rdf:about="http://www.sembysem.org/LastOwlWidhIndividual#Ring_Laser_Gyroscope">
<rdfs:subClassOf rdf:resource="http://www.sembysem.org/LastOwlWidhIndividual#NavigationPositionSensor"/>
Example of Functional Property
Exemple of Concept
Exemple of Action





- the figure bellow explain how to Add Actions