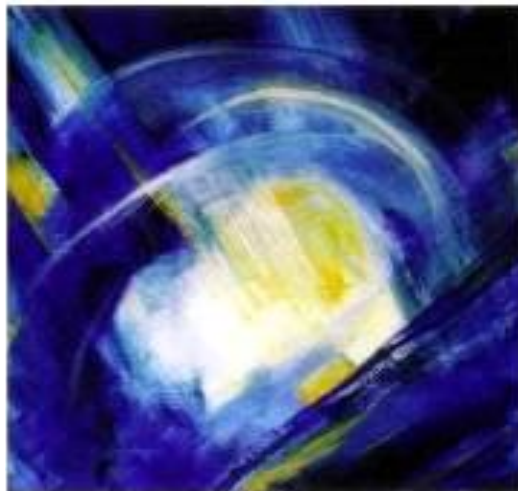


SemTalk

Version 4.4

General Tutorial



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Installation Guidelines

SemTalk minimum requirements:

- Microsoft Visio® 2007, Microsoft Visio® 2010, Microsoft Visio® 2013
We recommend using Microsoft Visio® 2010, Microsoft Visio® 2013 so that SemTalk functions as an integrated plug-in in Visio.
- Microsoft .NET Framework Version 4.0 or higher.
SemTalk will check to see if .NET is installed during installation. If it is .NET is not installed, SemTalk installation will not proceed.
 - Download Link: (<http://www.microsoft.com/downloads/>)

NOTE: SemTalk's startup language will be set according to your system settings. To change your regional settings and system language please go to Window's **START → Settings → System control → Regional and language settings**.

You may also change the start language in SemTalk without modifying your computer's regional settings. In SemTalk go to menu bar option **Tools → SemTalk Options → Language (Tab) → GUI Language** and choose a language or the source of start language setting.

What is SemTalk?

SemTalk is a user-friendly editor for Semantic Web ontologies and processes. Because Microsoft Visio® is embedded in SemTalk; it combines the graphical strength of Microsoft Visio® with the consistency of a professional modeling tool.

Using SemTalk, new modeling methodologies are easily defined for virtually any modeling problem. Applying a graphically configurable Meta model, Microsoft Visio® can be adapted to different modeling worlds such as CASE Tools, organizational models and object models.

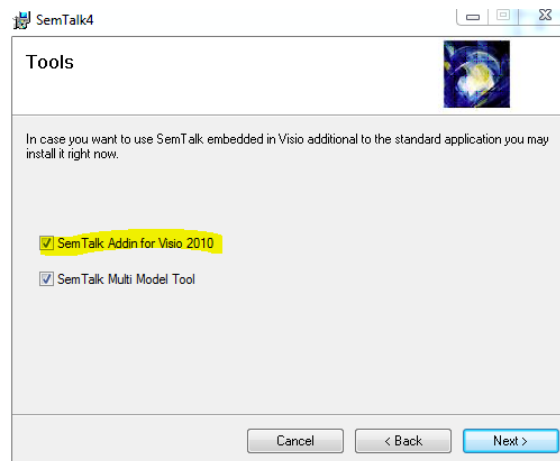
The main purpose of this tutorial is to learn how to use SemTalk. This tutorial does not include detailed information about specific methodologies nor SemTalk Web or BPMN use cases. It also does not replace the Visio Tutorial. This tutorial assumes readers are familiar with the basic Microsoft Visio® functions.

If you are not interested in gaining a basic knowledge of SemTalk and just want to model processes using specific business process modeling methods such as CSA, EPC, BPMN, Promet and others). You can download specific tutorials for each of these methods from our web pages at <http://www.semtation.de/index.php/en/manuals-en> .

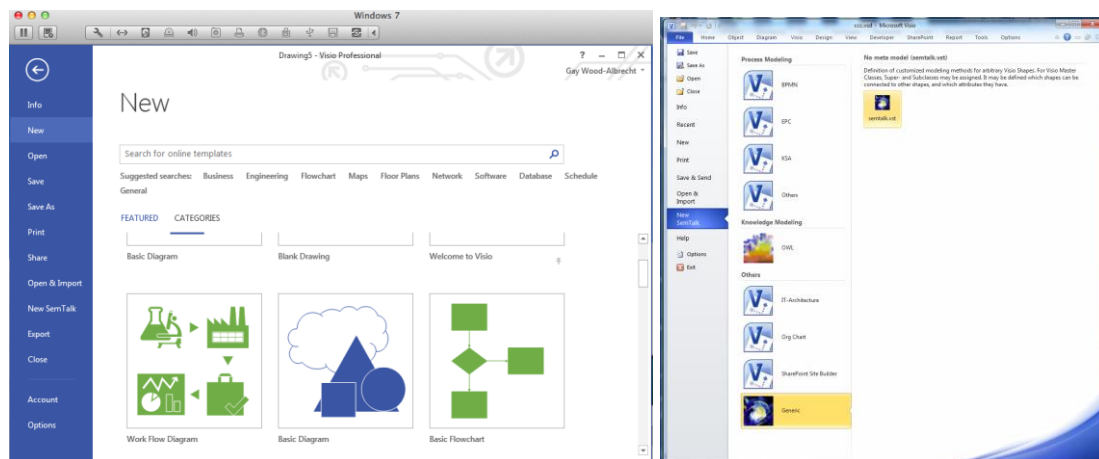
Note: SemTalk will open using the language specified in the currently installed operating system. Change system language settings in the Control Panel - Region and Language. You can also use SemTalk Options - "Language" menu to change the GUI into another language supported by SemTalk.

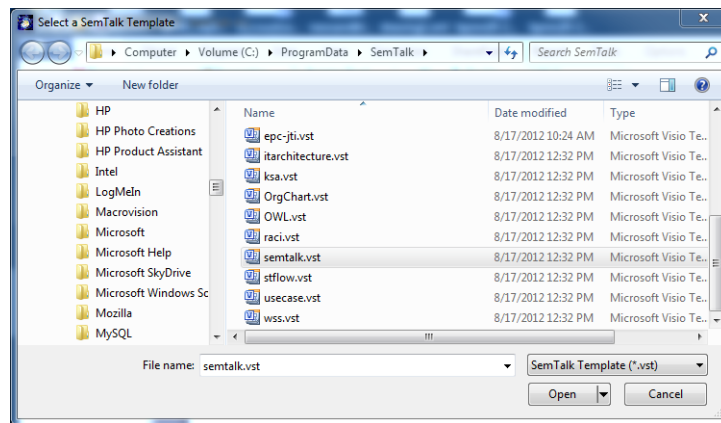
Let's get started

There are two ways to use SemTalk. The first, and recommended approach, is to install SemTalk, open Visio and use the SemTalk user interface embedded in Visio as a Visio Addin. The second approach is to open SemTalk directly and use SemTalk. The recommended approach, especially when using SemTalk with SharePoint, is to open Visio directly. Please make sure that you have installed the “SemTalk Add in for Visio 2010 / Visio 2013” before opening Visio. However, if you are using Visio 2007, open SemTalk using the SemTalk icon on your desktop.

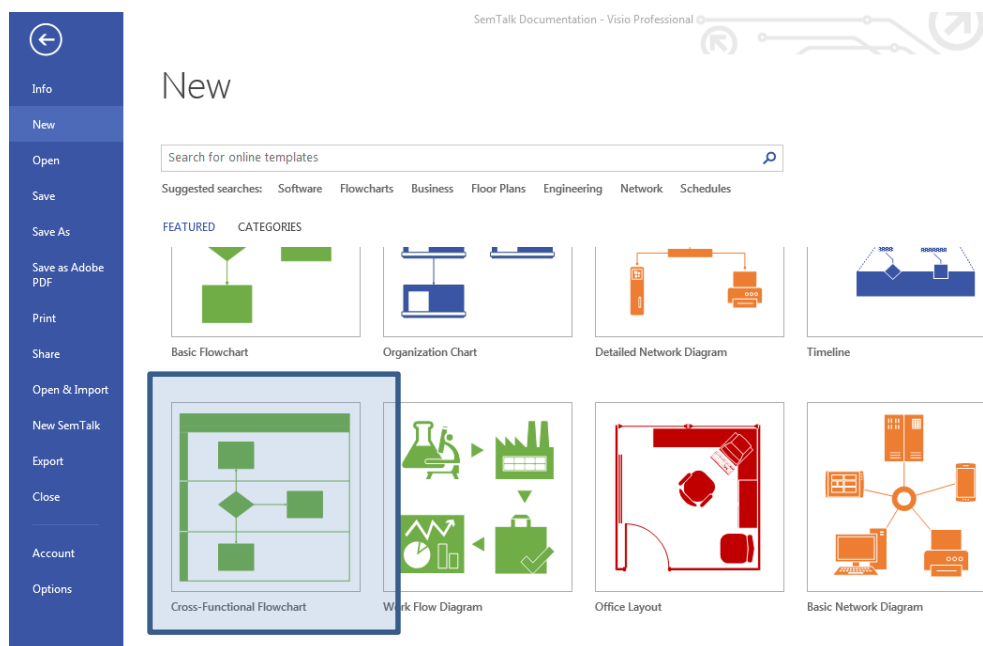


In order to start SemTalk simply open Visio. The “New SemTalk” menu gives an overview of preinstalled templates. Select “New” if you have Visio 2013 or 2010 and then select the Visio Work Flow Diagram. If you have Visio 2007, please open the SemTalk application by double clicking on the desktop SemTalk icon or use “Start->Programs->SemTalk->SemTalk4”. Then select “New SemTalk” and then select “no meta model”.

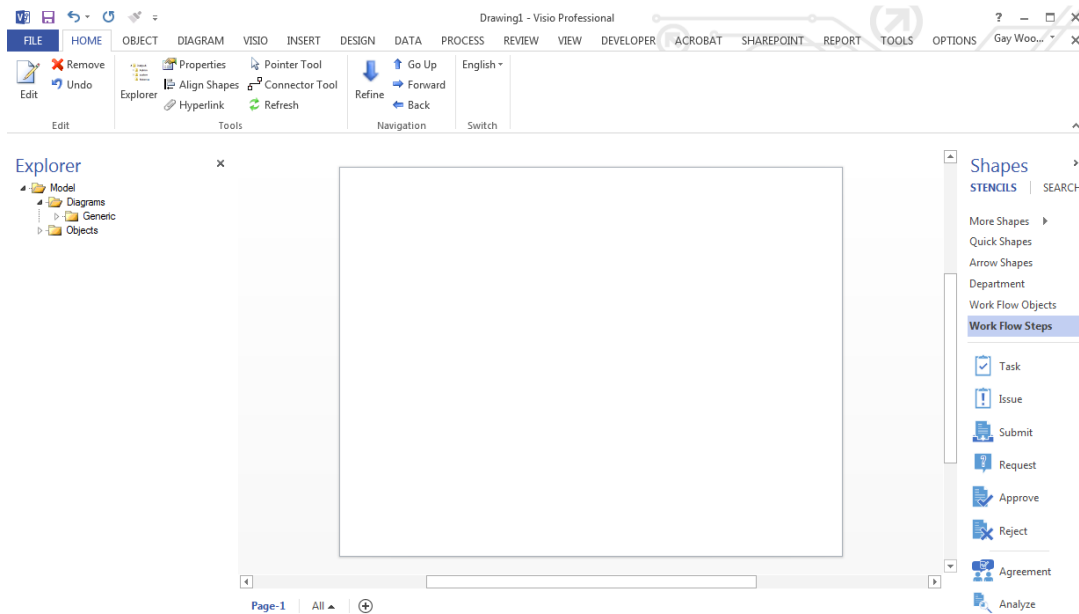




For this Tutorial we will not use a specific notation, rather we will use Visio's Workflow Diagram from the Flowchart category.

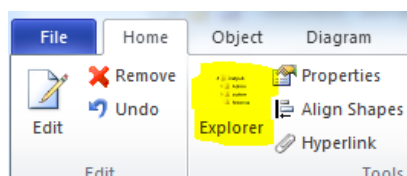


Once SemTalk is installed, you can use Visio's SemTalk as a Visio add-in, your user interface should look similar to the picture below. Since SemTalk is embedded in Visio, window panes within the application can be "docked" to the borders of the Visio pane. Move and size your Visio and Semtalk windows to dock them so that they look like the following picture.



"SemTalk Explorer" appears in the left windowpane. You will see a Visio drawing sheet (middle) associated with predefined shapes (symbols) in the object templates (templates) on the right side. The "SemTalk Explorer" displays the tree structure of all relevant model diagrams along with the objects and their relationships. If the SemTalk Explorer is hidden, view it by selecting the "Explore" button on the "Start" tab.

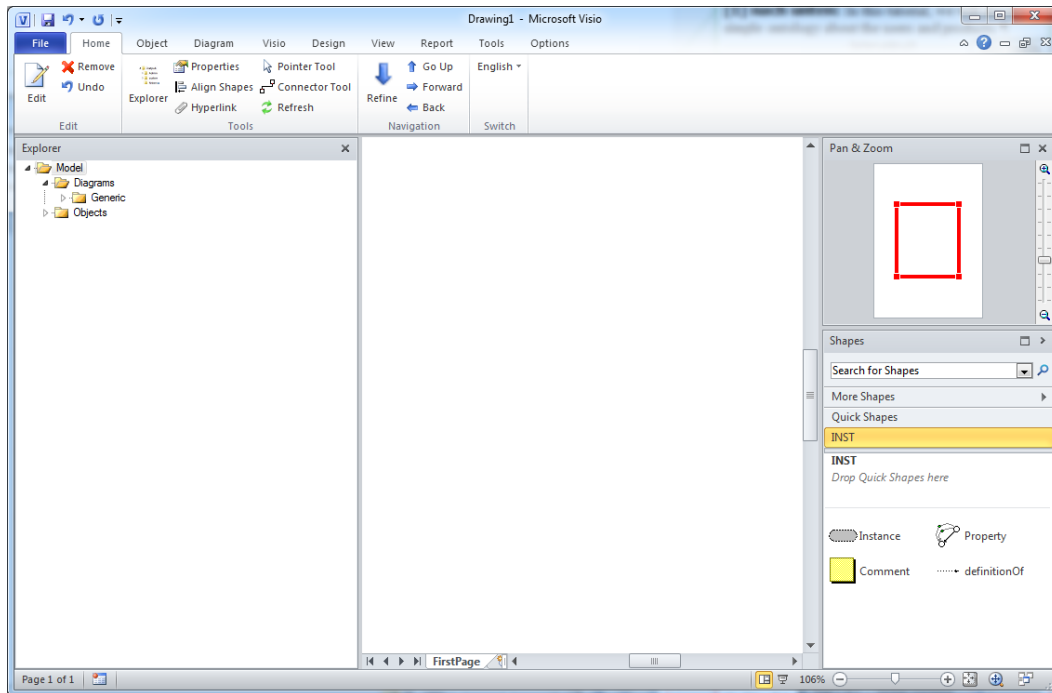
SemTalk Explorer can also be opened by using the Explorer Button on the Home Tab.



Structured access to objects contained in your model is available in the Explorer.

Visio's Pan & Zoom Window is located in the lower right corner:





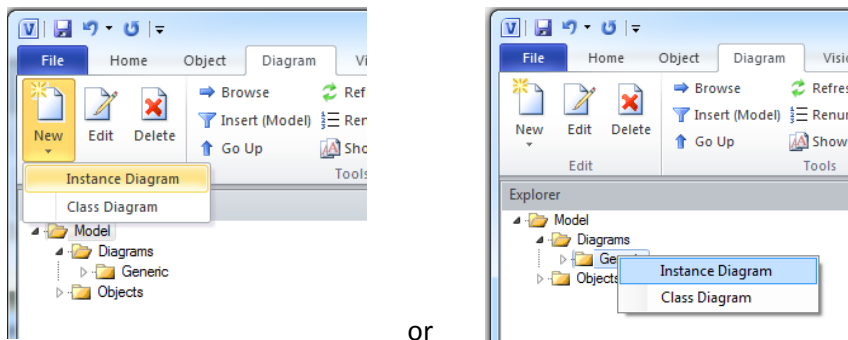
A major advantage of using SemTalk for Visio is that you can customize the ribbon to match your modeling needs.

Creating an Instance Diagram

Instance diagrams model concrete things that have their own unique identity. SemTalk uses Instance Diagrams for business processes, organization charts, data warehouse cubes, product models, etc. Virtually every Visio drawing contains graphics that represent "real", specific objects, whether a piece of kitchen equipment or a specific plan for your garden. Diagrams representing a particular scenario are Instance Diagrams.

Class Diagrams are the counterpart to Instance Diagrams. They contain abstract objects such as data types or class definitions that more broadly describe the characteristics of a general category. In the Visio world, Classes correspond to Master Templates vs. Instances of shapes that appear on a drawing page. In a Class Diagram, the Visio master and their possible relationships are described. Class diagrams will be further described in the section "Class Diagrams" that appears later in this section.

You can begin modeling using the existing page with modeling or you can create a new page.



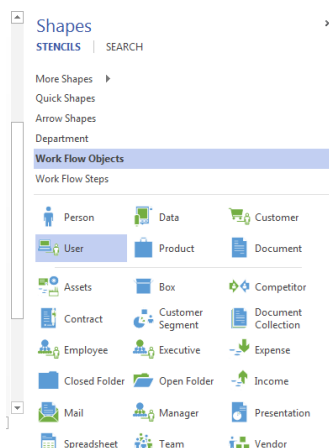
or

Create a Diagram using the New → Instance from the File pull-down menu or Right Click on the SemTalk Explorer – Diagram to create an "Instance Diagram". Create your new Instance Diagram. When using the Explorer option, a new diagram will appear with a default name (e.g. Instance -4). In the SemTalk Explorer a sub-folder "Generic" will appear under Diagrams. Your new diagram will appear in the Generic Folder. The Diagram Name can be changed by right mouse clicking on the new Diagram that appears in your SemTalk Explorer → Generic folder or by renaming the Visio page by selecting the right click Edit menu when you are on the sheet tab at the bottom of the chart. Change the name by selecting "Edit". The "Delete" option will delete the selected diagram.

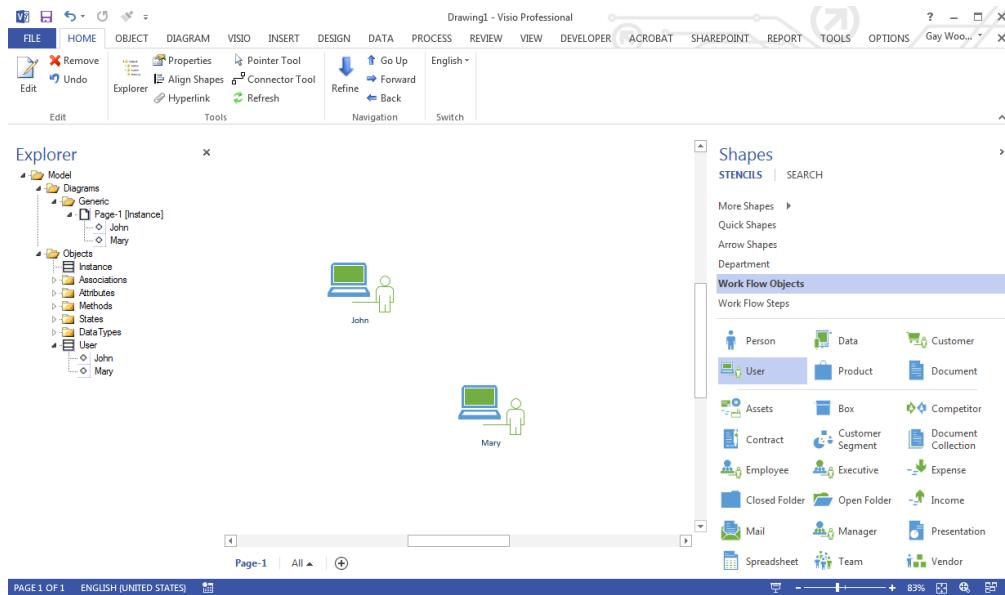
Creating an Instance

First open a Visio stencil. In this tutorial, we will use "Work Flow Diagram Shapes". (Found in the section "Flowchart").

Now drag & drop the shape titled "User". Repeat this procedure to create a second "User" object. It is also possible to use the Shape → Search function that appears in the Shape Window pane. The search option allows you to look for shapes already contained in your Visio® stencils. Select Work Flow Objects.

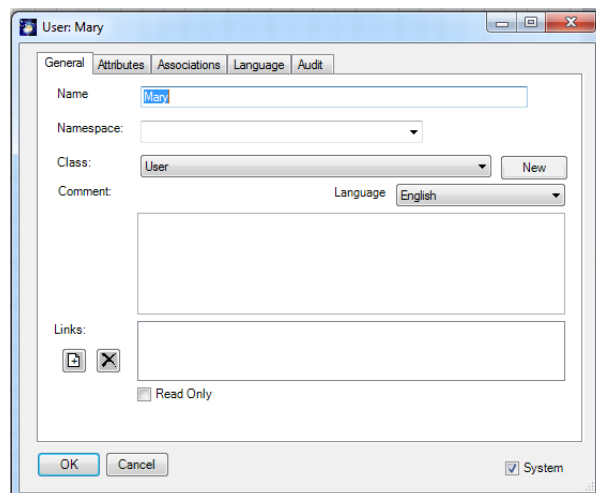


SemTalk automatically assigns a unique name to each object according to the Visio® stencil name. For example, "User.14" and "User.15" are different objects of the class "User". Double-click on the object to type in a new name. In your new model change the User names to "John" and "Mary".



Editing Objects¹

To change the object's name or other properties, double-click on the shape or right mouse click on the object and select **Edit**.



Add related documentation, either other file types or web links, by assigning or removing from your objects by using the (+) or (X) buttons in the lower left corner of the object's Edit dialog box.

Newly created objects in a diagram will also automatically appear in the SemTalk Explorer. If there are associated Links, they will appear as a list under Attachments in the SemTalk Explorer or under "Objects → Attachment".

¹ When we refer to "Objects", we are referring to both Instances and Classes in cases where it is not necessary to distinguish between the two. When the term "objects" is used, instructions apply to both Instances and Classes.

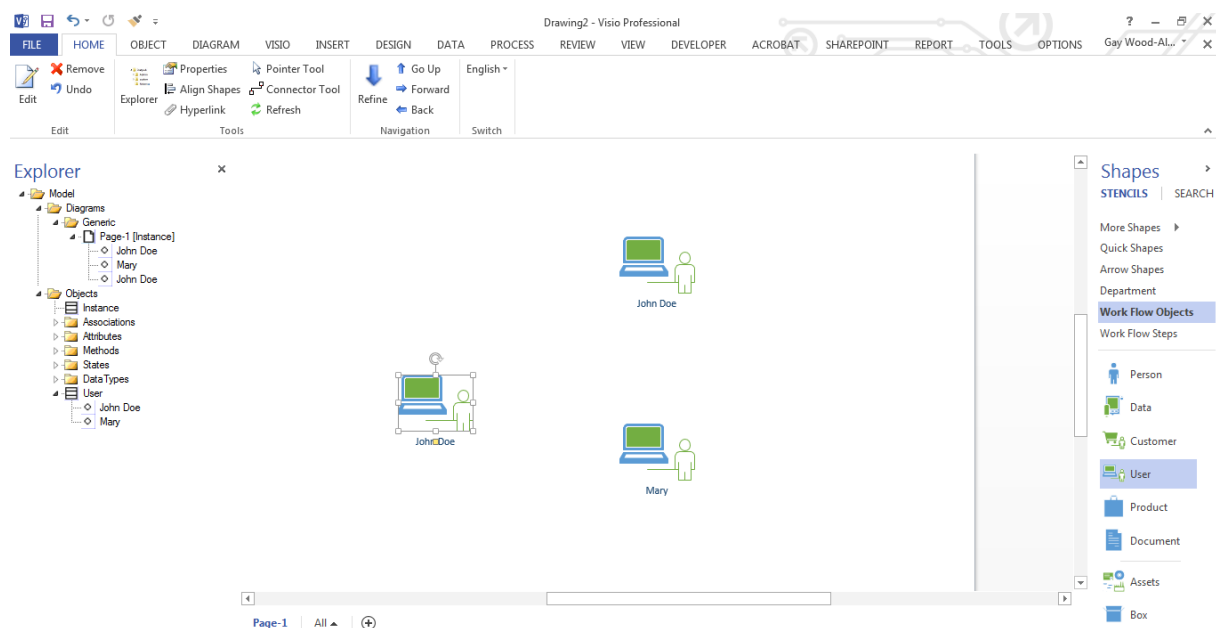
Note: If necessary, change the zoom of the drawing sheet. Zoom is located in the bottom toolbar in the lower right corner of your window. Adjust the zoom slide bar so you can better read object names.

If you have used Visio without SemTalk to create a specific User icon, you may have a series of already defined Users, such as User "Mary". Simply drag several symbols of type "Mary" into your diagram. In Visio these symbols bear no relationship to those objects managed by SemTalk. If you rename any of your icons, or change them to other symbols, this might give rise to changes in other Visio pages. Complex Visio models are difficult to maintain under these circumstances. SemTalk makes the maintenance of complex models much easier to easily maintain model consistency.

Consistency

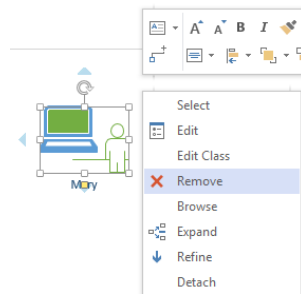
When duplicating a SemTalk object, it is necessary to maintain the consistency of the model. For example, if the user modifies the name of an object, the modification must also occur in every object that has the same name.

Please create a second shape for the Instance "John" by using Copy&Paste. (Ctrl-C, Ctrl-V) and rename it to "John Doe". When you change "John's" name you will see that all occurrences of "John" will be updated to "John Doe" because both of these Visio shapes represent the **same** instance.



Now, every modification done to the object "John" will be replicated in all "John" shapes.

Removing or Deleting an Instance



It is important to point out that with **Del-key, Ctrl-X** or **Object → Delete from Drawing** you are only **erasing** the chosen shape from the drawing area, but not **removing** it from SemTalk's object base. If you want to remove an object from the drawing area AND from the object base of your model, you must use **Remove** from the right-mouse click context menu or **Object → Remove** the menu bar.

Please right-click on one of the Instances of "John Doe" in your drawing area and select Remove.

In this way, you removed all instances of the object "John Doe" from the object base. This removes "John Doe" from the active diagram page, as well as, from every other page in your SemTalk model. In SemTalk, there is a single step Undo command that can restore the removed object and its properties. If you **delete** an object, you may restore it in your diagram(s) using Insert or drag it from the Explorer. Use this undo to restore John Doe to your model.

Other SemTalk model-based functions like **Browse, Find** and **Expand** are described later in this tutorial.

Navigation

SemTalk provides various navigation features described in detail in later sections:

SemTalk Navigation	Description
Browse	Navigation to the same and/ or related objects being used in the Visio documents
Find	String-based search in the model
Expand	Insertion of related objects into the actual diagram page

Removing vs. Hiding (DEL) Objects

In SemTalk a distinction is made between

- deleting objects from the database and
- hiding objects within a drawing:

Hiding Objects in a Diagram / Drawing Sheet

If you use the "Delete from Drawing" command in the Object tab or if you select an object within your diagram and use your Delete key (in some system configurations you may need to use Fn + Delete), objects will be removed from the diagram but they will not be deleted from the database. These objects can be reinserted back into your diagram at any time by selecting "Paste" when you right click on the drawing sheet.

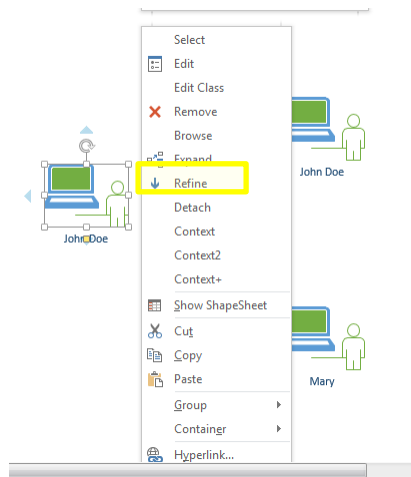
Email: support@semtalk.com

Deleting Objects from the Database

When "Remove" is executed on an object by right clicking on the object and selecting "Remove" or by selecting Remove in the Object tab or by the right click menu in the SemTalk Explorer, objects are deleted from the database. Therefore, all instances of the deleted object or relationship will be deleted from all drawings! Visio Undo is only available for the last command.

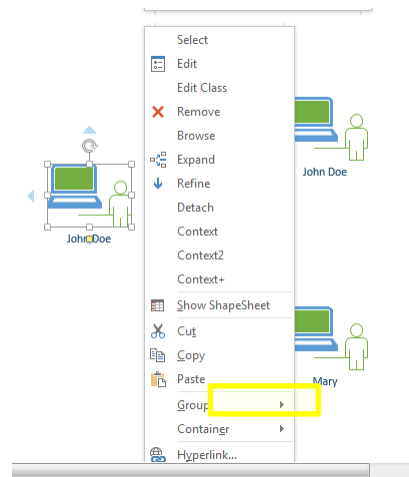
Remove from Database:

(All instances in the model are permanently deleted.)
hidden. All other instances are visible.



Cut (Hidden) From Diagram:

Only the selected Object will be



Note:

Objects appearing in any diagram in the model can also be deleted using the SemTalk Explorer. Select the object in the Explorer and delete it by selecting the object you want to delete in the Explorer. Then, using the right mouse click menu, select "Remove".

To search and delete multiple objects that appear in any diagram, use the menu tab Object → Delete Multiple. You can filter objects using classes to display any instances that are not used in any diagram

Class Diagrams

Class diagrams allow you to define the meaning of your Visio symbols. For example, you can define that a user is a particular person. Then you can identify what relationship this person has to a product or to the activities in the process you are describing. The definition of classes in SemTalk determines how instances of these classes behave in combination with other Visio shapes. Instance objects can only be connected to another object if this relationship is defined and allowed for the respective classes.

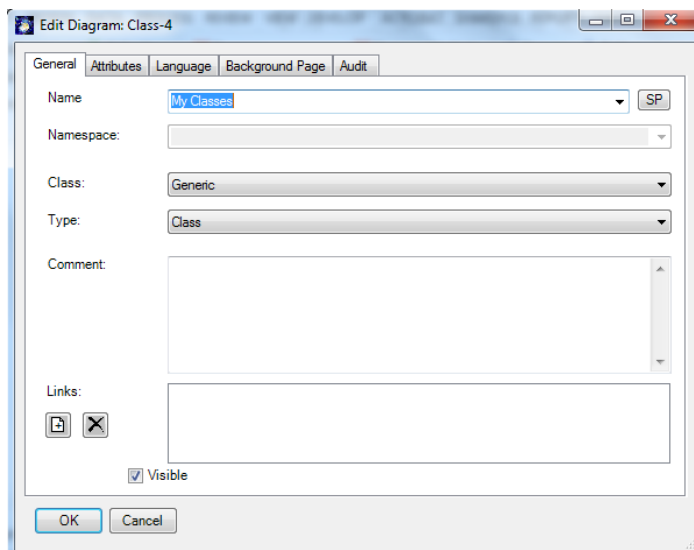
Classes with specific attributes can be created, such as creating a class with an attribute called "Experience" to allow a user Class to inherit either the subclass "expert" or the subclass "novice". Abstract classes where no Visio master shapes are available can be assigned a general class symbol ("Class"). For example, if there is no "Person" Visio® shape (yet), you can assign the general class symbol.

Creating a Class Diagram

First, a Class Diagram is needed. In SemTalk, there are two Generic diagram types - Class and Instance Diagrams. "Class" objects are located in Class Diagrams and "Instance" objects are located in Instance Diagrams.

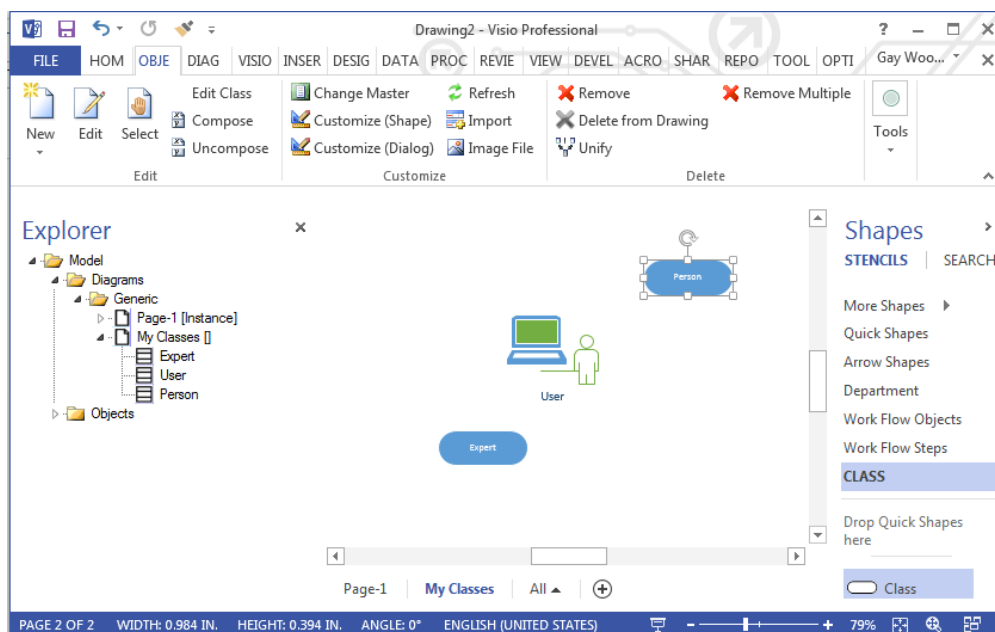
Select from the menu bar **Diagram → New → Class Diagram** or

- Alternatively, you can create a new diagram directly from the SemTalk's Explorer (tree structure). Right mouse click on the Diagram folder and select the option **Class Diagram**.



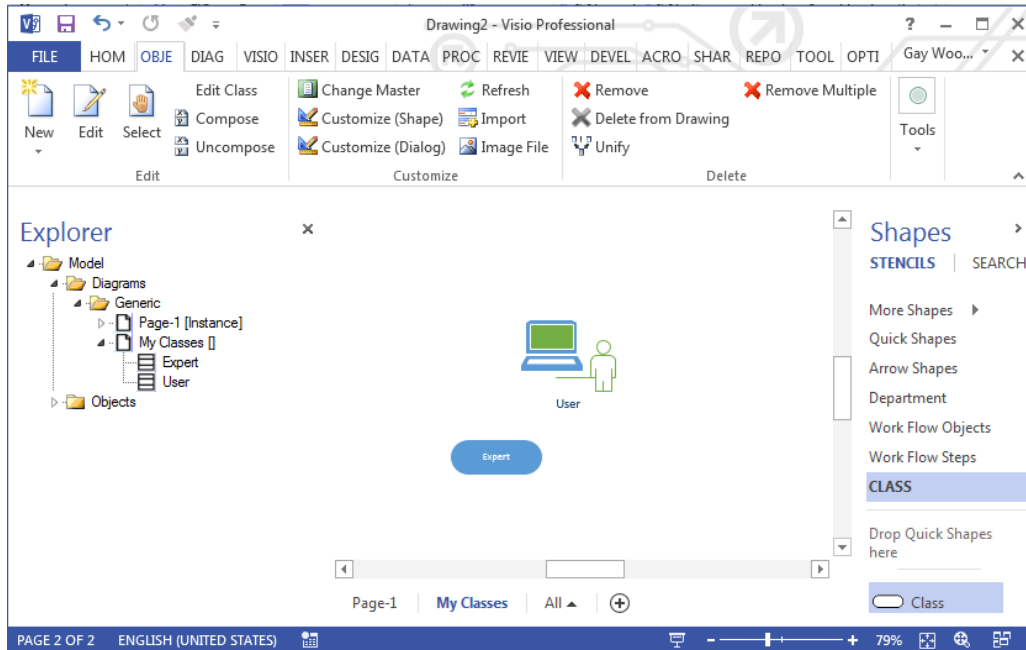
Please change the diagram name to "My Classes". Now you are ready to create and insert classes..

Drag & drop the Visio master shape "User" onto the drawing area, a class "User" is created. Everything that you define for the class will also apply to any instances of this class. For example, instances of Users may be real users such as "John" and "Mary". Everything you define for the class "User" will also be valid for any of its instances such as the "John" and "Mary" you created earlier



Adding a new class where there are no predefined Visio® Master Shape is very easy. Please drag the “class” symbol from the stencil and drop it on the drawing area. Just write a name on the shape or right click and select Edit to create your new class. For example, give your new shape the name “Expert”.

In the next sections, you will learn how to edit classes and instances. The term “object” will represent both classes and instances. In most cases, the edit dialogs are the same for both. Exceptions are highlighted.

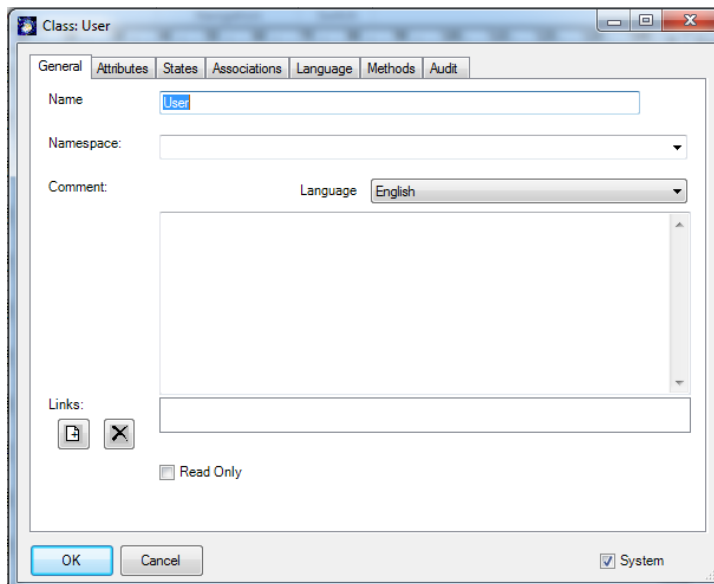




NOTE: Edit a class and/or its properties in the following ways:

1. Double-click on the object or,
2. Right mouse click and choose **Edit** from the context menu or,
3. From the menu select **Object → Edit** or,
4. Find the object in the Explorer as a child of **Diagrams → Generic → My Classes (context menu)** or
5. Find the object in the Explorer as a child of **Objects** (context menu).

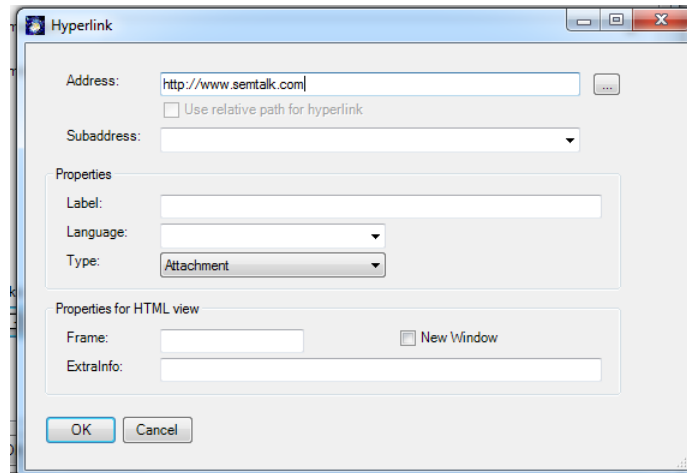
Editing Objects

Next, we will change the properties of the objects.

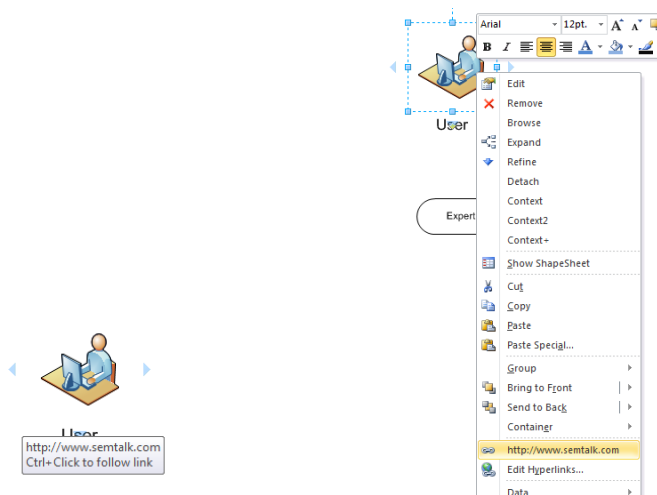


Name	The name of the object. You may change this name to specify the class name.
Namespace	The namespace of the class name for the object. The identifier of an object is the combination of a namespace and the name. E.g., "Tr#Treasurer" is the object named "Treasurer" in the namespace "Tr". There might be another object "Hu#Treasurer" which is also displayed as "Treasurer". Use each name only once in a namespace. You can precisely define an object companywide or even worldwide by combining of the name of an object and a Namespace, e.g. like this: "http://www.SemTalk.com/banking#Bank". Each name can only be used once in a namespace.
Comment	The description or definition of the class.
Language	To specify the language of a comment. Objects may have multiple names in different languages and multiple comments.
Hyperlinks	E.g. hyperlinks can be added or deleted using the context menu (right-click) of the Links text field or they can be added or deleted by clicking the  or the  button. Enter a hyperlink in the Address field, or select a file.

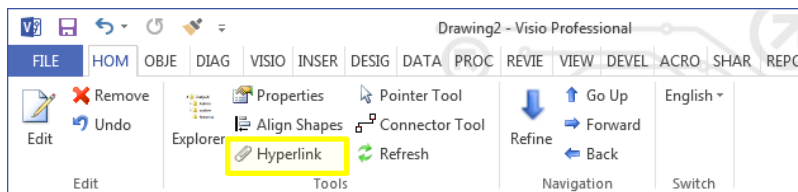
In the **Hyperlink** dialog, you can enter the following information:




SemTalk Hyperlinks are also Visio Hyperlinks therefore links they can be directly opened from a diagrams.



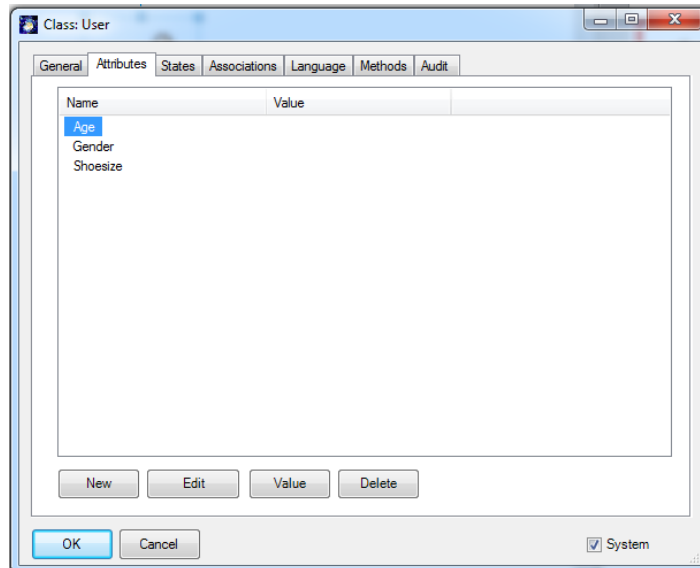
NOTE: You can directly add hyperlinks by dropping and dragging links from you Internet browser. Using the Data -> Hyperlink paperclip option from the pull-down menu you can quickly edit Hyperlink data.



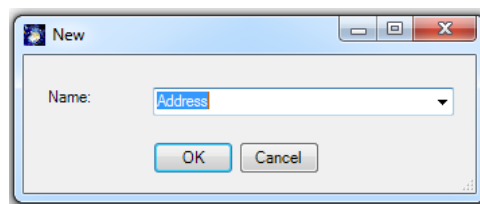
Read Only	Marks the class as read only and protects it from editing or deletion.
Address	Use to add a Web site's URL, starting with the protocol (such as http://) or type the path of a local file (a file on your computer or network) that you want to link. Alternatively, click  to locate the file or Web site.
Subaddress	If the text field Address is empty, it displays a linked page in your SemTalk model. If you enter the path of a local MS Excel file or a Visio file in the Address text field, you can name a location (e.g. an Excel Worksheet or a Visio page) as the target associated with the specified file.
ExtraInfo	Use this argument to specify additional information that HTTP requires to resolve the hyperlink. The most common uses for this argument are to send a Web server the contents of a form, the coordinates of an image map, or a search parameter for an ASP file. (Example: Address: http://www.google.com/bin/search ExtraInfo: ?q=keyword)
Label	Use to replace the hyperlink character string with text of your choice.
Language	If you are working with multi-languages models, choose a language(s) that relates to the hyperlink target. For example, if you want to link a document explaining the tasks of the bank treasurer in different languages and the link has been translated to English and Spanish you may attach different documents for each language.
Type	You can define classes of attached documents such as job descriptions, pictures etc. These classes are defined as subclasses of the class "Attachment"
Frame	A HTML Target frame where the document will be opened
New Window	The document will be opened in a new (Browser-) Window

Attributes

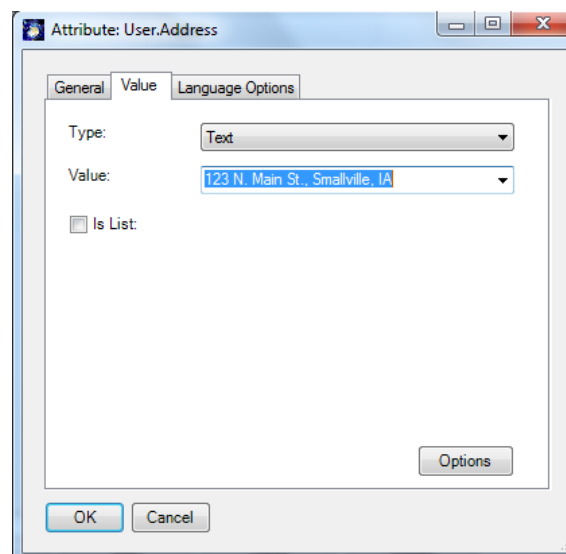
The attributes of a class can be defined and edited in the **Attributes** tab. Some Visio-Shapes already have attributes. You will be able to use them, but now you are also able to edit them or just delete them.



Please create the attribute "Address" by pressing **New**.

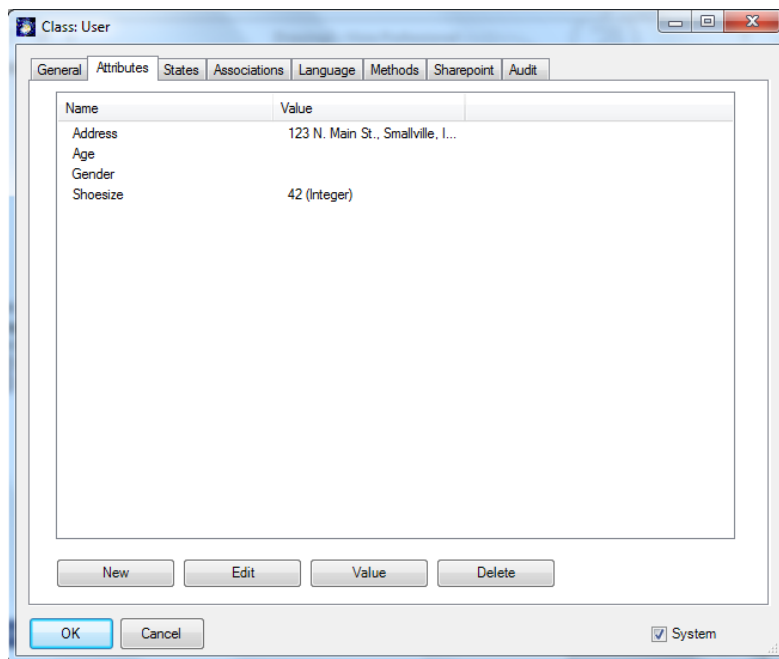


Double click or press the **Edit** button to open the attribute details dialog box. The button **Delete** is intended to delete an attribute. **Value** is a convenient way to enter a larger piece of text into an attribute value.



Type	Specifies the type of attribute. Available attribute types are: Symbol (string), File (uses external file), Date, Duration (time), Float, Integer (a number between a range of numbers) and Boolean (true/false) Selecting an attribute type is not required.
Value	The default value (value range) for this attribute.
Is List	Allows the use of multiple valued attributes. E.g. "red" and "green".
Options	Specifies the options for values of that attribute e.g. "red", "green", or "blue". Those options will be used as options for the values combo box.

After closing this dialog box, the value is shown in the right part of the attribute list.



Once attributes are defined, they are available for use in other objects so you will not need to redefine the same attribute for each object class. The actual value, or range of values, must be redefined every time an attribute is used for a new class.

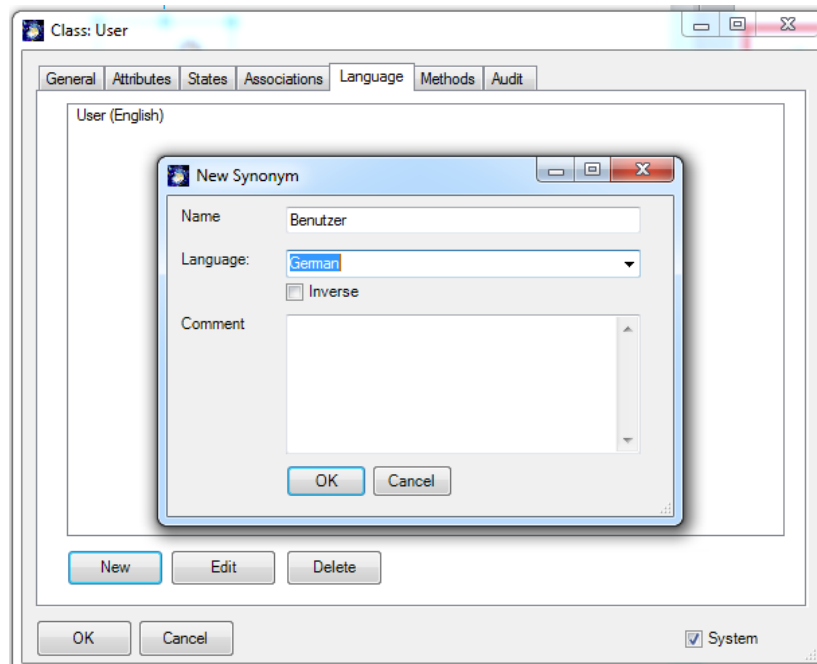
NOTE: "System" attribute are special predefined attributes that can also be edited.

NOTE: When "SubClassOf" connector classes (see shape-set "CLASS") or subclass / superclass are connected, attributes are inherited with their values to their subclasses. For further information, see "Connections".

Language

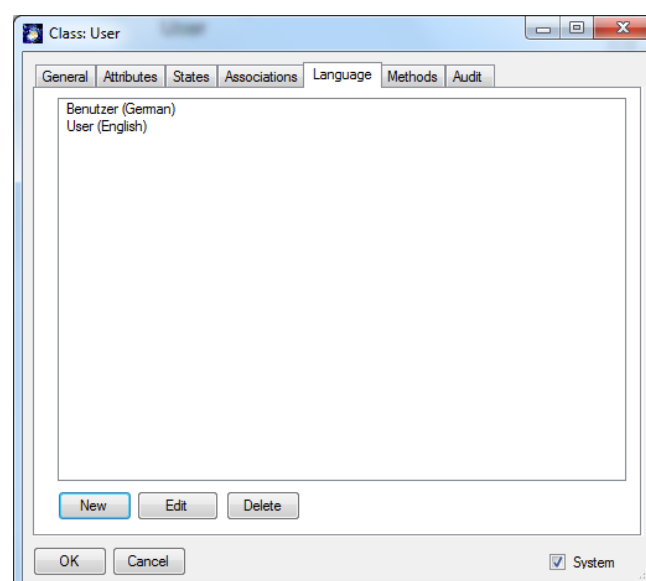
With SemTalk it is possible to create multi-language models. Every class, association class, instance, attribute or method can be given different names in any language. SemTalk supports Unicode characters, which means that it supports Chinese, Arabic, Japanese and other character based language types.

Open the edit dialog for the class “User” and go to the tab **Language** and press the **New** button. The following dialog will appear.

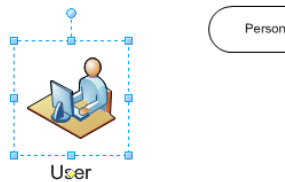
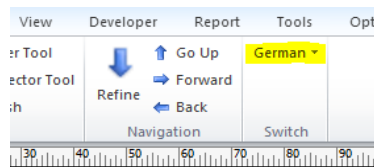
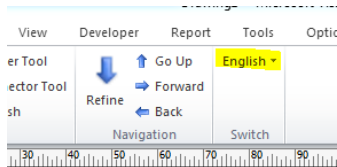


Enter the term “Benutzer”, which means “User” in German. Select “German” from the **Language** combo box or enter a new Language.

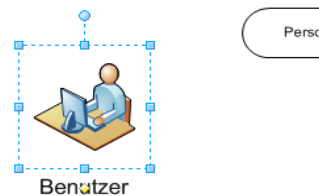
You should now see the following dialog as result:



By changing the current display language, you can switch between all used languages:




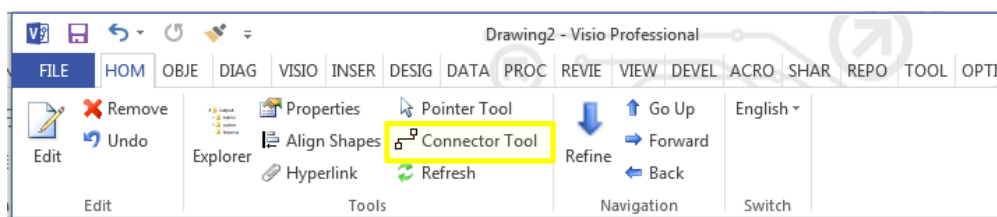
Vs.



Associations: Connecting Objects


Now we will create relationships between objects.

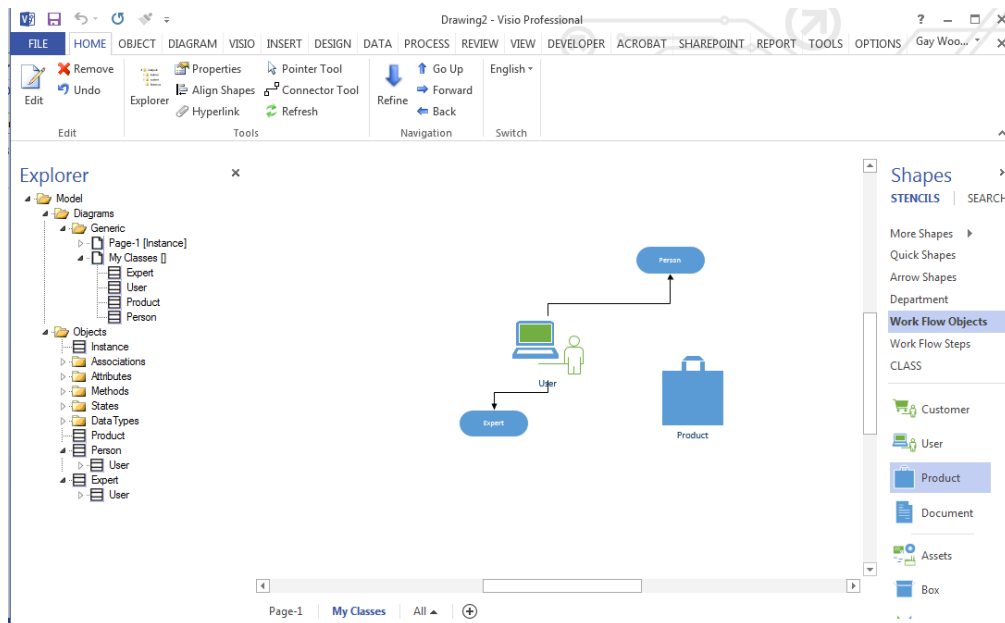
The easiest way to create connectors is to use the "automatic connector" tool ( Connector Tool) found in the Home toolbar. The **Associations** tab of the class or instance editor shows the object's associations and they can be edited there. Nevertheless, the easiest way to create, edit or remove an association is to do it graphically. In order to do this, we will add additional classes to this example.



From the "Work Flow Diagram Shapes", drag & drop the "Product" shape into your drawing area.

A class can have subclasses that represent concepts that are more specific than the superclass. The "subClassOf" association defines a taxonomic (subclass – superclass) hierarchy. Adding relationships is quite simple.

Drag & drop the "subClassOf" shape somewhere in the drawing area or by clicking first over the **Connector Tool**  on the menu bar and then clicking over the "subClassOf" shape in the CLASS Stencil.



If you pull the end-point of the arrow over an object's "connections point", you will notice that you can glue the relationship to that object. With the "Connector Tool", you just click over the two shapes you want to relate. You can do it more than one time consecutively. A green coloring tells you if the connection was successful. Select an end-point and glue your new relationship to the objects of your choice. Notice that in case of the "subClassOf" relationship the arrow points toward the superclass.

NOTE: Object names are always singular. It is not recommended to use the class "Users", since the Class "User" already describes one or more Users.

In our model, "Expert" became a subclass of "User". It inherited the attributes of "User", but you can now add further attributes to "Expert" (e.g. Domain) or change the values of inherited attributes using the **Edit** button. In the same way, "User" is a subclass of "Person". Now add the attributes Age and Gender.

Name	Value
Address	123 N. Main St., Smallville, I...
Age	
Gender	
Shoesize	(Integer)
* Education (Expert)	* Ph.D.

Buttons: New, Edit, Value, Delete, OK, Cancel. ☒ System

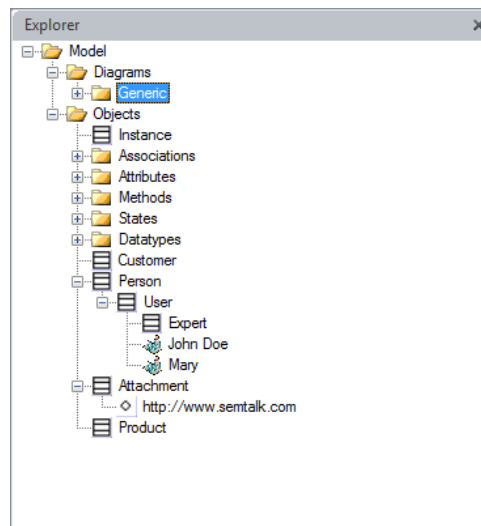
Inherited attributes are characterized by a "*". If you change the value of inherited attributes, SemTalk's object engine creates a local copy of the attribute. This copy will be deleted when you delete (reset) its value.

Now create instances of your classes and call them "John Doe" and "Mary", you will see that each of the instances inherits the associated class attributes. You can now click on each instance to specify an age for the each of your users.

If you use the "UML Class" shape instead of the generic "Class" shapes, attributes are defined by predefined class attributes that are predefined in the shape. "Select Object → Master" you can later select a different shape or switch between defined shapes for classes.

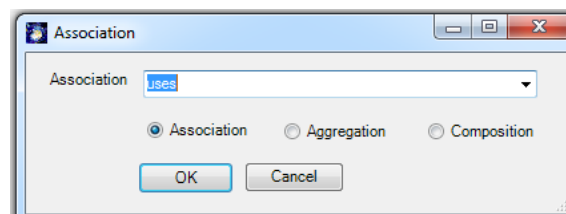
Please look at the Model Explorer. Below "Objects", you will see the inheritance hierarchy. In the tree structure is the contents of the chart "My Classes" (the name can be later changed) listed. By "objects" you will see the inheritance hierarchy. This is a view on how the classes are defined along with the inheritance relationship (subClassOf, "is a", "Upper Class") in a tree structure.

Please create a new relationship using the template "property" (in the template "CLASS"). Define a new association between "person" and "product". "Used" as the name of the relationship type.



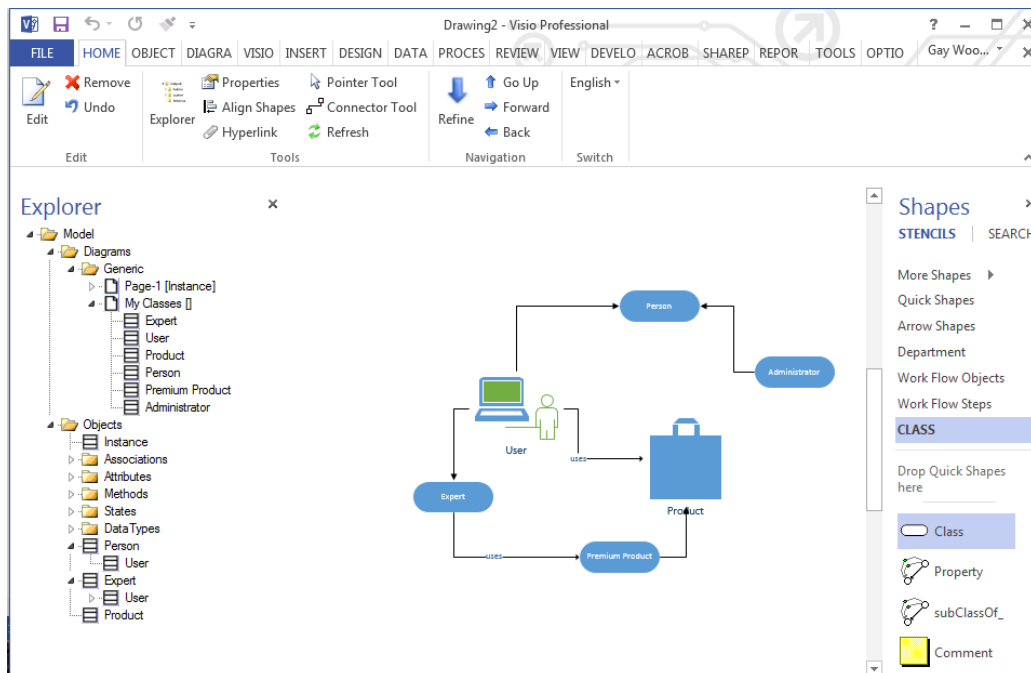
Associations can be made graphically using the "Property" connector. After adding a connector, you will be prompted to create a name for your association. Define your new association between "User" and "Product" as "uses".

Relationships between objects are "associations". Associations appear on the tab and can also be changed there. In SemTalk attributes (properties) and associations (relationships) are two different objects². A property is usually descriptive text or a number (e.g. name, age, etc.), while an Association shows the relationship to another object (eg "used").

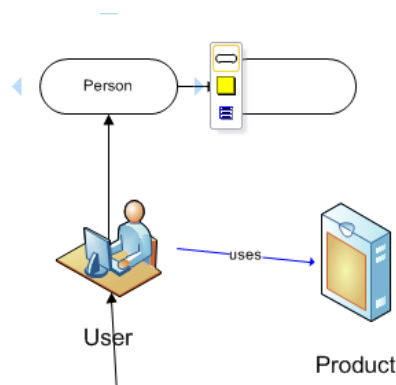


² In OWL this is the Data Properties for Attributes and the Object Properties for Associations.

Draw another association between "Expert" and "Premium product" the previously created association "used" is already available in the combo box as a selection option. If you select "superclass" and "subclass", inheritance relationships are created instead of associations.

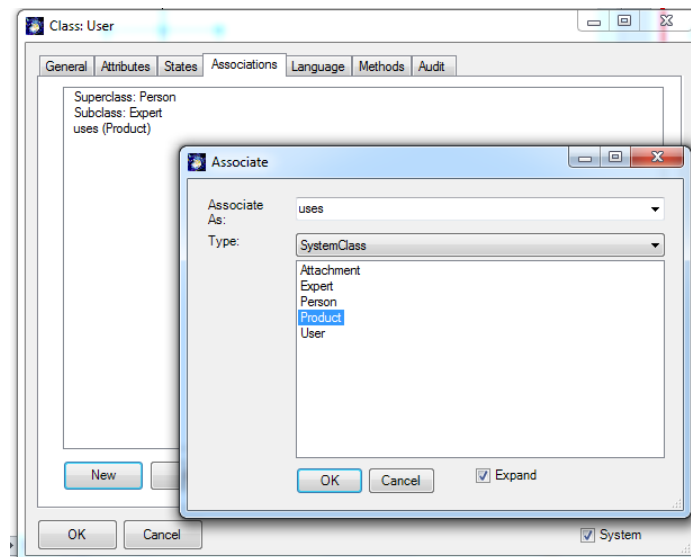


NOTE FOR VISIO 2007 AND VISIO 2010:

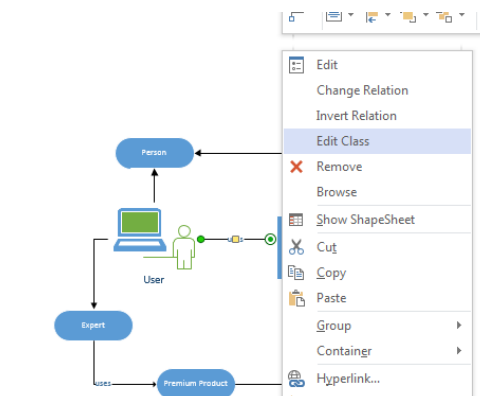


As Visio 2007 users may have already noticed, Visio offers a new tool to connect neighboring shapes. As the figure shows, you can choose one of the blue arrows from the origin shape (just move the mouse pointer over it) and Visio will mark red the next neighboring shape. Click on the blue arrow to confirm the selection and SemTalk opens the association dialog box immediately after. Visio 2010 has "Quick Shapes" which to allow a very fast construction of a diagram without drag & drop.

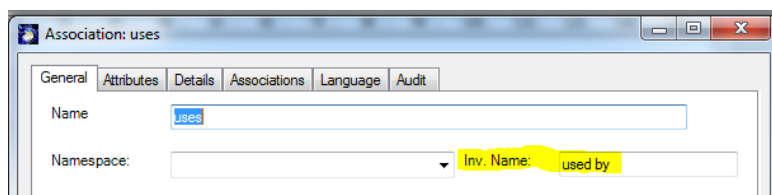
Associations can also be made without using graphics using the Associations tab.



If you open the **Edit** dialog box for “Product” and select the **Associations** tab, you will notice, that the relationship is named “inv uses”. “inv” means that it is the inverse relationship and the inverse name of “uses” has not been defined yet. If you right-click on a link and choose **Edit** you can edit the properties of the association. Edit the relation class “uses” by right clicking and selecting “Edit Class” with your pointer on the connector line.



You can find this class in SemTalk’s Explorer under Associations. Edit this class and change “inv uses” to “used by”.

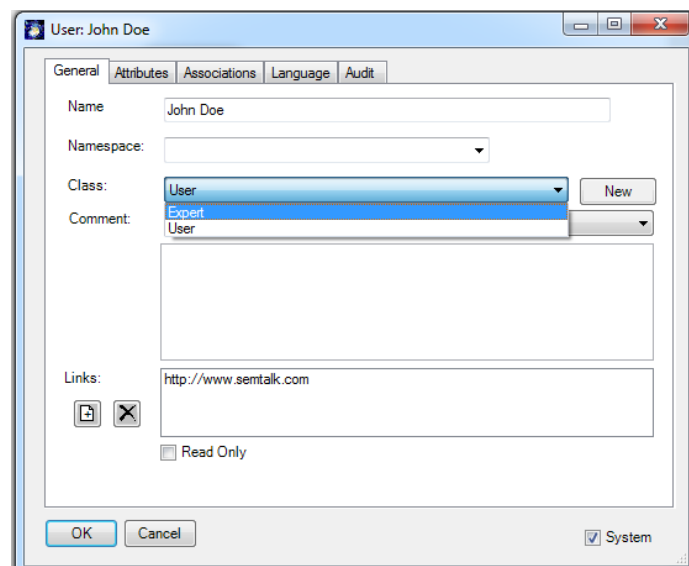


Notice the association's context menu has more options:

Change Relation	Used to change (create a new association or replace it with an existing one). The original class association is not erased or modified; it is only replaced between the two associated objects.
Invert Relation	Use to reverse the direction of an association.
Edit Class	Use to open directly the edit dialog of the association's class.
Browse (Please refer to the Browse function explained later in this tutorial.)	

NOTE: Remove deletes the association from the model. Deleting using right mouse click Cut or the Del-key only removes it from the drawing. All other SemTalk objects behave in a similar manner.

You can change the class of instances by using the **Class** combo box of this dialog box in the **Edit** dialog.



Basic SemTalk Functions

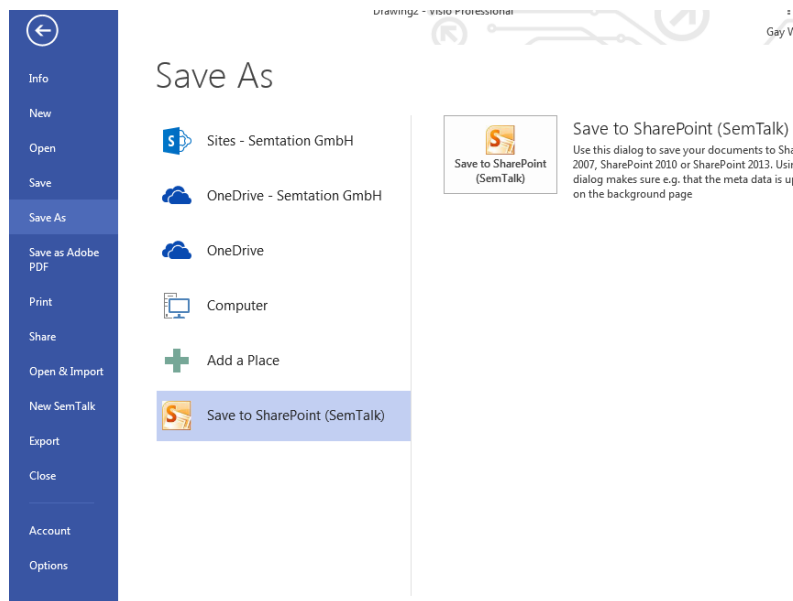
In the following sections, you will learn about SemTalk basic modeling functions. In some cases, examples in this tutorial require supplementary models to illustrate functions. When external models are available from our website, their URL will be provided.

Saving a Model

Please use Save or Save As. In addition to Visio's VSD file, a XML file for the model is created. You may turn off saving of XML files via SemTalk->Options. Internally SemTalk saves an XML regardless. The external XML is only used for referencing objects from other models. If the XML file gets lost, it does not matter since SemTalk creates a new XML file every time you save.

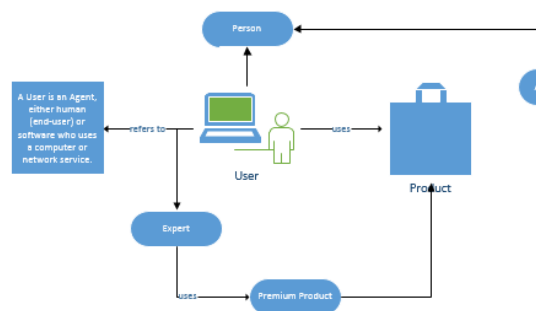
You can use Visio's AutoSave from the Visio options.

If you use SharePoint Integration, you may directly save into SharePoint document libraries.

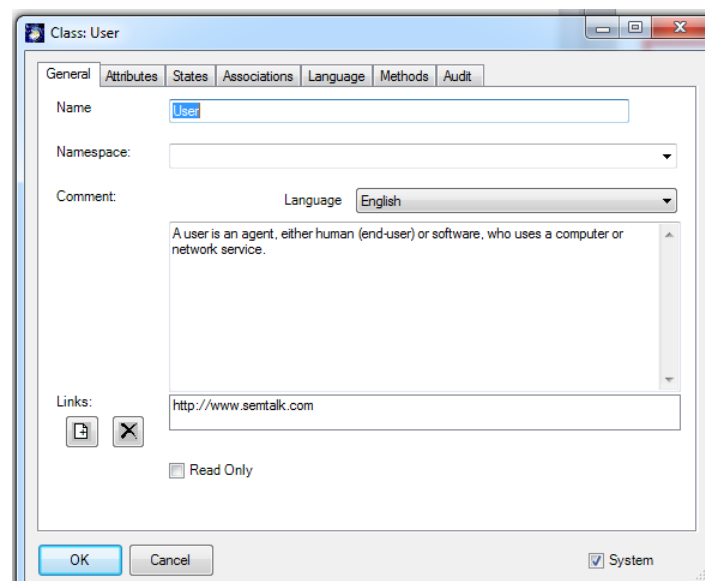


Comments

In order to display a comment / definition of an object drag & drop the “Comment” shape in the drawing area and point with the “definition of” connector to one or more objects:



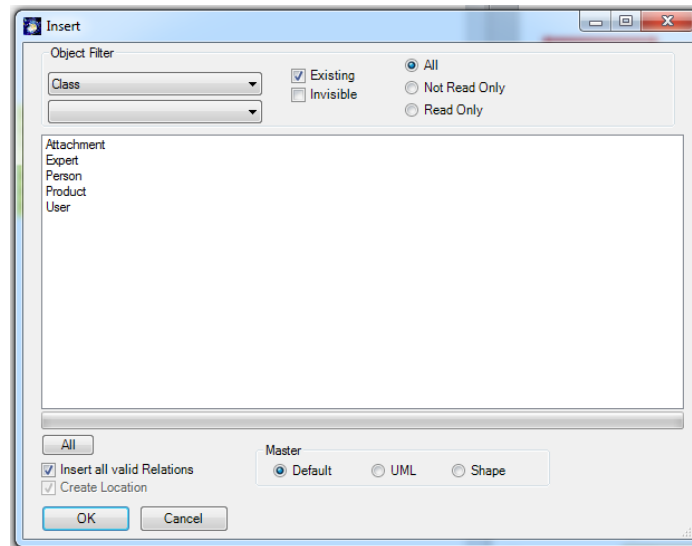
By double-clicking on the comment shape, the object’s **Edit** dialog will open.



Changing the language for the comment allows you to maintain comments in multiple languages.

Insert Objects

You can easily insert existing Classes in new diagrams with SemTalk. Please create a new class diagram. Then right-click on the drawing area and choose **Insert (Model)** to insert existing classes into the new diagram. Alternatively, you may use the menu Diagram → Insert. You will see the following dialog box:



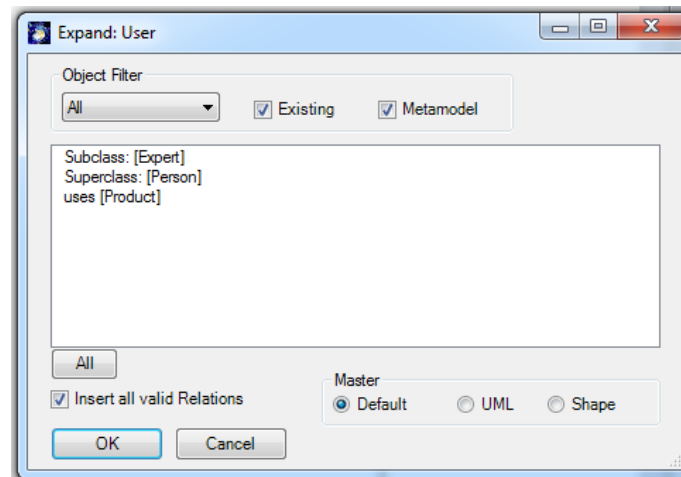
Object Filter	You can insert classes, relation types or diagram types into generic class diagrams. For other diagram types, restrictions may apply. The second combo box of the object filter allows filtering by subclasses or instances (applies only for Diagram types with a root class)
Existing	The default list contains only objects not shown on the current page. If you check Existing , you can insert those objects again.
All / Not ReadOnly / ReadOnly	Include classes, which are marked as Read-only or not. Typically, these are the elements of a method's meta model.
Invisible	You can insert only those objects that exist in the model's object base, but are not present in any page.
Insert all valid Relations	All relations used within the object base are visualized.
All	Selects all the objects in the list at once.
Master (options)	It specifies the shape to use. Default is the shape used until now. UML uses a UML-style class shape. Shape searches for a shape master with the same name as the class.

NOTE: You can change the size of the **Insert** dialog box with your mouse.

Expand

When objects are expanded, diagrams are extended using information that has already been modeled. For example, if a User is associated with a Product, we can add related objects to the active diagram based on information modeled in other diagrams.

Insert the class “User” in a new diagram and right-click **Expand** on the class. Alternatively, you may use the menu **Object → Expand**.



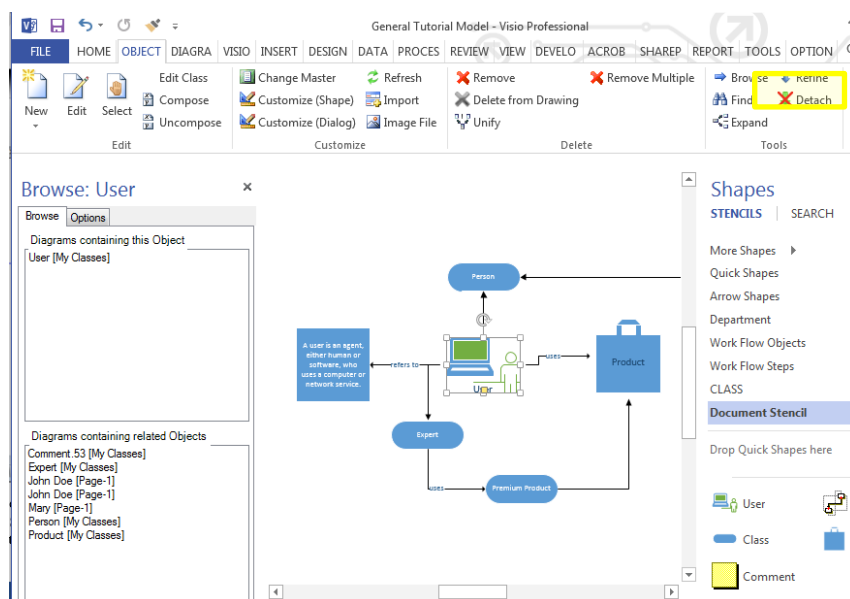
Select “uses” and press OK to insert the class “Product” in the diagram.

For the expand options see “Insert”

Browse

Using the **Browse** command in the context menu (right-click on an object), allows you to navigate to other visualizations of that object. Alternatively, you may use the menu **Object → Browse**.

The upper list box shows all diagrams that have a node for the object. The lower list box shows all diagrams that have a node with objects having a relationship to the object.

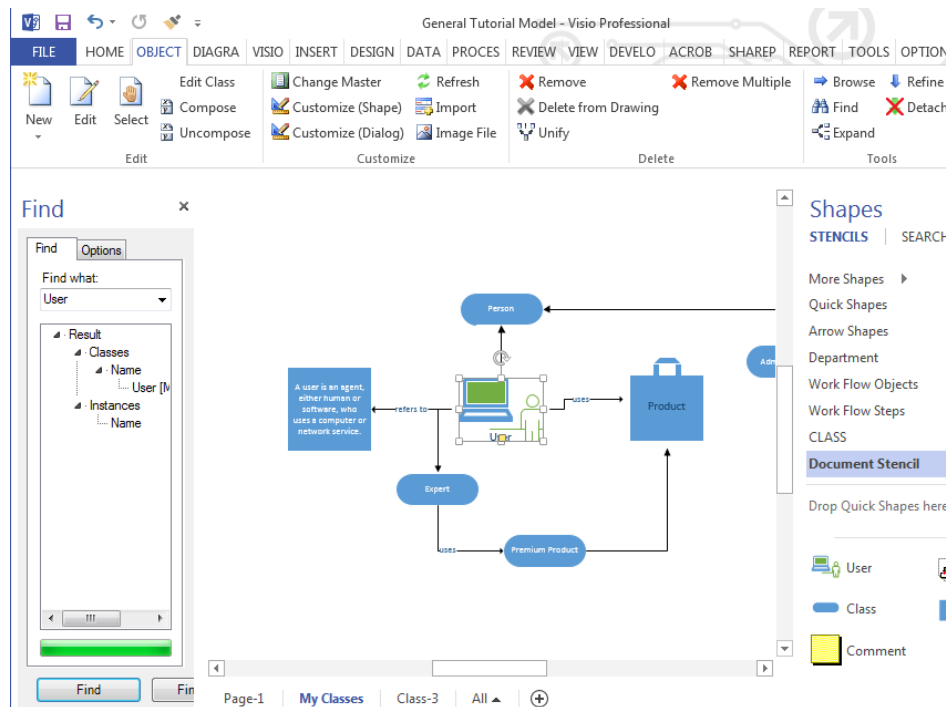


Select an object to show the object in different diagrams. To navigate to related objects, double-click on the object you want to see. By checking / deselecting the options **Super**, **Sub**, **Relation** and

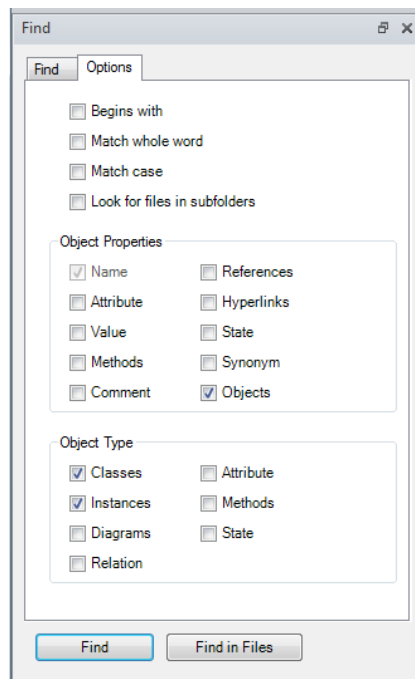
Instance, you can filter the objects in the lower list box. **Objects with compose** is used for Business Process Modeling only.

Find

The command **Find** is located on the context menu of the drawing pane or in the SemTalk menu. With **Find**, you can search objects displayed on your diagram and navigate to them.



Name	The string to match. Blank "Name" matches every object.
Begins with	Searches only for objects where the name starts with the string in Name .
Match case	Used to carry out a case sensitive search.
Match whole word	Used to find the whole string only enter in Name .
Find	Used to begin searching.
Find in Files	Used to search a string in local SemTalk model xml files.
Show	Go to the object's location in the model.
Edit	Opens the selected object's edit dialog.

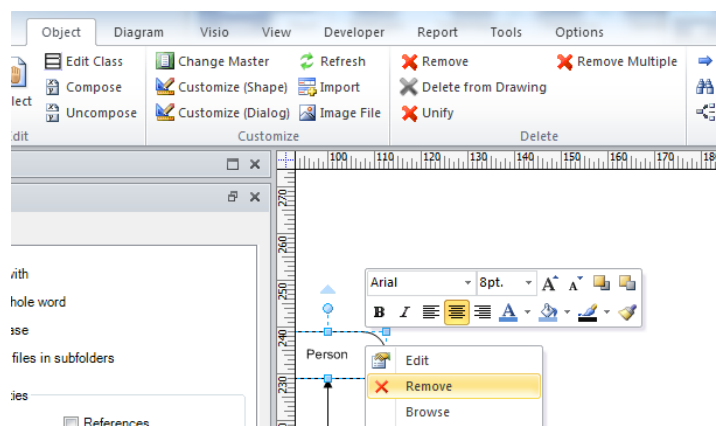


Object Properties	Searches the object's properties
Object Types	Searches kinds of objects
Look for files in subfolders	Used to search subfolders of the selected folder when using the Find in Files command.

The tree view shows the matching objects and corresponding type. You may double-click on the object or use **Show** to go to the object.

Remove

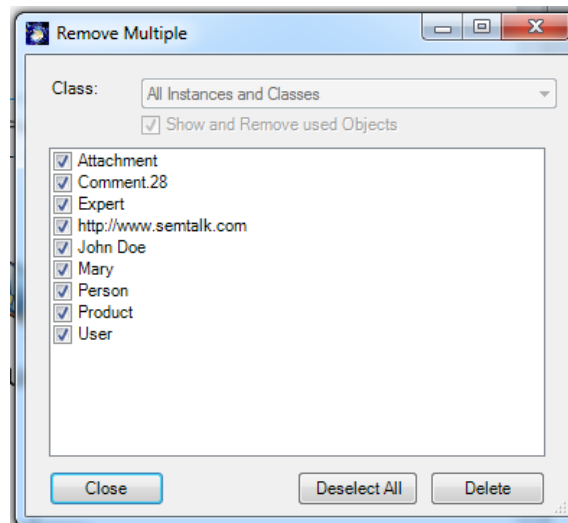
The **Remove** command on the context menu (right-click on a node) will delete the object or relationship from all diagrams in the model. Alternatively, you may use from the tool bar the menu **Object → Remove**.



NOTE: Objects that are not displayed in any diagram can only be deleted from the model using the model explorer or Remove Multiple command. Select the object in the explorer and use **Delete from Model**.

Remove Multiple

The command **Object → Remove Multiple** gives you the opportunity to remove more than one object at once.

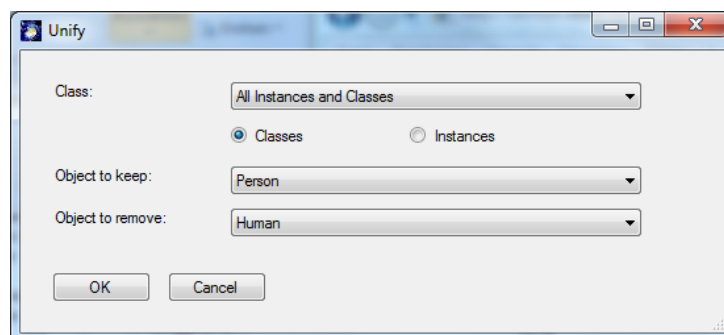


When you are working with a specific modeling method (e.g. process modeling methods), the combo box **Class** acts as an information filter.

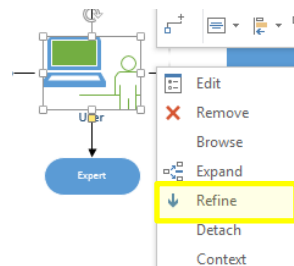
Because this dialog is able to remove several objects at once, it is not possible to use the Undo command. Select the **Delete** button to execute the removal of the objects.

Unify

Select the **Object → Unify menu** to combine two objects. The “Object to keep” will inherit every relation, attribute and visual representation of the other object and the “Object to be removed” will be removed from the model.



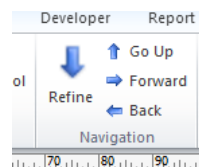
Refine / Detach



The right-click command **Refine** attaches a diagram to an object. You can also use **Object → Refine**.

If the object has a refinement, **Refine** will open the corresponding diagram immediately because it is a kind of hyperlink navigation.

You can navigate back from the refinement to the refined object using **Diagram → GoUp** or selecting **GoUp** from the context menu of a diagram (by right clicking on the drawing area of a diagram).

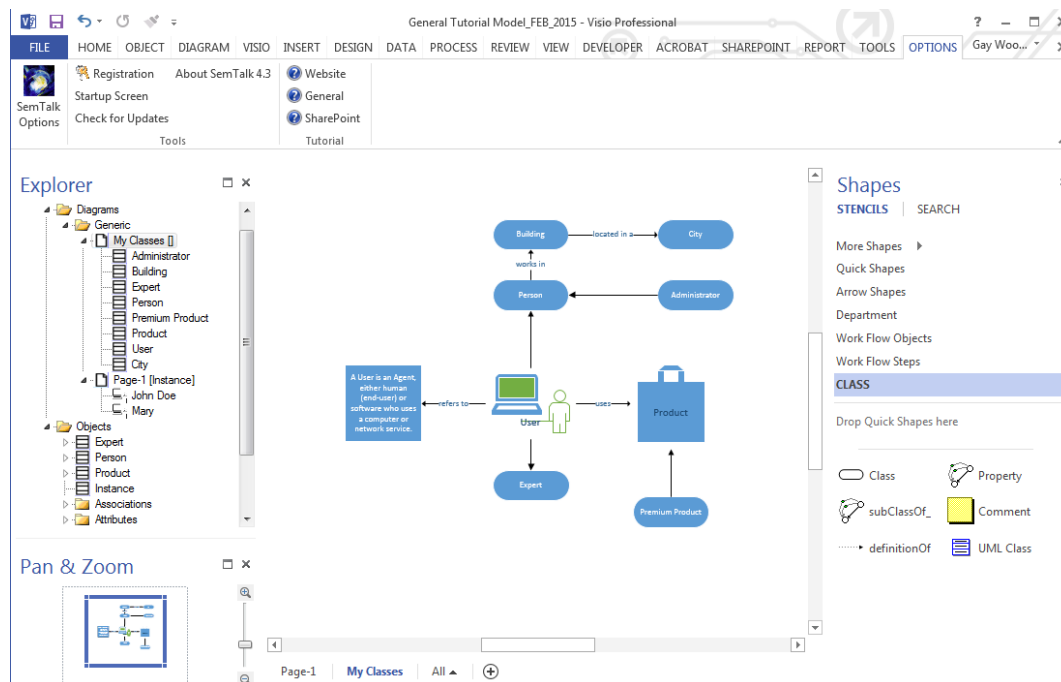


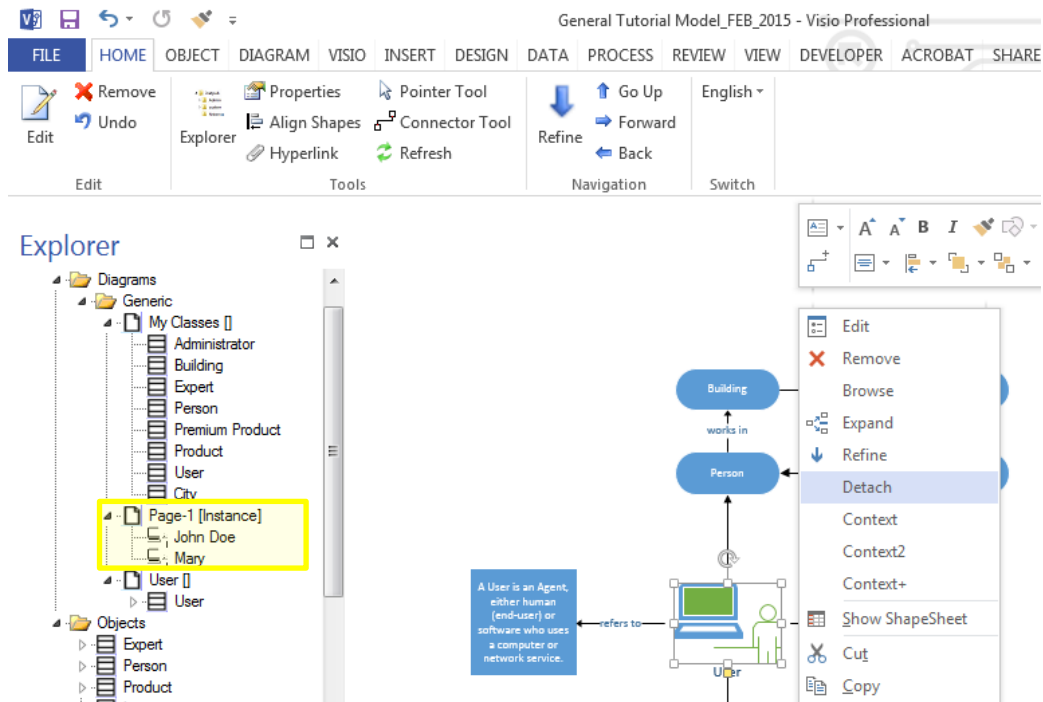
NOTE: Objects having a refinement are highlighted with underlined text.

The **External** button assigns a diagram in another SemTalk model.

NOTE: The diagrams are attached to the object, not to its visualization. This implies that the object is refined in all diagrams.

The resulting refinement tree is reflected in the SemTalk explorer:





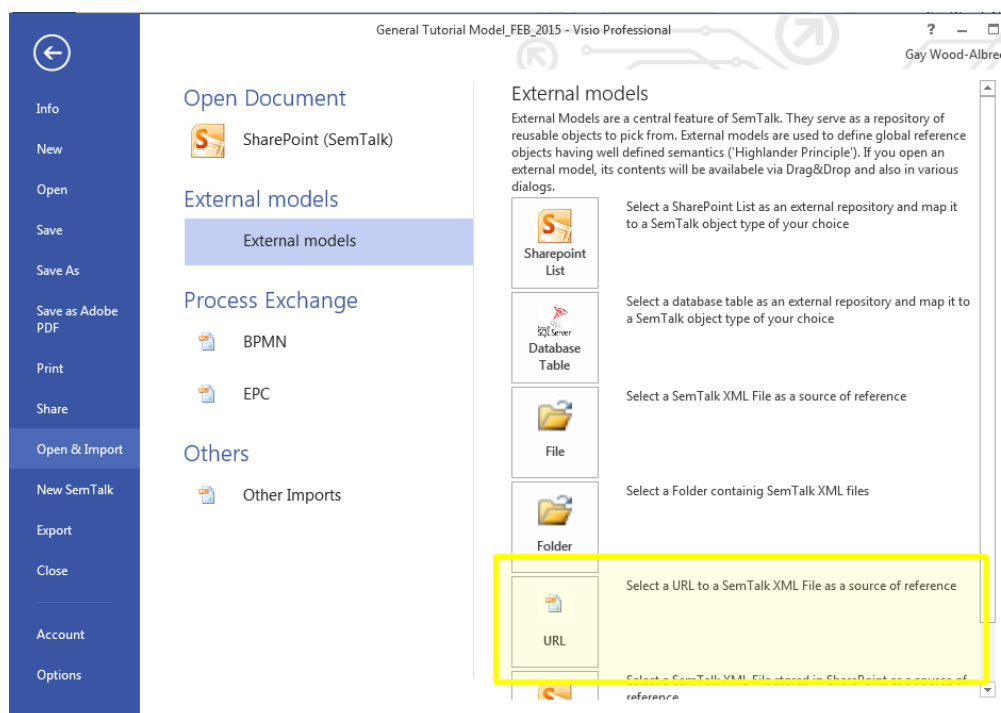
The command **Detach** removes the link to the diagram, but not the refined diagram itself.

External Model

There are different ways to insert external models in a SemTalk model. Next, we explain two alternative ways to insert external objects in SemTalk models.

Load Individual External Models

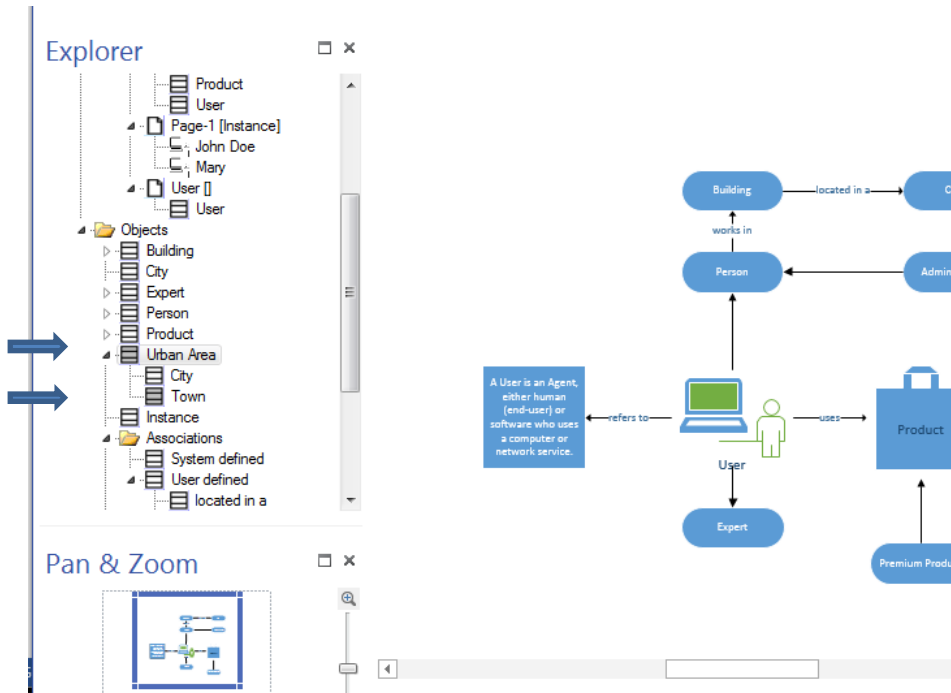
In order to use external objects in a SemTalk diagram, an external model must be loaded first. Loading an external model is very easy.



Choose **File** to select a local file from the folder for a directory containing XML files or **URL** for a model saved to the internet. You do not need the Visio file or HTML file for this operation.

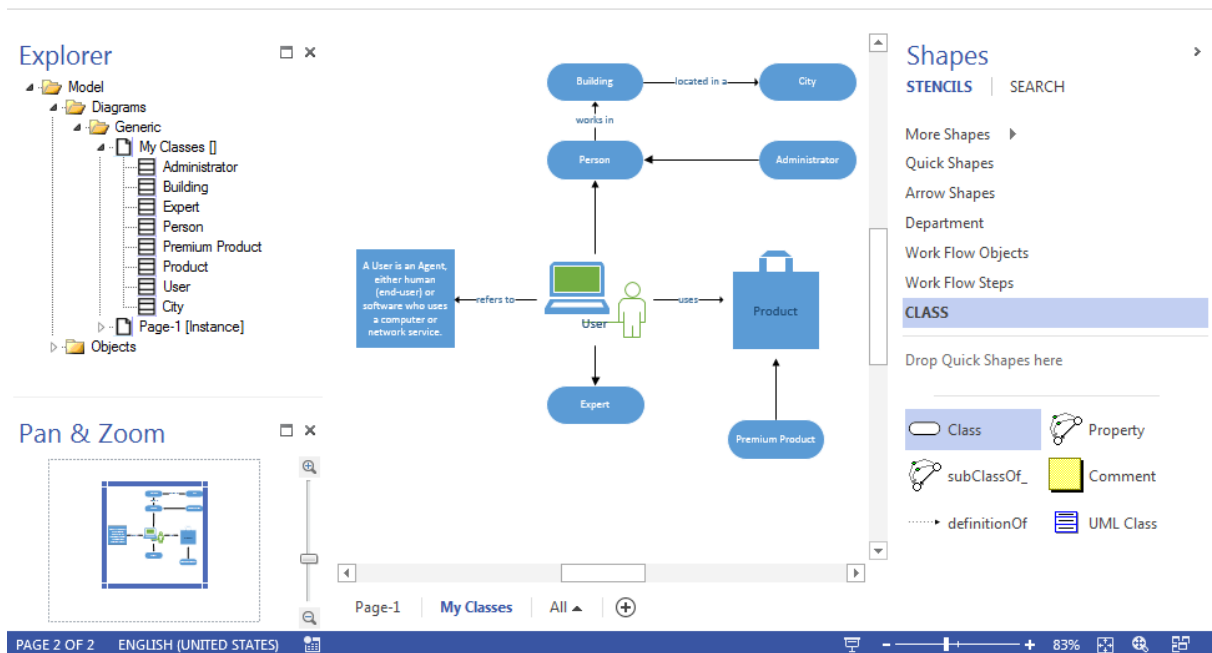
For the purpose of this tutorial, we created an “Urban areas” model to be imported <http://www.semtalk.com/pub/urban.xml>. You can use **URL** to reference it.

Once you have opened the XML file, SemTalk’s Explorer should look like this:



As you can see, the explorer contains new grey colored objects. These objects exist in the “to-be-imported” model. Until now, they exist only virtually in the “urban” model. To make them part of your model you have to import them. There are three ways to do this:

- Drag & drop the object(s) in your diagram.
- Mark the grey colored object from SemTalk Explorer and select from the menu bar **Object → Import**
- Right-click over the grey colored object in SemTalk Explorer and select from its context menu **Object → Import**

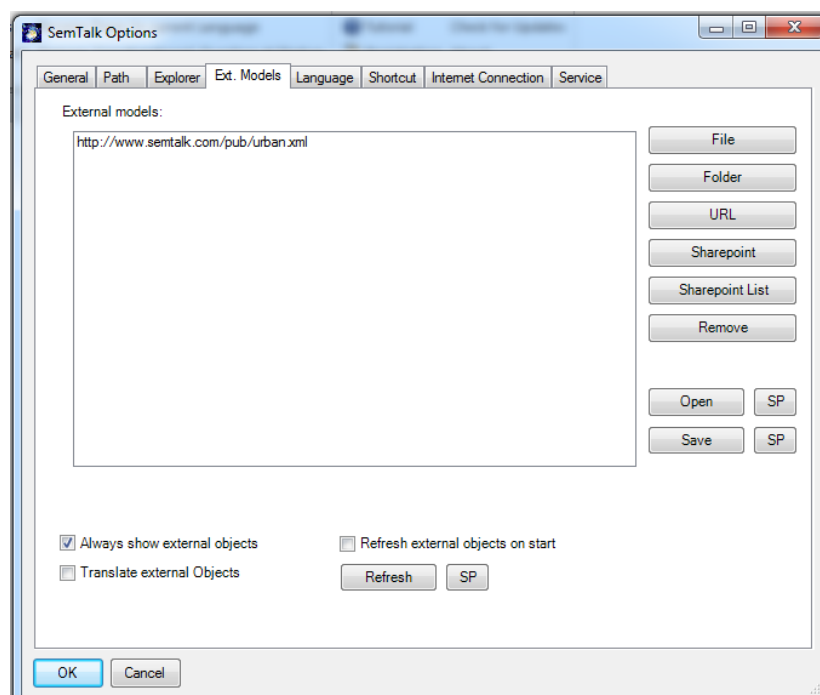


Please insert the classes “Building” and “City”. Please notice that the objects inserted can only use the **Default** or **UML** shapes.

Load multiple External Models

Frequently users work with more than one source of external objects. Imagine the following scenario - you are working on common model of concepts from different departments in your company. The model files are stored in your company’s intranet and on the internet. You need to constantly visualize relevant objects from the rest of your organization.

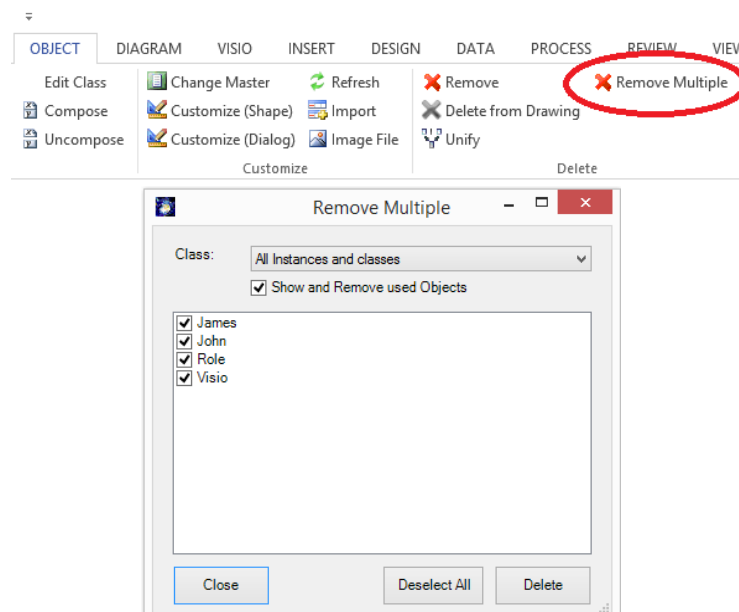
To accomplish this task, you might want to load several external models to your working model at once. To do this, select from the menu options **Options → SemTalk Options → Ext. Models (Tab)**. You should see now the following dialog:



File	Use to add local files (in your hard disk or intranet) to the external models list.
Folder	Use to add a folder of files (in your hard disk or intranet) to the external models list.
URL	Use to add URL address (xml file of the model published in the Internet) to the external models list.
SharePoint	Use to add files located in a SharePoint Services Workspace to the external models list.
SharePoint List	Use to add objects defined in a SharePoint list to the external models list.
Remove	Use to remove any link or path in the external models list.
Open /Save	Open or Save the list of external models to a file.
Refresh	Lookup and update all references to external files. This is important after copying complete SharePoint site with references to SharePoint list.
Always show external objects	Use external objects in SemTalk dialogs. (Instead of pushing the “External” Button). Objects are imported/referenced as soon as they are used.
Translate external objects	Translates all objects from external models. Uncheck this option for large external models if you know that they are single language.
Refresh objects on starts	Updates all references to external model on startup.

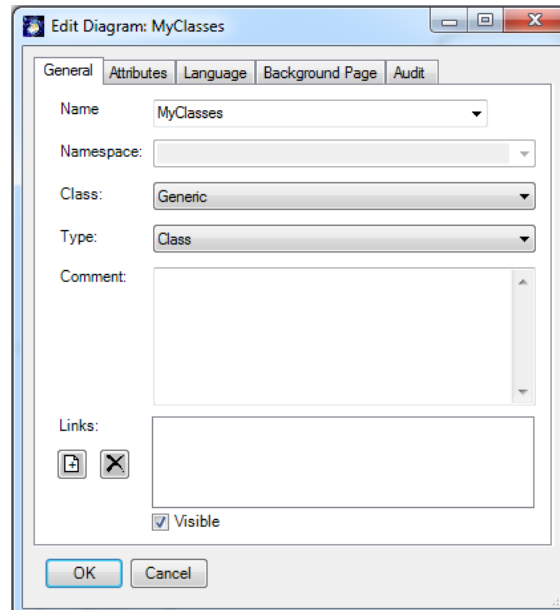
Delete multiple objects

In, for this tutorial used, basic SemTalk you have the option to delete multiple objects with the assistance of a single dialog. (Objects → Remove Multiple) In other methods will be filtered from system classes, tasks and physical resources and gives you the option to delete not used objects.



Edit a diagram

Please select a diagram and right-click the option **Edit**. You may also use **SemTalk → Diagram → Edit**.



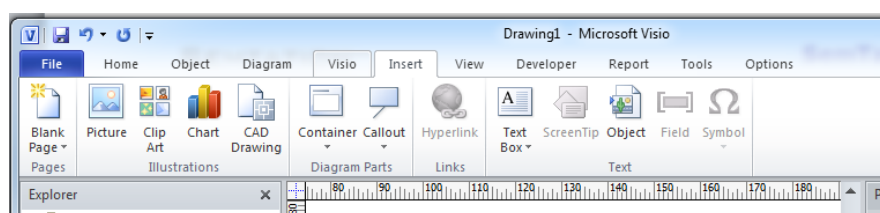
Name	The name of the diagram.
Class	The Diagram Class (or diagram type). Diagrams are also SemTalk objects. New Diagram Classes may be processes or product models. Details on how to create a new Diagram Class are found in a later in this tutorial.
Type	Specifies the type of object displayed in this diagram. There are Class Diagrams and Instance Diagrams.
Visible	Indicates if this page is visible in SemTalk, Word Export or HTML Export. The page will continue to appear in SemTalk Explorer, in case you need to make it visible again.

SemTalk Interfaces

Most of SemTalk interfaces depend on the modeling method and the template been used. Almost of SemTalk interfaces, options are located under **“Open & Import”**. Basic SemTalk interfaces are explained later in this tutorial. For specific interfaces, please check the corresponding methods. At the end of this section, you will find a complete list of SemTalk interfaces.

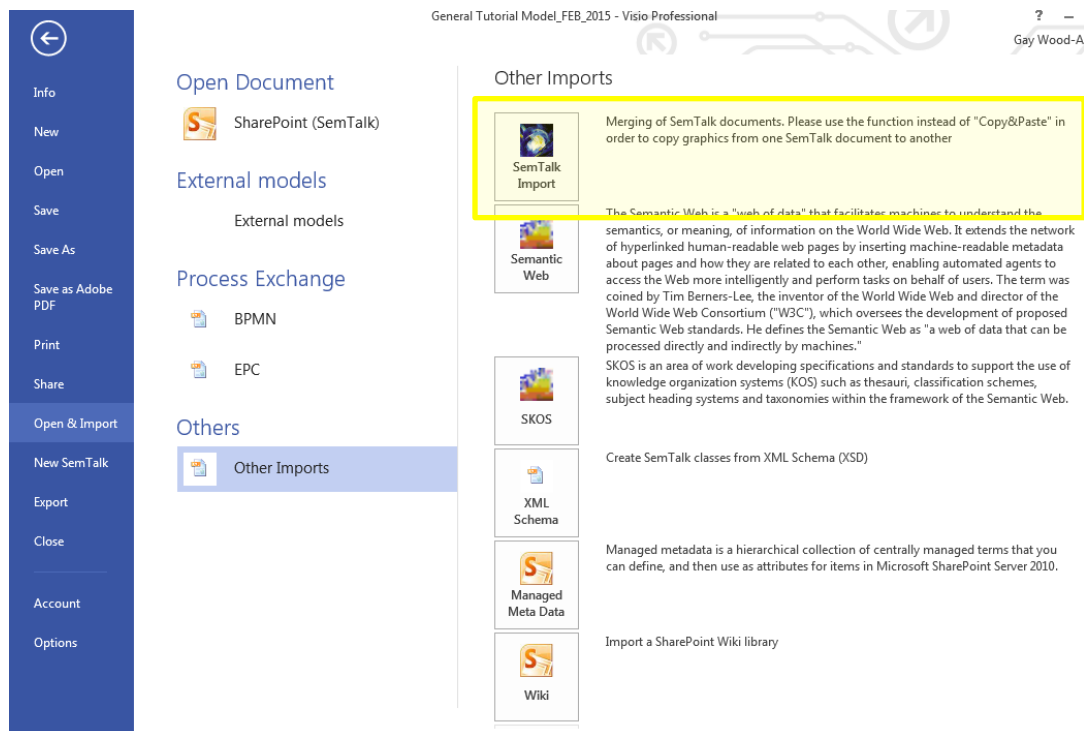
Import Picture

Insert Picture only inserts a picture; it does not create a SemTalk object for the picture. Just copy & paste your picture or use Visio's Insert Options.

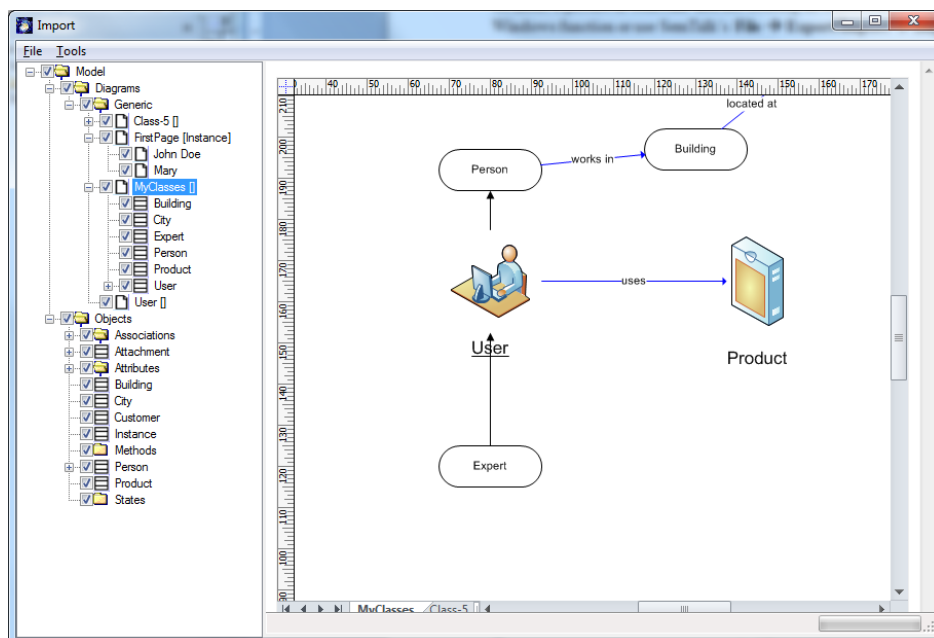


SemTalk Import

Use File – Open & Import – Other Imports – SemTalk Import to merge SemTalk models.



Use import to merge complete or partial models. Select an existing model and the following import window will appear:

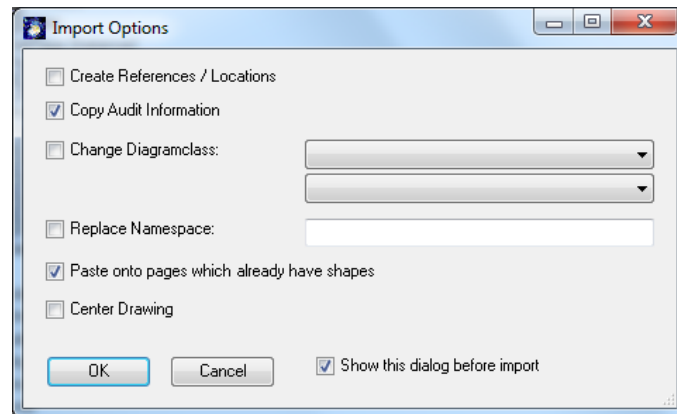


On the left hand side, there is a tree view similar to the SemTalk Explorer where you can select objects by diagram or by hierarchy. Additional objects may be imported. On the right side, you can preview the page(s) to be imported

NOTE: Do not try to change anything in the preview. Any changes you may make are not saved.

Please check those objects or diagrams you want to import and afterwards use **File→Import**.

Select from the Import dialog menu bar **Tools → Options** to pop-up the import options available, which allows specifying some parameters for the import.



Create References / Locations	Each object is assigned a reference to the imported file so that it can be updated using Object → Refresh .
Copy Audit Information	Audit Information such as Created, CreatedBy are copied from the imported model. If this option is not checked, the current user and the current time will be used
Change Diagram class	Used to import method-specific ontologies (class models) and change the original diagram class.
Replace Namespace	Replace the namespace of imported classes with a new namespace
Paste onto pages which already have shapes	In order to enable incremental import, SemTalk default settings do not import pages that already exist or have shapes. This means that you cannot import "Process-1" from a different document if you also have a page named "Process-1". Checking this option will enable copying on used pages
Center Drawing	After import, shapes are centered on the Page.

SemTalk Import is the best option if you want to import complete diagrams or a large set of objects. If you need single objects, **Show External Model** with Drag & Drop (see section 0) is more convenient.

Semantic Web

Semantic Web stems from the idea that the Internet is made of data. Models for the Semantic Web are called ontologies. The W3C recommends storing information in the Semantic Web using the following protocols: RDF (~Instances), RDFS (~some aspects of classes as you have seen in SemTalk so far), OWL (<http://www.w3.org/TR/owl-features/>, complete description logic).

What is an Ontology?

For the purposes of this tutorial an ontology is a formal explicit description of concepts (i.e. classes) in a domain of discourse, properties of each concept describing various features and attributes, and restrictions on properties and attributes (i.e. relation and data types). In simple words, an ontology

is a formal model for a specific domain of knowledge. An ontology, together with a set of individual instances of classes, constitutes a Knowledge Base.

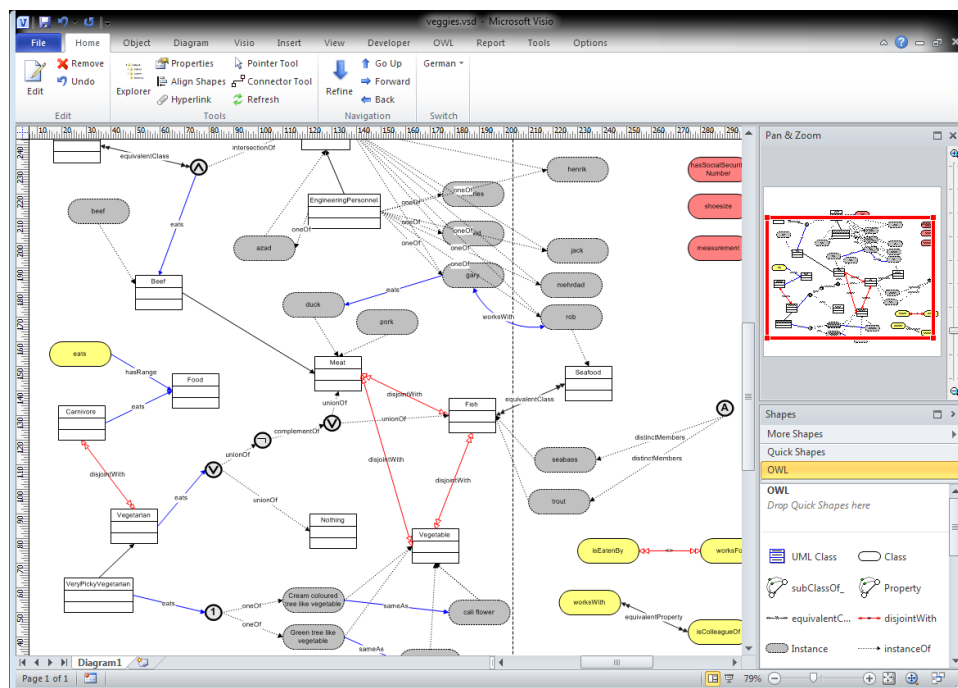
Ontologies are developed to provide a machine-understandable semantics of information sources that can be communicated between different agents (software and humans). Ontologies are useful to:

- share common understanding of the structure of information among people or software agents,
- enable reuse of domain knowledge,
- make domain assumptions explicit,
- separate domain knowledge from the operational knowledge and to,
- analyze domain knowledge.

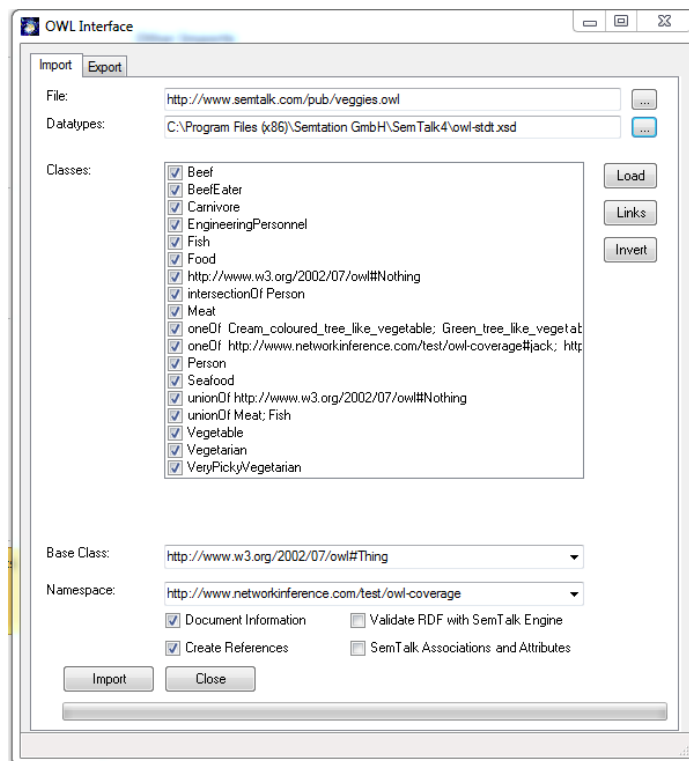
Web Ontology Language (OWL) is a W3C recommendation for the representation of ontologies. In case you want to work with OWL, you should use the OWL Template: File->New and select OWL.vst in the SemTalk program directory. In this tutorial, we have used OWL, the SemTalk default notation, which is a subset of OWL.

In SemTalk we use Semantic Web data structures to exchange data in a vendor independent way. Any SemTalk model can be exported completely to OWL. SemTalk can import and use OWL ontologies as class models for various purposes.

If you want to use SemTalk as an OWL editor, you should use the OWL template **OWL.vst** that has all the additional constructs, which are needed to cover the complete set of OWL feature. If you need to exploit these features, we recommend using SemTalk in conjunction with Reasoners such as PELLET (see Chapter 10 on details for working with OWL). The following example was created using OWL.vst



In order to import OWL, RDFS, RDF data select **Open & Import** → **Other Imports** → **Semantic Web**.



For example, import the following file: <http://www.semtalk.com/pub/veggies.owl>

Additional SemTalk data types are needed. Standard OWL data types are found in the SemTalk program directory.

NOTE: Instead of importing complete ontologies, you can use **Show External Model** with Drag & Drop (see section 0) and open an OWL file or URL.

Load	Redisplays the contents of the file in the list box
Links	Selects objects related to the current selection in the list box
Invert	Inverts the selection of the list box
Base Class	The common superclass for all object to be imported
Namespace	The default namespace for all object to be imported
Validate RDF with SemTalk Engine	Only those associations defined at classes are allowed and imported
Document Information	Meta data of the document
Create References	Each object will get a reference to the imported file so that it can be updated using Object->Refresh afterwards
SemTalk Associations and Attributes	If you do not check this option, the import of ObjectProperties will be OWL compliant ("has Domain", "has Range"). If you do check this option ObjectProperties will be mapped to SemTalk' s more UML style Attributes and Associations, which make more sense in various SemTalk modeling scenarios but screw up the semantics of some OWL ontologies.

Exporting to OWL or RDFS is quite simple. You can choose to export classes, instances, meta model (read only classes) etc.

OWL Interface

Import Export

☒ Export Classes ☐ Remove Local Namespace

☐ Export Instances ☐ Export Meta Model

File: d:\christian\tutorial\tutsem40e.owl

URN: http://www.test.org

Prefix:

Base Class:

☐ Export Document Information ☐ Export Restrictions

Title:

Date: 7/25/2011 4:59:36 PM

Creator: Christian Fillies

Subject:

Description:

Export Close UTF8 ISO

OWL Interface

Import Export

☒ Export Classes ☐ Remove Local Namespace

☒ Export Instances ☐ Export Meta Model

File: c:\users\christian fillies\desktop\tutsem32.owl

URN: http://www.test.org

Prefix:

Base Class:

☐ Export Document Information ☐ Export Restrictions

Title:

Date: 4/20/2010 11:03:37 AM

Creator: Christian Fillies

Subject:

Description:

Export Close UTF8 ISO

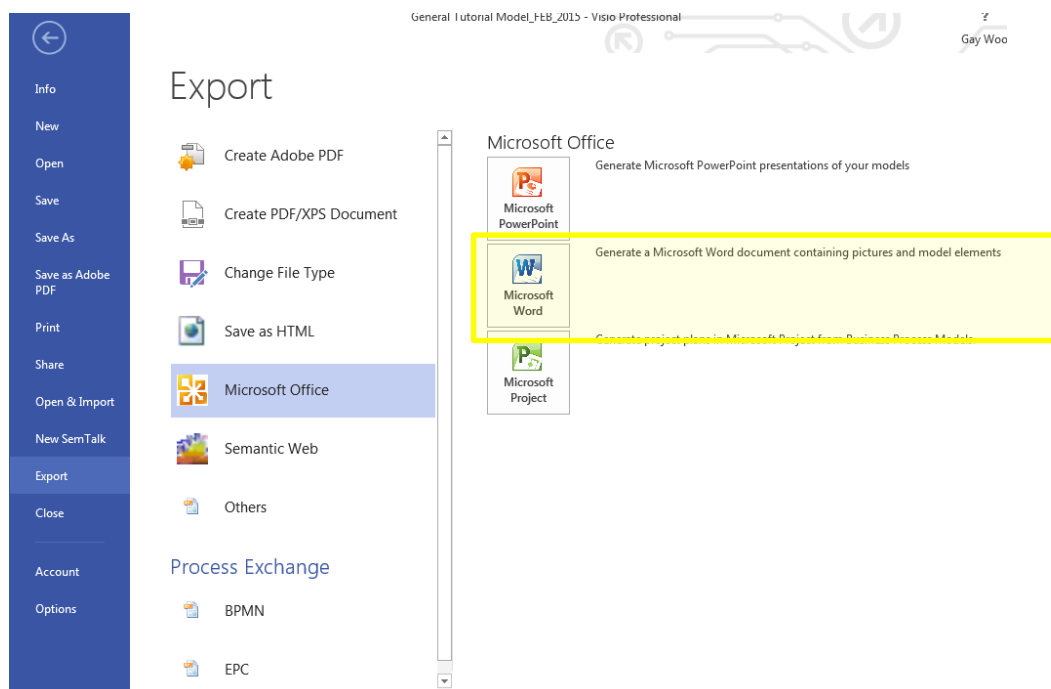
If you have selected objects in your drawing, only selected objects are exported.

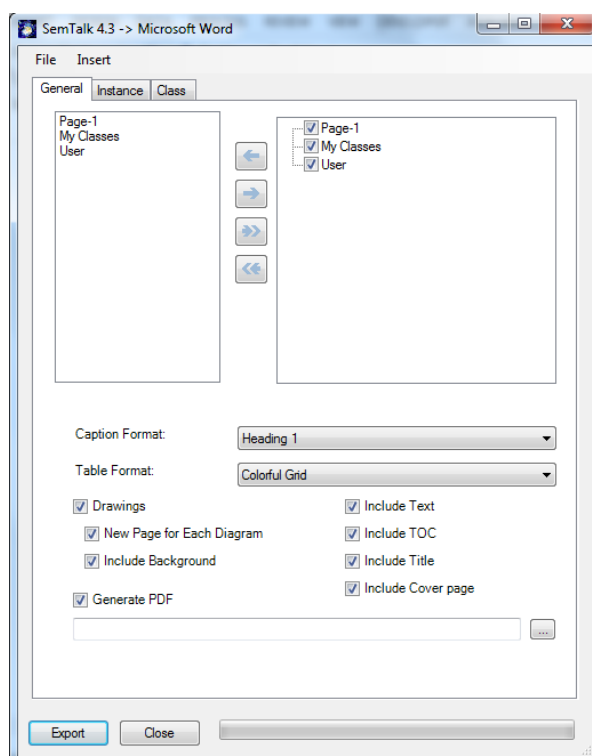
Remove Local Namespace	Ignores the namespaces. This makes sense if you plan to export ontologies from process models
Export Meta Model	Export classes marked as “Read Only”
URN	Base namespace for the ontology
Base Class	Only subclasses of selected Base Class
Prefix	Prefix for the base namespace
Export Document Information	Title, Date, Creator, Subject, Description
SemTalk Associations and Attributes	If you do not check this option, the import of ObjectProperties will be OWL compliant (“has Domain”, “has Range”). If you do check this option ObjectProperties will be mapped to SemTalk’s more UML style Attributes and Associations, which make more sense in various SemTalk modeling scenarios but screw up the semantics of some OWL ontologies.

Microsoft Office Word Export

Generating documentation of your models is quite easy with SemTalk and Microsoft Office Word.

Select **File→Export→Microsoft Office →Microsoft Word**





On the upper right corner of the dialog, you see a tree view with the existing diagrams in your model classified according to their diagram type. Select which diagrams are to be exported using the buttons between the two boxes. Use the **Insert->Add Text File** button to insert text files (.doc, .txt, etc.) or **Insert->Add Reports** to add reports into the Word export. The items' sequence on the list on the upper left corner determines the order of the diagrams and text in the Word export.

Use the File menu option of the dialog, if you want to do the following:

Load Diagram List	Loads a predefined diagram list to generate as Word document.
Save Diagram List As	Saves the current diagram list as .txt file. You may load this file and generate a custom Word export.
Open Document Template	Loads the Word Normal.dot as default template, but you may select a custom template with this command.

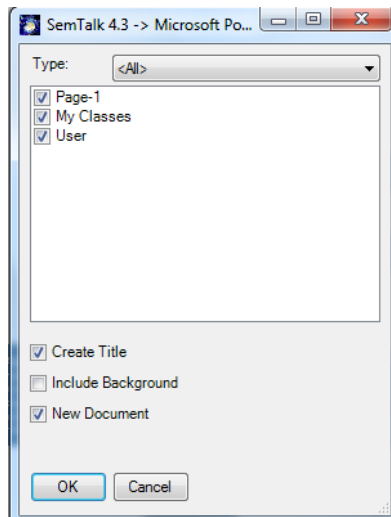
More layout options on the Word export dialog:

Caption Format	Defines the heading format according to your MS Word.
Table Format	Defines the layout format of your tables.
Drawings	Includes diagrams in the Word export.
New Page for Each Diagram	Inserts one or more than one diagram in a page.
Include Background	Defines the diagrams' background (e.g. company's logo), if predefined.
Include TOC	Adds a Table of Contents at the beginning of the Word document.
Include Text	Adds tables to your Word document.
Include Title	Document Title
Include Cover page	Document Title on an extra page
Generate PDF	Automatically generate PDF using Word2007 save as PDF

In the **Instance** and **Class** tabs, select which object properties and information to include in the Word export.

Microsoft Office PowerPoint Export

The Microsoft PowerPoint interface makes it easy to present models quickly and effectively. Open the export dialog for PowerPoint using the menu item File → Export → Microsoft Office → PowerPoint to generate a PowerPoint presentation from a SemTalk model. You should see the following dialog now:



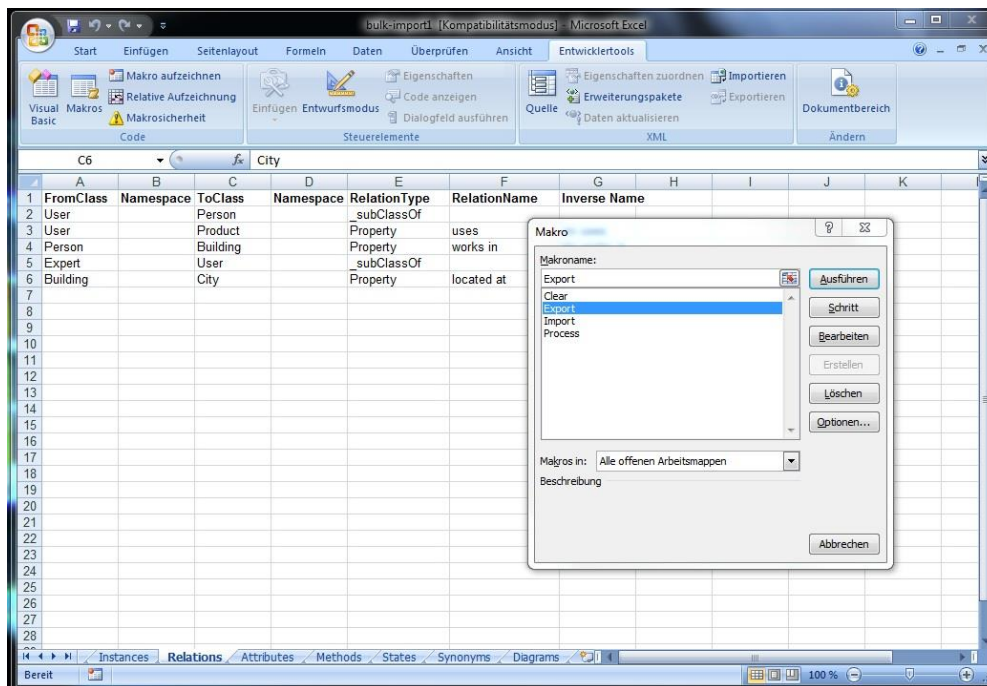
You have the following options:

Type	Filters the diagrams by diagram type.
Create Title	Creates a title for each presentation's slide that matches SemTalk's page titles. This is not recommend if you have a Diagram background page which also shows the page title
Include Background	Adds the diagrams' background page (e.g. company's logo), if predefined.
New Document	If this option is not checked AND a PowerPoint presentation is open, the slides are added to the open presentation

Microsoft Office MS Excel Import

The MS Excel Import function is very handy when creating big models with lots of classes and or instances. Instead of creating every single class and/or instance in SemTalk, you can import them from a MS Excel spreadsheet. The only condition is that the spreadsheet must reflect SemTalk's logical structure. Therefore, an appropriate spreadsheet is included and you may find it in the following location: C:\Program files\Common Files\SemTalk3\bulk-import.xlt. You may create your own bulk-import spreadsheets, but you must follow the original Bulk Import structure.

To import objects from a MS Excel spreadsheet into a model, select from the menu Tools → **MS Excel**. Then select an appropriate MS Excel spreadsheet (e.g. bulk-import.xlt). Once you are ready to import the objects and information in the spreadsheet, select from Excel's menu options Tools → Macro → Macros. You will see the following dialog:



DiagramName	DiagramType	Name	Namespace	X	Y	Shape
Page-1	Generic	John Doe		6.75	5.75	Sheet 1
Page-1	Generic	John Doe		5	4.875	Sheet 22
Page-1	Generic	Mary		6.75	3.25	Sheet 6
My Classes	Generic	User		5.5	4.5	Sheet 2
My Classes	Generic	Expert		5.504625984	3.446850394	Sheet 1
My Classes	Generic	Person		5.501377953	5.901905252	Sheet 66
My Classes	Generic	Product		7.3125	4.5	Sheet 8
My Classes	Generic	Premium Product		7.3125	3.098094748	Sheet 22
My Classes	Generic	Administrator		7.632874016	5.901905252	Sheet 23
My Classes	Generic	Comment.71		3.601377953	4.5	Sheet 71
My Classes	Generic	Building		5.501377953	6.678149606	Sheet 73
My Classes	Generic	City		7.632874016	6.678149606	Sheet 75
User	Generic	User		5.5	4.625	Sheet 1

Click on the button “Export”. SemTalk will export the objects and information to Excel. “Import” will import the current elements back into SemTalk. “Clear” will remove all content from Excel. “Process” is a sample intended for process modeling notations. It creates a simple process hierarchy from the spreadsheets data.

All macros are included in the document as source code. The intension of bulk import is to provide you with an API sample how to read and write SemTalk content. If you copy/edit the macros to match your personal ideas you will have a convenient way to export/import mass data from virtually any other application.

More Export / Imports

The following is a short summary of export/import options.

MS PowerPoint	Export to MS PowerPoint version 2003 and higher.
MS Word	Export to MS Word version 2003 and higher.
MS Excel	Import from MS Excel version 2003 and higher.. Provides an MS Excel sample macro to create SemTalk objects via the SemTalk API.
MS Project	Export and Import to MS Project. Available for CSA ("ksa.vst"), EPC ("epc.vst") and others.
SAP Explorer	Import Solution Maps and other diagrams from the SAP Solution Composer (Solution Composer must be installed). Some content of the Enterprise Service Repository ESR and Business Blueprints created via SAP Solution Manager. At Tools->SAP Explorer
SAP R/3 4.6c Reference Model	Import processes of the SAP's R/3 Reference model. A reference model database is required which can be obtained from SAP's Value SAP (Asap) CD. Use the template "epc.vst" It is at Open & Import->EPC->SAP R/3
AML / EPML (ARIS)	Import and export of EPC models from other EPC tools such as ARIS via ARIS XML using the tool independent standard EPML http://www.mendling.com/EPML/ Use the template "epc.vst" It is at Open & Import->EPC->EPML
BPEL	Export of the Web Services format BPEL e.g. for BizTalk. Use the template bpmn.vst It is at Save & Send->BPMN->BPEL
WSDL Import	Create object definitions from XML-Schema files / WSDL. To be used with BPMN It is at Open & Import->Other Imports->XML Schema

Additional SemTalk Functions

Next we will review additional functions intended to assist you in your creation of comprehensive models.

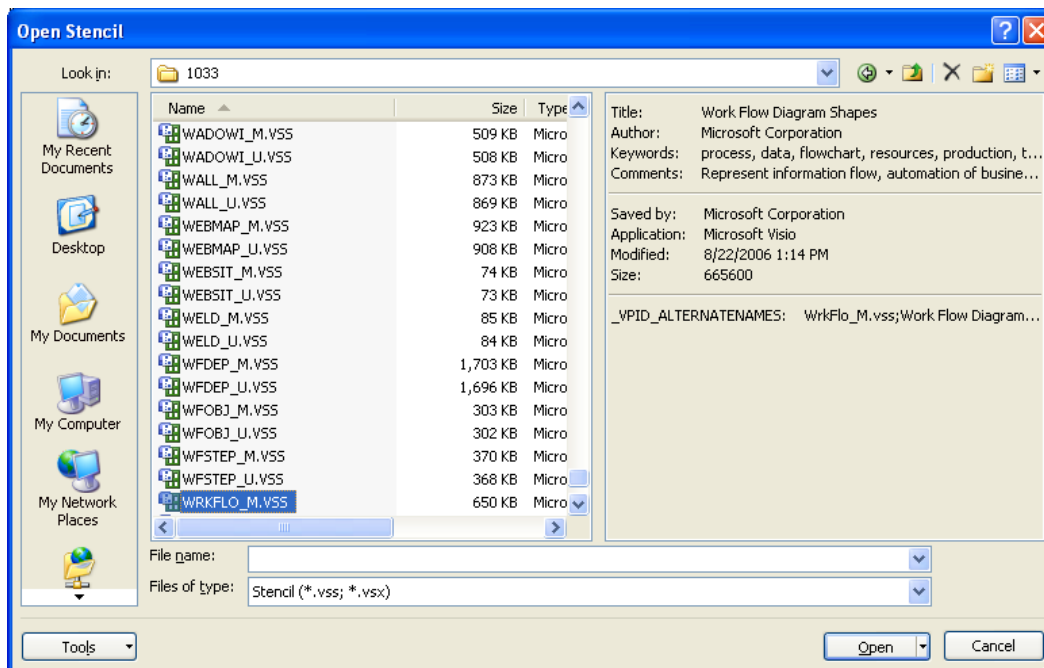
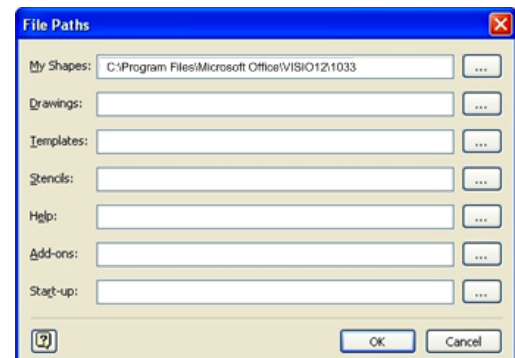
Working with Visio Stencils

You may define classes and instances based on Visio masters from any stencil. To open a Visio® stencil e.g. **File → Open Stencils**. In the embedded Version, use **File → Shapes** to open a stencil.

NOTE FOR VISIO 2007

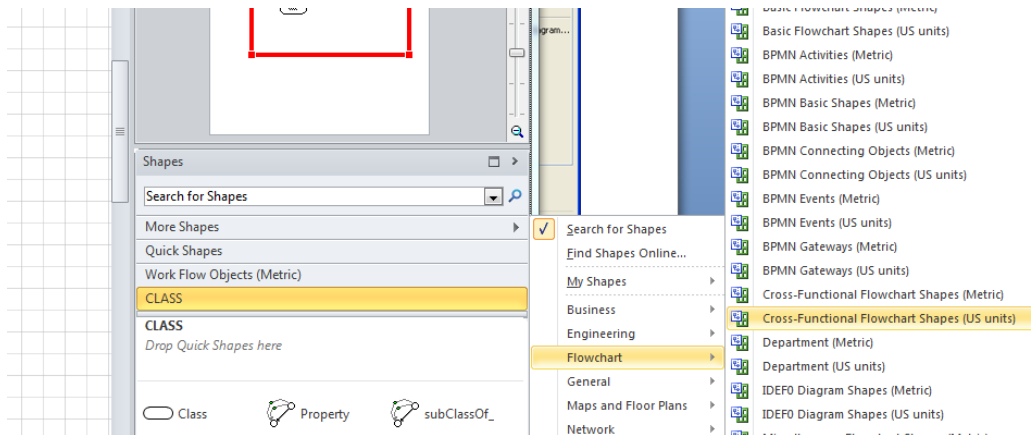
If you are using SemTalk not embedded in Visio 2007 and you plan to use regularly Visio shapes, you should define the path for the Visio stencils. To do this select from the menu bar **Tools→Visio Options→Advanced (Tab)→File Paths... (Button)**. You should now see the following dialog:

In the text field “My Shapes:” navigate to the directory where Visio saves the stencils (e.g. “C:\Program Files\Microsoft Office\VISIO12\1033”) (1033 for English version).



NOTE FOR VISIO 2010

In Visio 2010 the handling of Stencils has changed. You will open a new stencil now from the Shapes anchor window.



New Visio Master

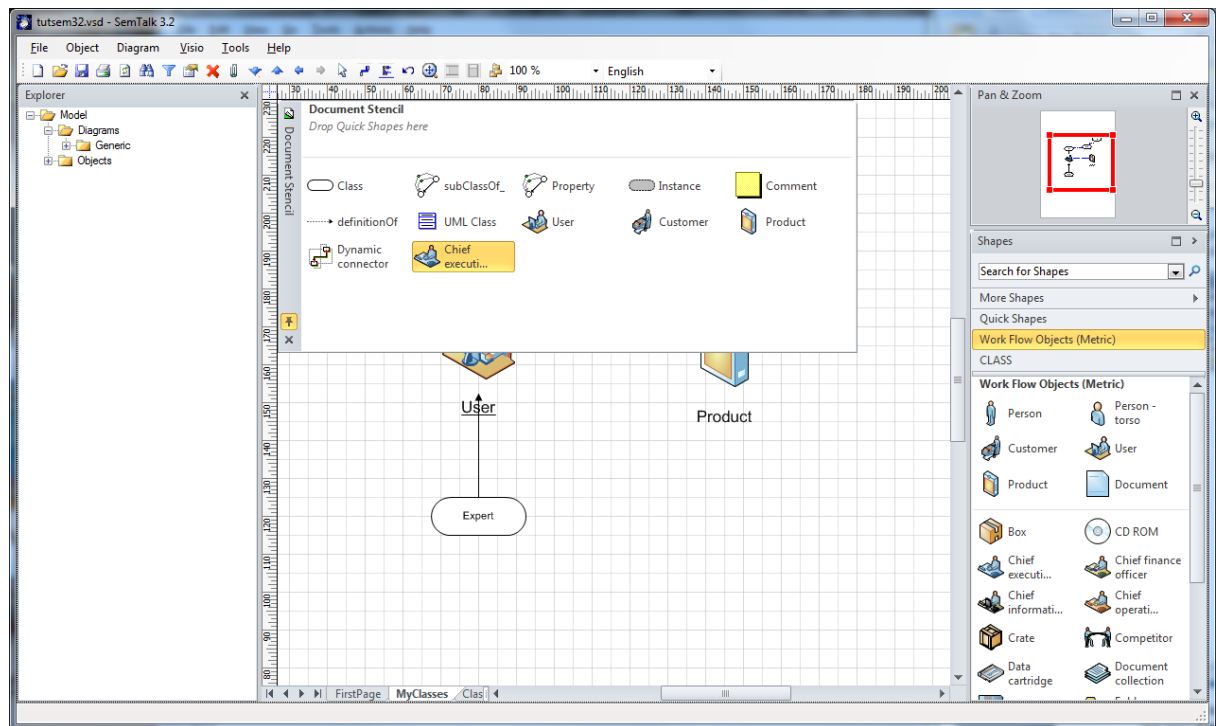
If you drop a shape on a class diagram, SemTalk creates for each master a class. You may have to rename the class afterwards to match your requirements. If you drop a shape into an instance diagram, SemTalk will create an instance for each shape that inherits from the class with the master's name.

Until now, you have created class diagrams with existing Visio Master Shapes or with abstract objects. You have also built instances using Drag & Drop.

If you want to create new Visio Master Shapes, you have two possibilities. Either copy an existing Visio Master Shape or create a new one. It is important to keep in mind that the names of the template symbol correspond with the class names in the existing models. Therefore, please copy the respective Master Shape, insert it in the **Document stencil** and rename the symbol ("Master Shape Properties" in the master's context menu). Now, you can use the symbols from the **Document stencil** or create your own stencil to build your models.

For the purpose of this tutorial, we use the Visio-Master-Shape for "Person 2" as "Manager". Please do as follows:

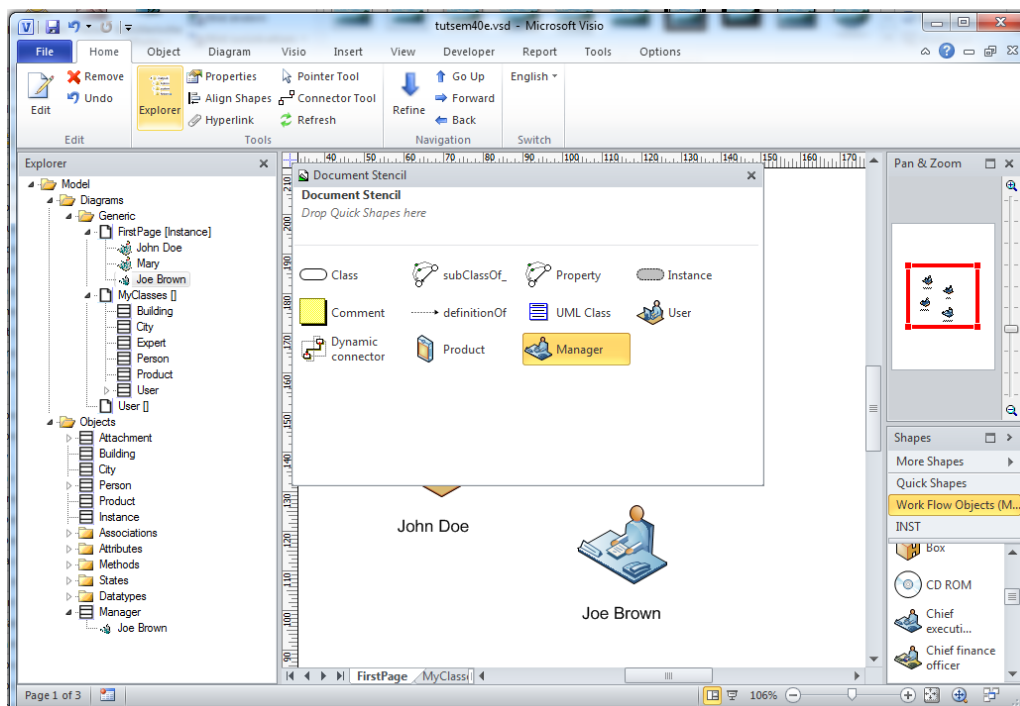
1. Open the **Document stencil**.
2. Open the "Work flow diagram shapes stencil"
3. Drag & drop the master "Chief executive officer" from the "Work flow diagram shapes stencil" in the "Document stencil".



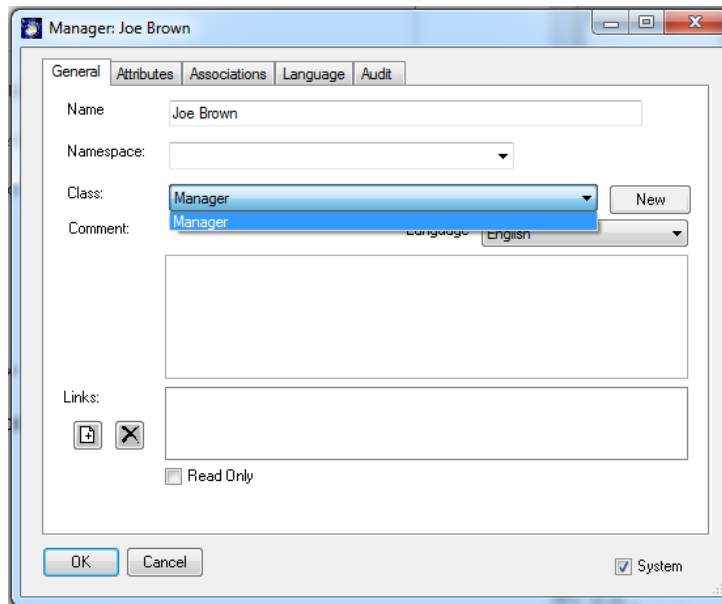
Rename the master “Chief executive officer” to “Manager” in the **Document stencil** by right clicking on the symbol and select **Rename Master** from the context menu.

NOTE: In the stand-alone version of SemTalk you cannot create or graphically edit a Visio master. Stencils and masters can only be edited in Visio.

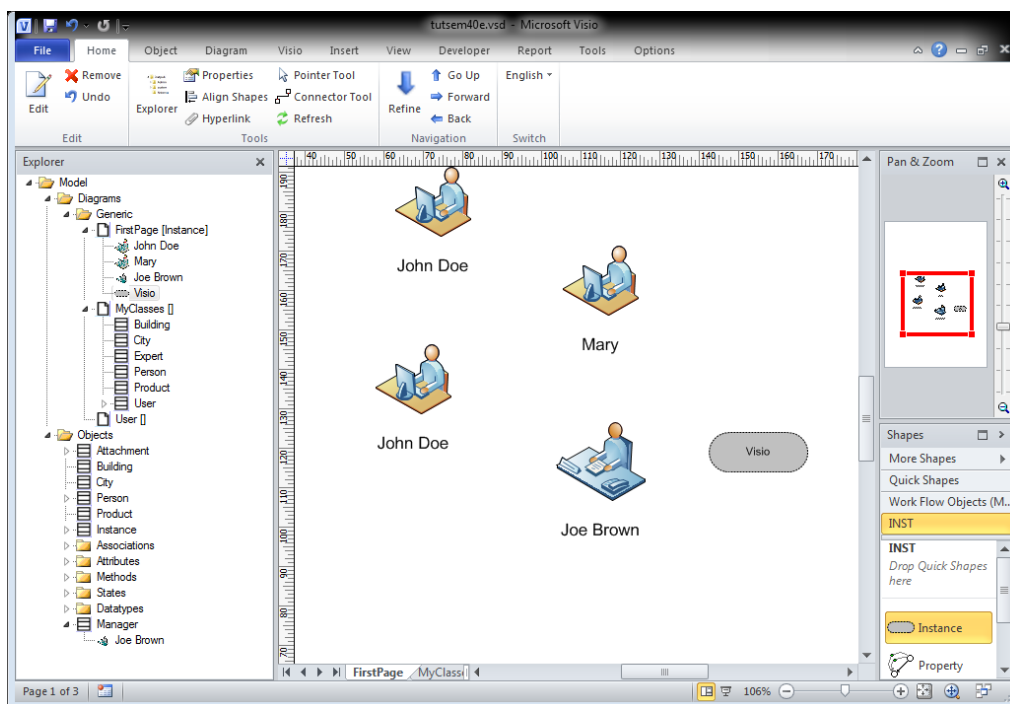
Please drag a “Manager” and drop it in your instance diagram. Then assign a new name to the new “Manager” instance.



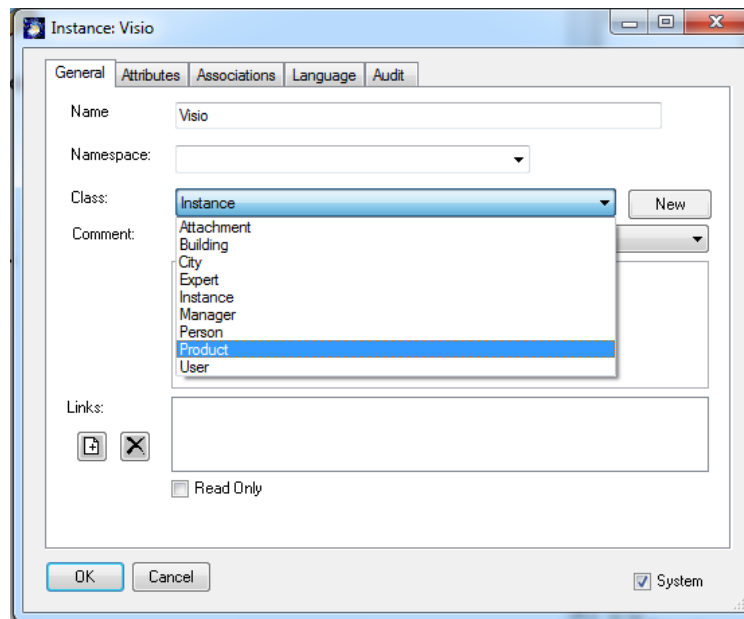
Instances, which use the new “Manager” Shape, must stay associated to that particular class. They cannot be changed to be instances of other classes such as “Product”



If the generic Instance symbol is used, it can be changed to any class. Please, drag the “Instance” master from the “INST” stencil and drop it in the drawing area.

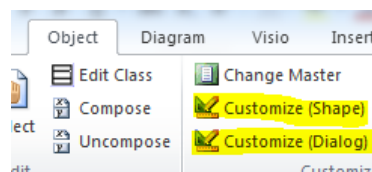


When you create instances with the “Instance” master, you can choose any class you wish to assign to the class.



Customize

Customize specifies how objects will be displayed and which tabs will appear in the edit dialog box. In addition to the object's name, it is possible to show any attribute or association value.

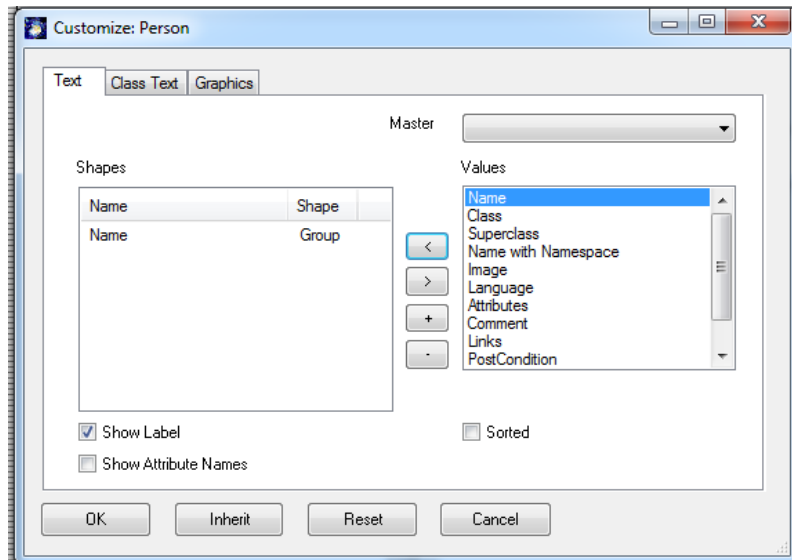


Layout specifications are found in Customize (Shape). They may be overwritten for subclasses or for single instances. Please select the Person class from the explorer and select the menu **Object → Customize (Shape)** or from the object's context menu in SemTalk Explorer. In the dialog, select the **Text** tab.

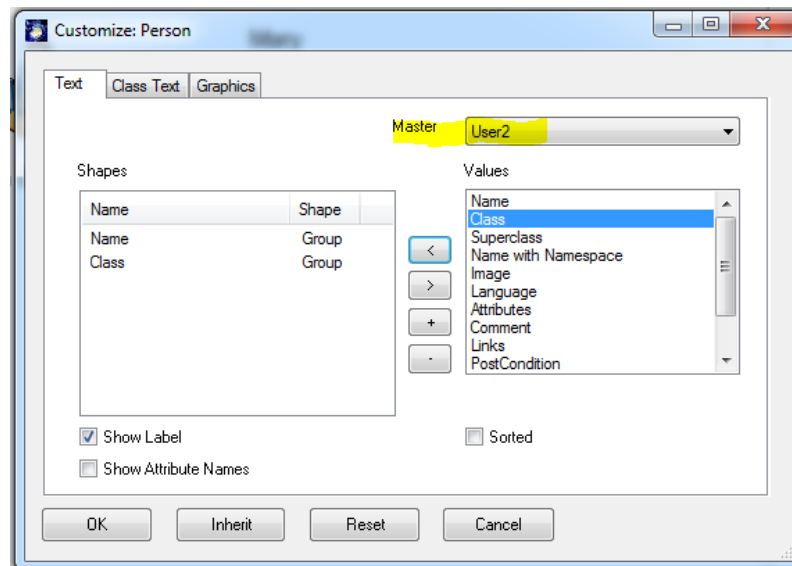
Text specifies how instances of the class (or its subclasses) are displayed in instance diagrams. **Class Text** specifies how the class itself or its subclasses are displayed in class diagram.

The left list box shows all currently selected attributes and the right list box shows all possible attributes or associations. Use "<" and ">" to add and remove selections.

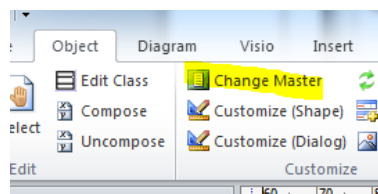
In the case of complex shapes, choose "+" and "-" to show in which sub-shape the value will be displayed. You can address up to ten sub-shapes. Multiple attributes may be displayed in the same sub shape. **Group** specifies that you have selected the whole shape itself (and not a sub-shape).

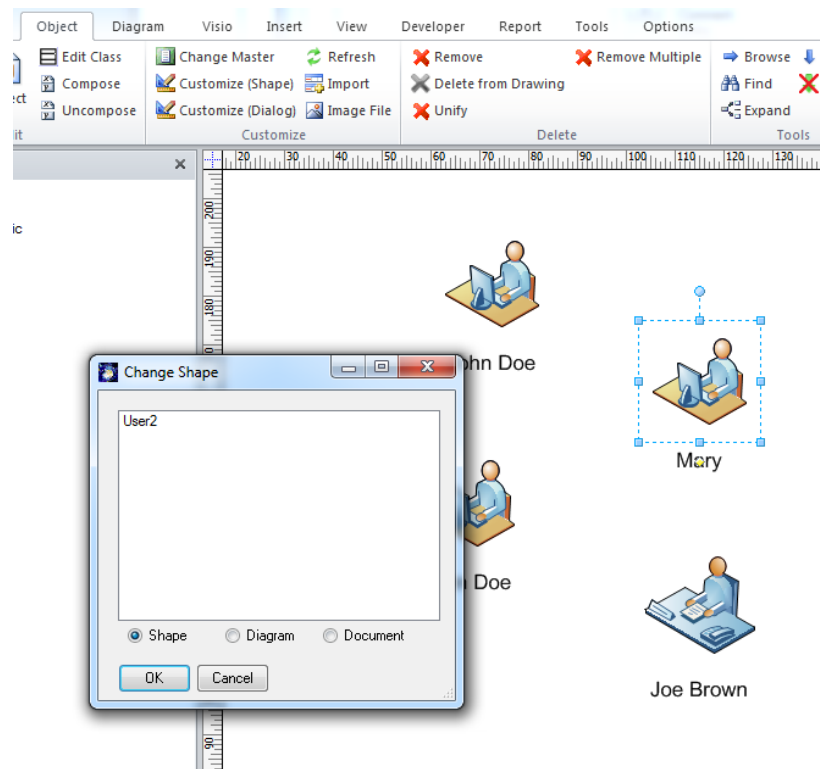


You may use multiple Visio masters with the same SemTalk class (or instances of that class). For each master you can specify individually how SemTalk attributes are displayed.

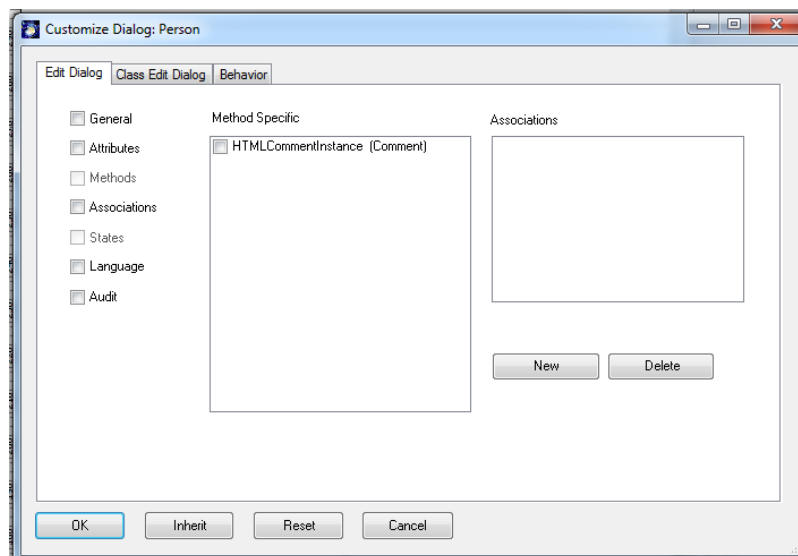


Once you have defined multiple masters for a class, you can switch which master is used in the drawing.





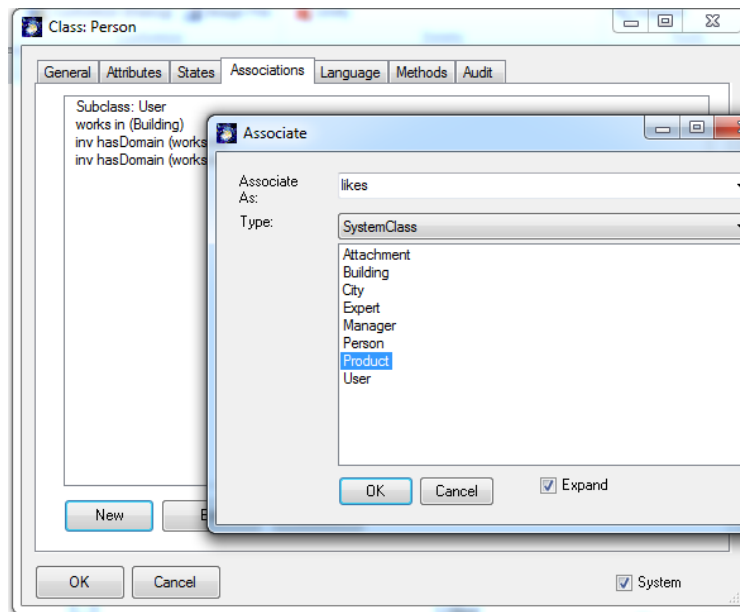
Customize (Dialog) is used to customize the appearance of the object's Edit dialog.



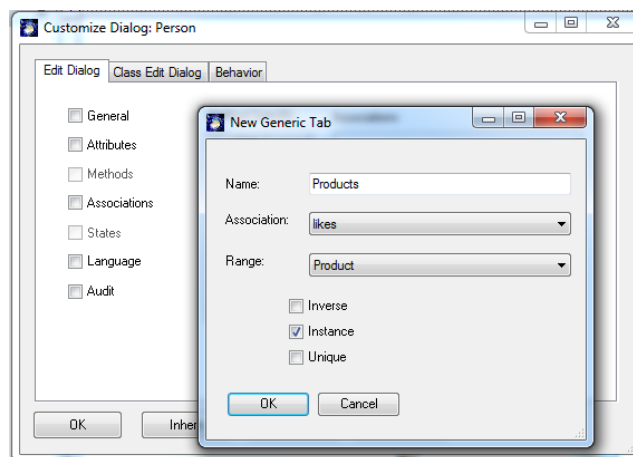
Here you can select which tabs to show in the object editor. The check boxes on the left side of the dialog box enable or disable SemTalk's system-defined tabs. If you were using a specific modeling method (e.g. a specific process modeling method), you would see a list of check boxes with the name of the method-defined tabs for that method.

With Associations you can define new tabs for the dialog which allow to maintain associations to other objects in a non-graphical way if they are defined in the meta model.

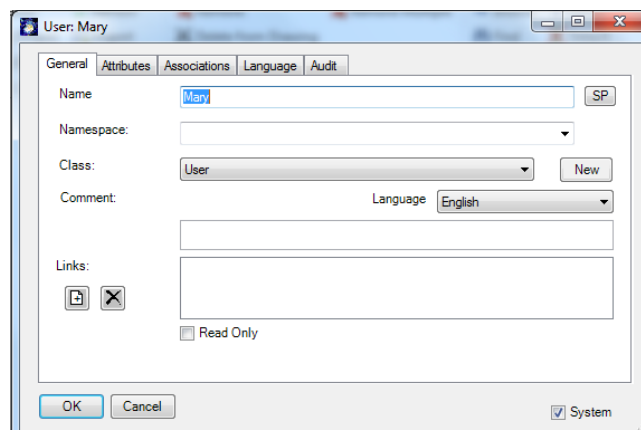
1. Define the Association

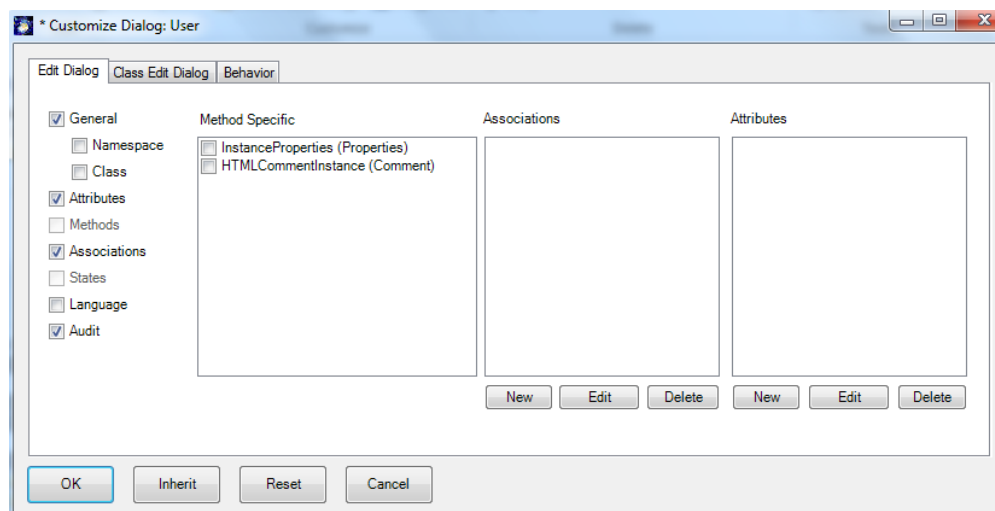
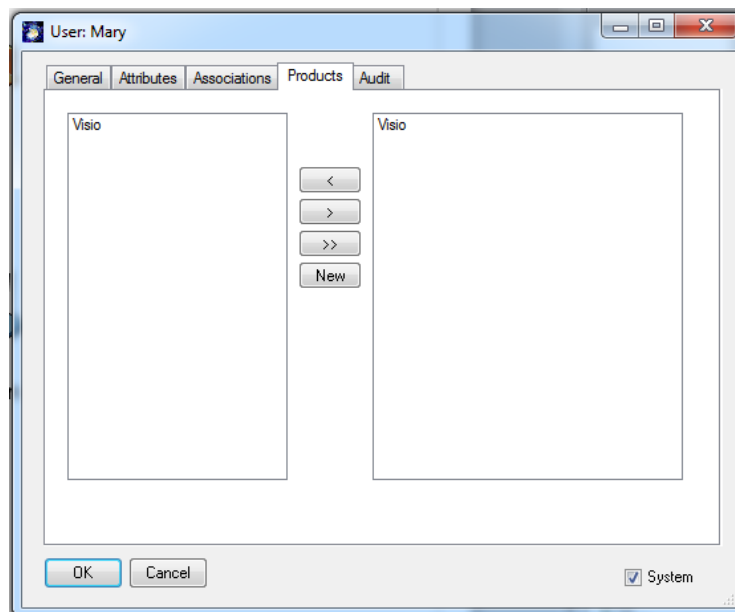


2. Define the Tab



3. Instance Dialog





NOTE: In this screenshot you can see the other SemTalk tabs - Methods, States and Language. In particular, the language tab is quite useful for specifying alternative names for the object. The SemTalk **Find-Dialog** also searches for label in different language ("Synonyms").

Class Text and **Class Edit Dialog** are the same for both displaying and editing classes.

Behavior tab specifies important options regarding how SemTalk manages new instances or subclasses of the class.

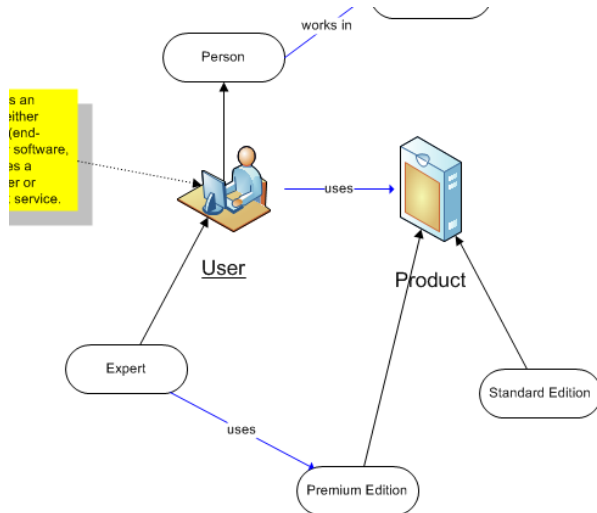
Instances exist on exactly one Diagram	Instances are deleted from the object base as soon as they are deleted from the diagram.
Anonymous Instances	This feature is often used for activities in processes. You must have a master named as the class. If you renamed an instance of a class, a new super class for the instance is created. The instance is not individually named. Its name is super class name + "." + ID
Refinement of Class	This is used together with Anonymous Instances . Refinements are attached to super classes and to the instances. e.g. the activity "write Book" will be refined by the same sub-process in all processes where "write Book" is used
Create Subclass on Drop	Similar to Anonymous Instances but used on classes. Every time a class master or class from Explorer is dropped onto a class diagram, new subclass is created instead of inserting the class in the diagram
Hide in Explorer	This hides a class so that it will not be shown as a root class in the SemTalk Explorer
Refine	Determines if a Refinement is allowed.

Graphics tab gives you some basic control over how shapes will be displayed without the need of changing the Visio master shape

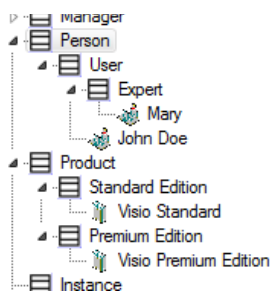
Color	Shapes showing instances of the class will get the specified color overwriting the color of the master
Line Pattern, Line Weight	Line Pattern and Line Weight applied to the shapes AND ALL Subshapes
Use Image	Allows a bitmap to be displayed in the first sub-shape

Associations and Instances

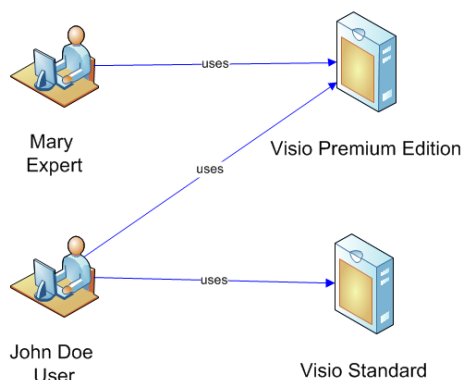
The property connector is used to define associations between instances. In connecting two objects a dialog box pops up offering possible associations for the object's class. In our example, an "Expert" uses a "Premium Product", but does not use a "Standard Edition Product".



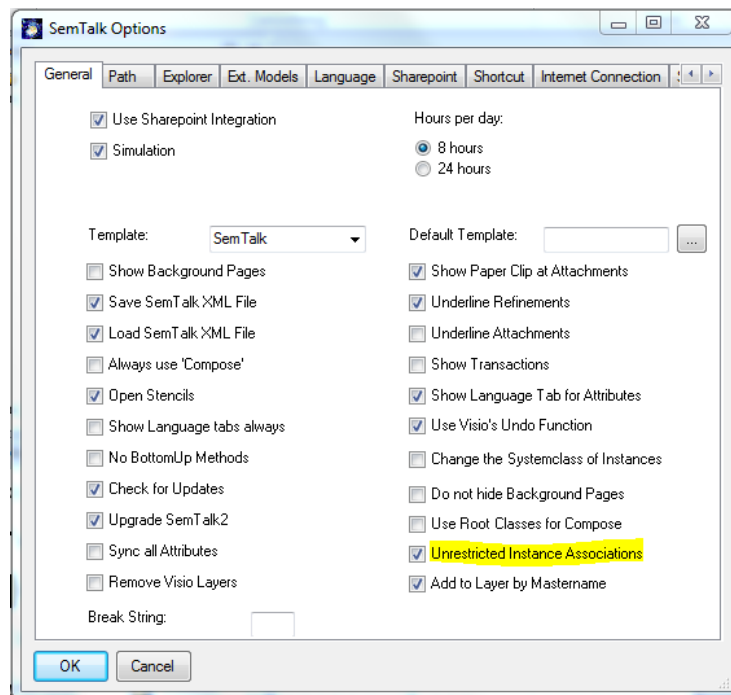
We classified our instances following that scheme:



For instances this means that the expert Mary may not use the community edition but John, as a standard user may use any product.



You may change the association class of each existing link by right clicking the connector and choosing **Change Relation**. Associations not specified in the class model are generally not allowed between instances. SemTalk Options allow arbitrary associations between instances that have no classes specifying associations.



By adding classes and associations, SemTalk adds semantics to Visio shapes. Class models (so called ontologies) specify how shapes are assigned to instances. This paradigm allows users to define a huge range of modeling scenarios.

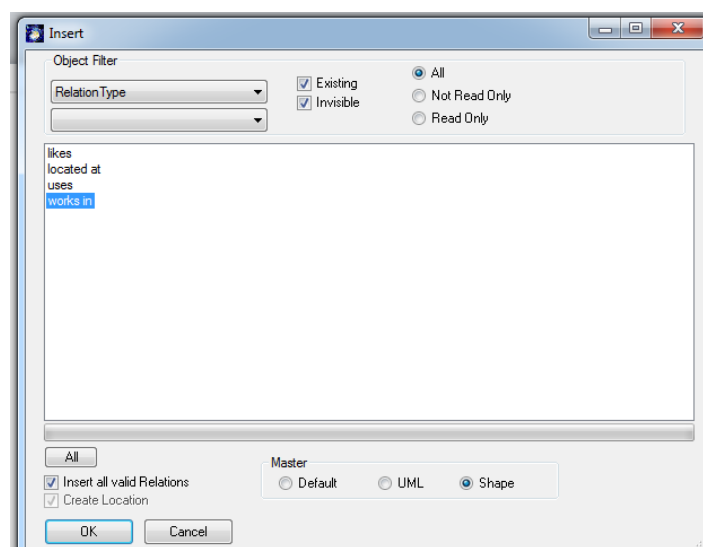
In the **Associations** tab of the instance edit dialog, you may select an association (property) without displaying it graphically.

Associations are ordinary instances of their association class. You may also define associations on associations.

Note: For some of the settings to become active, you may need to restart Visio/ Semtalk.

Association Classes

Since associations are instances of an association class, they are able to define attributes. In our example, we can add an attribute “arrival time” on the class “works in”, which can then be edited for each instance.



Add the association class “works in” to the class diagram by right clicking on the background of the diagram. Select **Relation Type** in the type combo box and then “works in” in the list box.

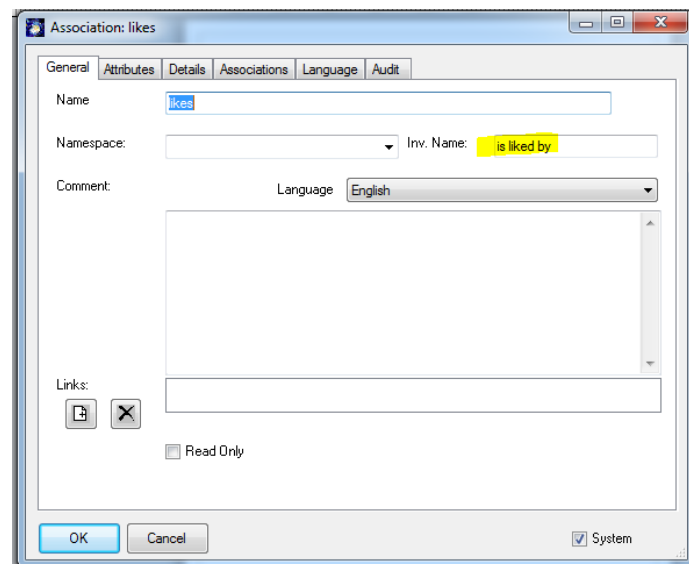
The class will be displayed in the class diagram. You may now add attributes, subclasses and new associations.

If you need a specific Visio connector for an association class, you can drop a Visio Connector to a stencil and rename it to the name of the relationship you want to use. Using the new master shape will automatically select the specified relation with the matching name.

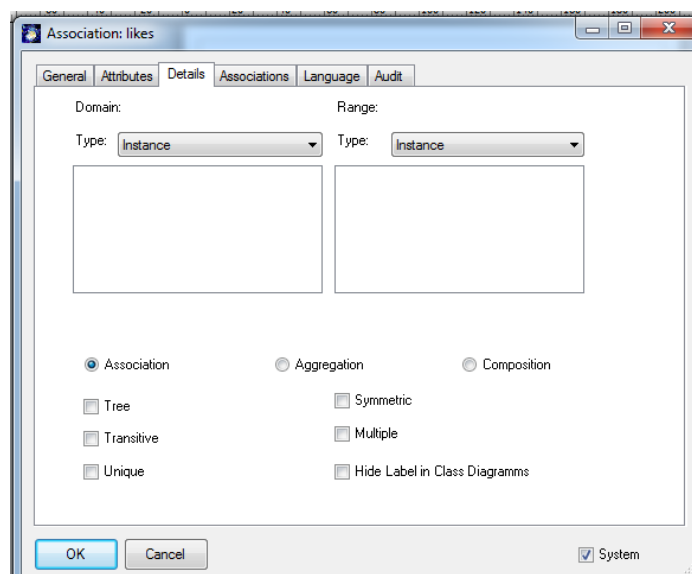
Association Class Options

Associations not only connect instances with instances, they are also used to connect instances with classes and vice versa.

NOTE: You may edit any object from the Explorer using right-click edit as classes, instances, diagrams and diagram classes.



The tab **Details** presents other options to specify which types of object may be associated (class or instance) along with some of their cardinalities.



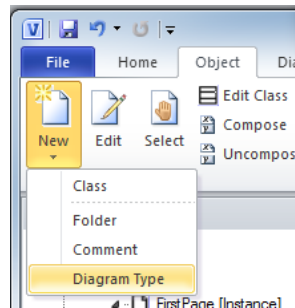
In case of an aggregation, the class' own relations and its inherited relations will be shown. When working with an aggregation, relations of subclasses are added to those from a superclass.

Aggregation can be understood here as a “is part of” relationship. **Composition** is a specific “is part of relation” but has no real meaning in SemTalk. It is simply used to display a diamond on the line. No partial objects are deleted if you delete the container.

With **Tree**, you prevent cycles. A **Transitive** relation is e.g. “bigger”. When A is bigger than B and B is bigger than C, then A is bigger than C. In case of **Symmetric** relations, the inverse name is the same as the name. **Multiple** means that between two objects more than one relations of the same kind are allowed. **Unique** means that only one relationship of this relation class is allowed to exactly one other object.

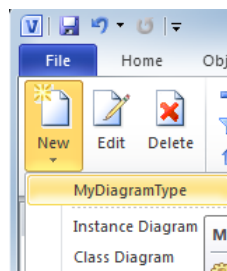
Diagram Types

You may create new diagram types in SemTalk. To create a new diagram type select from the menu options **Object → New → Diagram Type**.



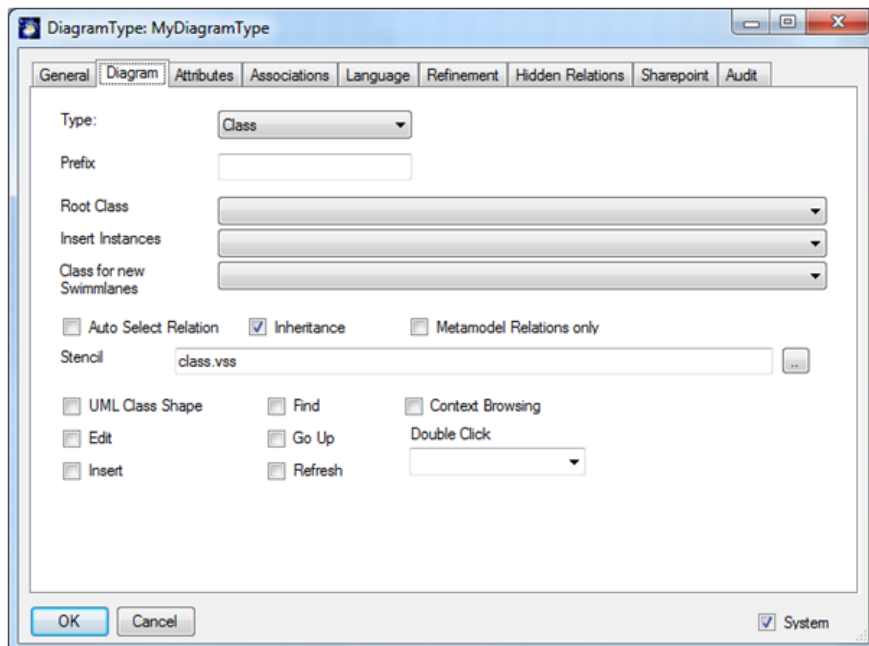
Please enter a name in the dialog to identify the diagram type.

Do not worry if you do not see the new diagram type in SemTalk Browser. Select from the menu options **Diagram → New** and you should see the new diagram type listed as an option. Click on it and you will see the new diagram type and diagram in SemTalk Browser.



You may edit a diagram type to constrain the type of objects allowed on the diagram. This option is often used when working with specific stencils making it possible to define what operations are available from its context menu, etc. Select the node in the SemTalk Explorer for the new diagram type (in this case “My Diagram Type”) and select from the menu options **Object → Edit**. Please create a new diagram of type “MyDiagramType” because this diagram type will not appear in the Explorer until it is used.

Next, select the **Diagram** tab. You should see the following dialog:

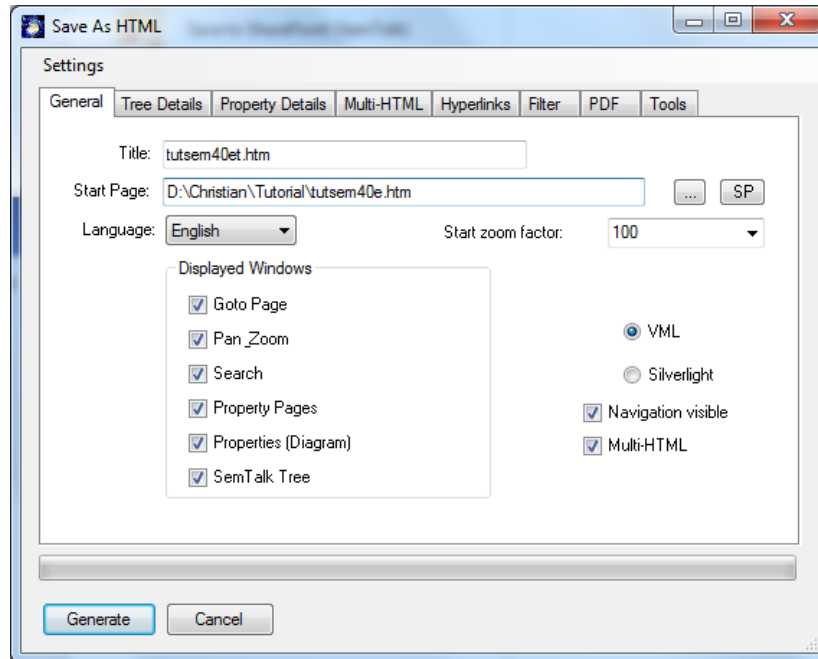


Type	Selects Instance or Class diagram.
Prefix	Sets a namespace for new classes derived from the Root Class of this diagram type.
Root Class	Sets a class that clusters objects in the diagram type. If the diagram type is a Class Diagram, classes on the diagram are subclasses of the root class. If the diagram type is set to Instance Diagram, objects on the diagram are instances of the root class or its subclasses. The goal of the diagram's root class is to manage objects allowed on the diagram. This gives a diagram a context and it is necessary when modeling with specific modeling methods.
Insert Instances	Sets classes from which instances are allowed in a class diagram. In other words, instances of the classes are permitted in a class diagram. For an example, see section 0 on modeling with OWL.
Class for new Swimlanes	Used in process modeling. Swimlanes usually represents a human resource that carries out the tasks placed on the Swimlane. If edited, the standard class for the Swimlane may change.
Auto Select Relation	Sets that only a single association is allowed between two classes. This association is selected every time a relation is drawn between instances of these classes.
Inheritance	SubClassOf Relations are offered on links between two classes
Metamodel Relations only	Only Relations defined on system classes (no namespace) will be valid in the diagram
Stencil	Sets which stencils automatically open when the page is visible.
UML Class Shape	Used to set the UML class shape as standard shape when classes are created or inserted into a class diagram.
Edit, Insert, Find, Go Up, Refresh, Context Browsing	Adds options into the diagram's context menu.

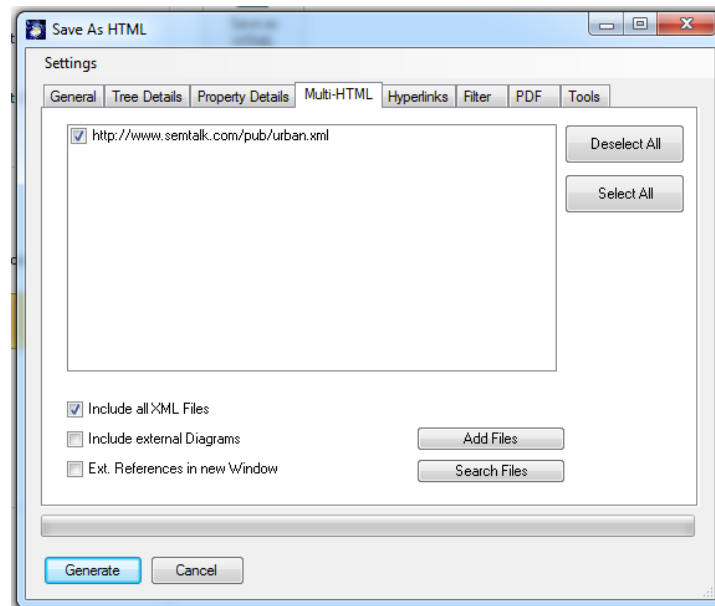
HTML Generator

In order to create an HTML version of your model select from the menu bar **Save & Send** → **Save as HTML**.

Remember to save your diagram before using the HTML generator.



Title	Specifies the name of the Website. In multilingual models, the next field specifies the language in which the Website will be saved.
Stat page	Determines the file path of the Start Page. Do not generate a Start Page to a network drive. Always generate to a local directory such as C:\myhtml and transfer the html afterwards to the fileserver.
Select the following options to add elements and functionalities to the HTML export from the General tab.	
Goto Page	Facilitates a fast navigation across the diagrams.
Pan Zoom	Allows zooming of the diagrams.
Search	Enables search in the website.
Property Pages	Shows the properties of a selected object in a diagram
Properties (Diagram)	Even if Property Pages are not assigned for all objects, you may want a Property Page for each diagram for navigation purposes.
SemTalk Tree	Reproduces the SemTalk Explorer in the Website
VML / Silverlight	Specifies how Visio generates graphics
Language	Used to define the language preference for objects attached to the model.

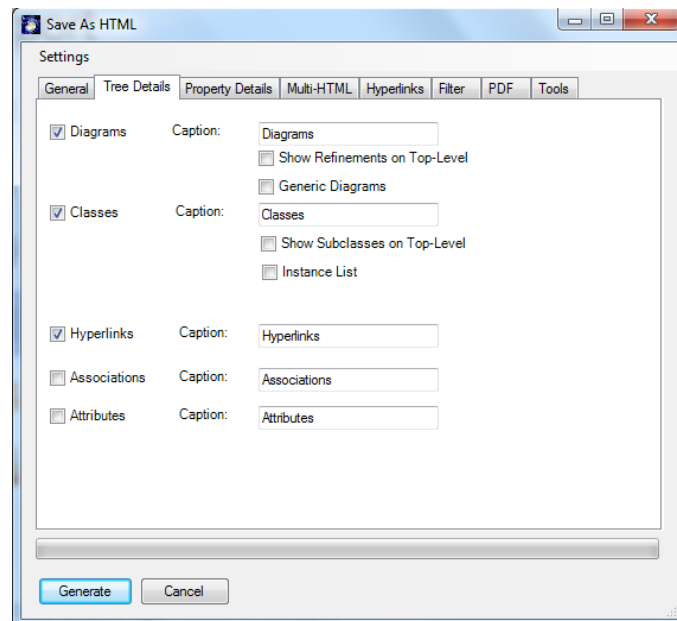


The **Multi-HTML** tab allows you to decide which models to connect to your HTML export.

Include External Diagrams	Select to generate links to from objects in the to-be HTML model to other external HTML diagrams. NOTE: When you open the HTML files of the external models from a HTML model, all the Start Pages (not the supporting files) must be located in the same directory.
Ext. References in new Window	If selected, external referenced HTML models or documents (e.g. Word documents, forms, etc.) open in a new internet browser instance.
Add files	Used to add and search files yourself to the list of files for the multi-html export.
Search files	Used to search and to automatically add files referenced in the current model to the multi-html list.

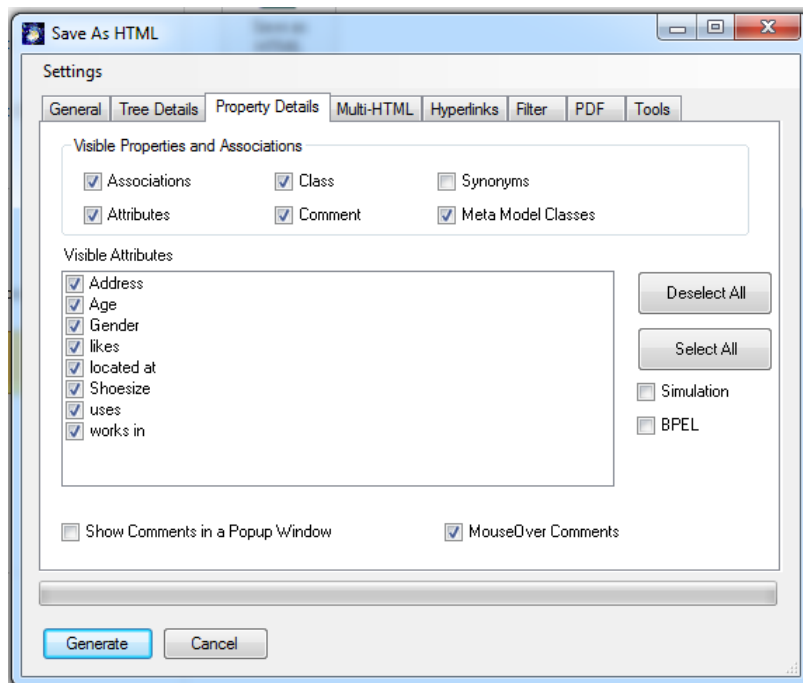
NOTE: The linking of HTML files works only when the index files (i.e. HTML start files) of the linking web pages (models) have the same name as their XML files, since the intern referencing uses the XML file names of the external models. Please notice that the name of the index file should not exceed 38 characters.

Under **Tree Details**, you can choose which object types are to be displayed. Normally, you will want to display classes and diagrams but you can also choose associations, attributes, synonyms or instances.



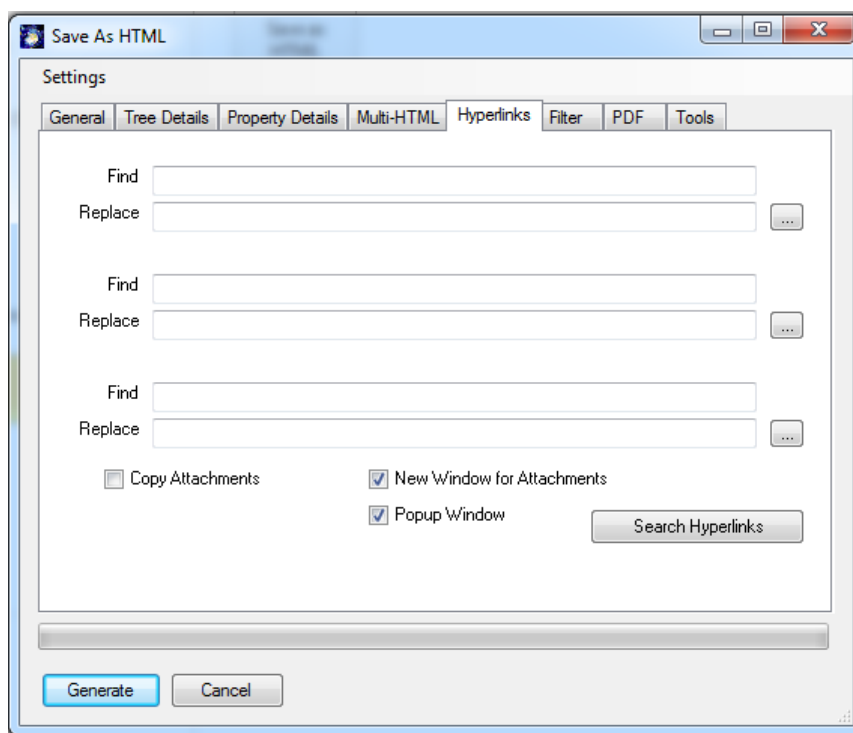
Diagrams, Classes, Hyperlinks, Associations, Attributes (Caption)	Normally, you will want to display classes and diagrams but you can also show Hyperlinks, Associations and Attributes. You may also change the node name of these objects in the tree view. (e.g. Classes -> Concepts or Associations -> Relations).
Show Refinements on Top-Level	Specifies if diagrams that are refinements of other elements should become root nodes in the tree. If not checked, users have a more hierarchical navigation. If checked, users get a complete list
Generic Diagrams	Often generic (or "Un-typed") pages display meta models. These pages are usually excluded from the HTML representations.
Show Subclasses on Top-Level	Used to display in the tree view a hierarchical structure (subclass of) for each class.
Instance List	Used to display in the tree view a list of instances and no classes.

Property Details tab allows you to choose which properties are shown in the property frame in the HTML export.



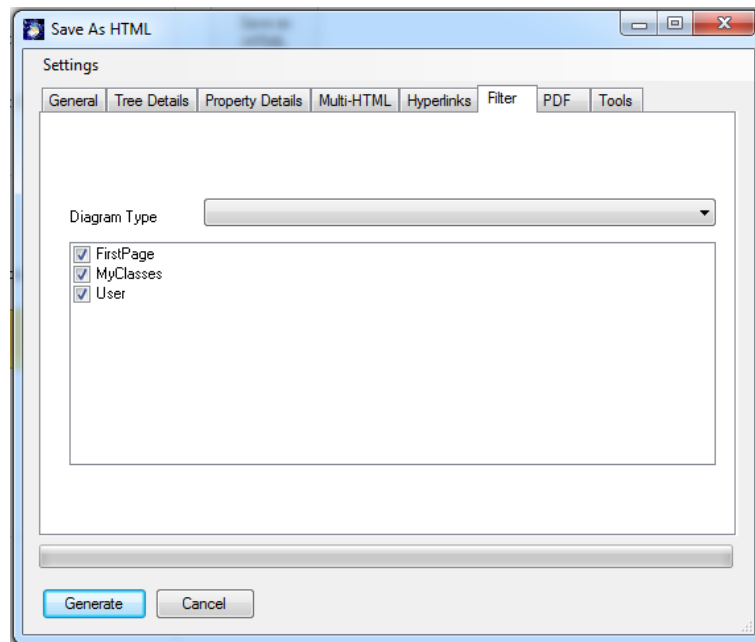
Visible Properties	Selects the object properties that you would like to see for an object in the property frame in the HTML export.
Visible Attributes	Selects specific properties and associations that you would like to see for an object in the property frame in the HTML export. <i>Simulation</i> and BPEL allow you to select a common set of attributes. Usually only a subset of attributes are of interest. This allows undesired attributes to be hidden.
Show Comments in a Popup Window	Specifies if an extra menu entry for Comments should be generated. The menu will pop-up an extra window showing Comment.
MouseOver Comments	Specifies if object Comments will be shown if a user hovers over the shape.

Use the **Hyperlinks** tab to edit the path of the referenced objects in the current model.

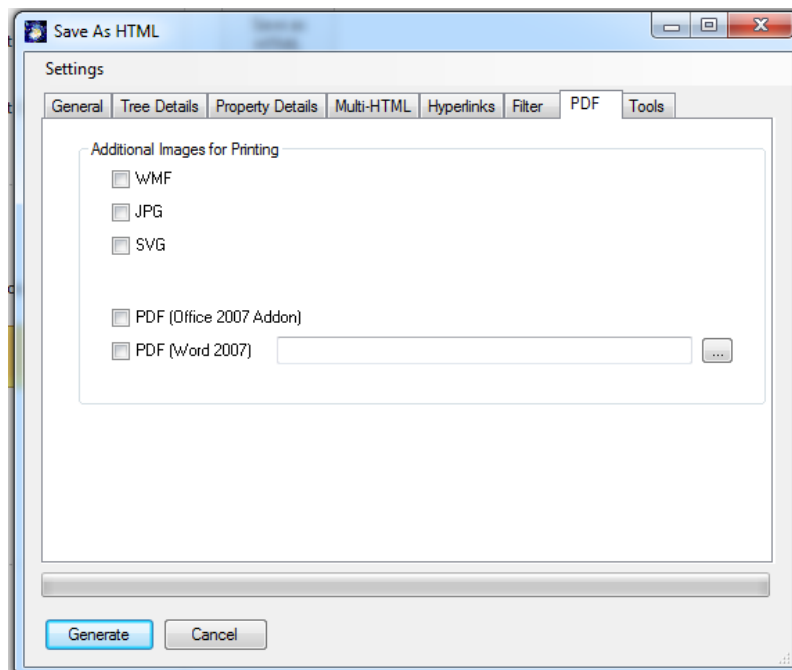


Find Replace	You may search and replace up to three sub-paths. The button Search Hyperlinks will search for existing paths in your model and display them in the Find text field. You may replace absolute paths with relative paths ("../"). Please remember that the relative path does not begin with the "Start Page" directory, but with the subdirectory "xxx files". The "../" in the HTML tag tells the browser to go up one directory level (i.e. to the "Start Page" directory in this case.
Copy Attachments	Used to indicate files attached to objects in the model are copied to the target directory of the HMTL export.
New Window for Attachments	Used to indicate that the attached files should be opened in a separate instance of your internet browser.
Popup Window	Attachments will open in a limited Popup Window instead of a new browser window.

Use the **Filter** tab to select those pages to be included in the HTML export.



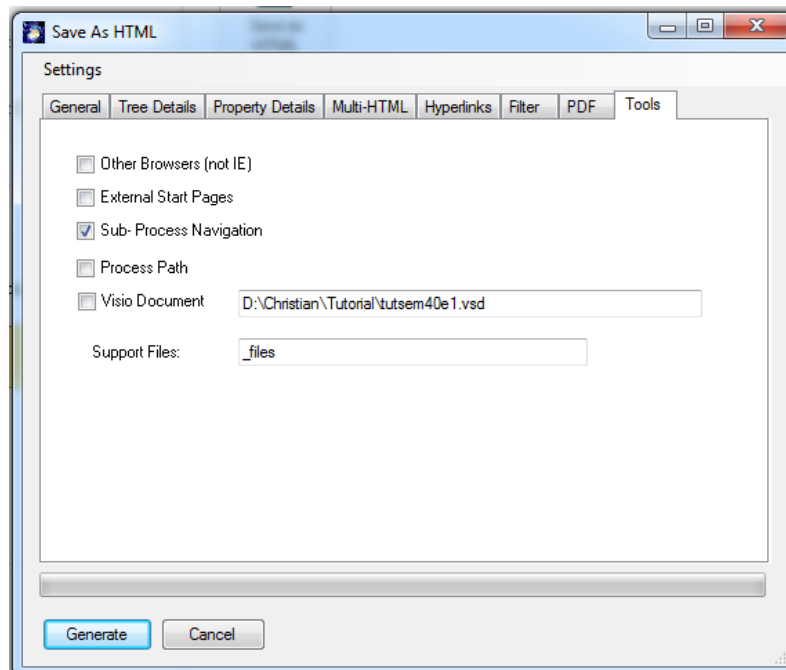
Organization unit, Buffer	If a modeling method applies, select one of the options to file the adjacent combo box with the corresponding objects. Select one of the object's filters from the list of diagrams below. Mark only those diagrams where the object is present.
Diagram Type	Select a diagram type filter from the list of diagrams, marking only diagrams of that type.



The PDF tab allows you to specify that for each page a printable copy in the desired format is created. This simplifies the printing of individual pages. You may choose from Bitmap formats such

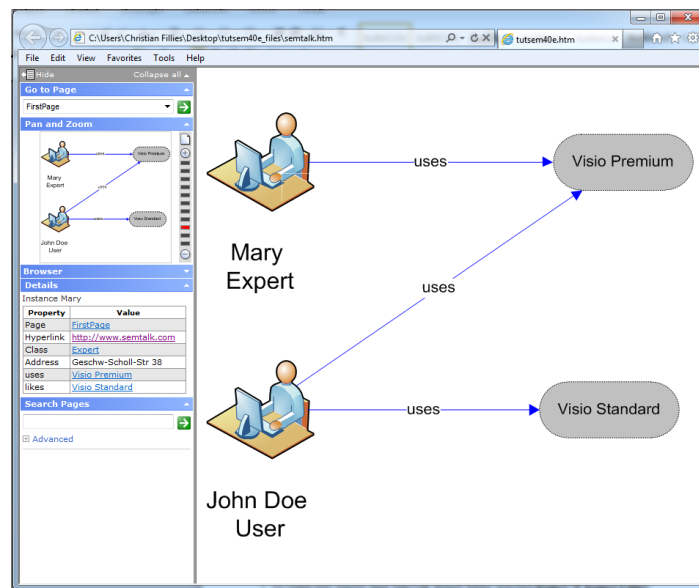
as **WMF, SVG, JPG** or use PDF. You can also use Word (Export) to generate the PDF. Please select a template for your Use Case.

Other options are found at the **Tools** tab.



Other Browsers (Not IE)	Visio generates HTML for IE 6 or higher. HTML export for other browsers have limited functions and generates a large number of small html pages.
External Start Pages	For each object, SemTalk generates an individual Start Page, where external models are referenced.
Sub- Process Navigation	Navigates between lower level diagrams in process models
Process Path	Breadth crumb navigation for process models. You'll see a shape with text REFINEMENTPATH on the background page
Visio Document	SemTalk additionally generates a Visio document with selected properties for the Visio Viewer. SemTalk object attributes are transformed into Visio User attributes.
Support Files	Specifies how support files folders are named. "Files" is not an allowed name for SharePoint.
Link to SharePoint Viewer	A menu entry with a link to a specific webpage will be added. The ID of the object will be passed as an argument. The intended use is to link elements to SharePoint forms

The resulting HTML:



Report Generator

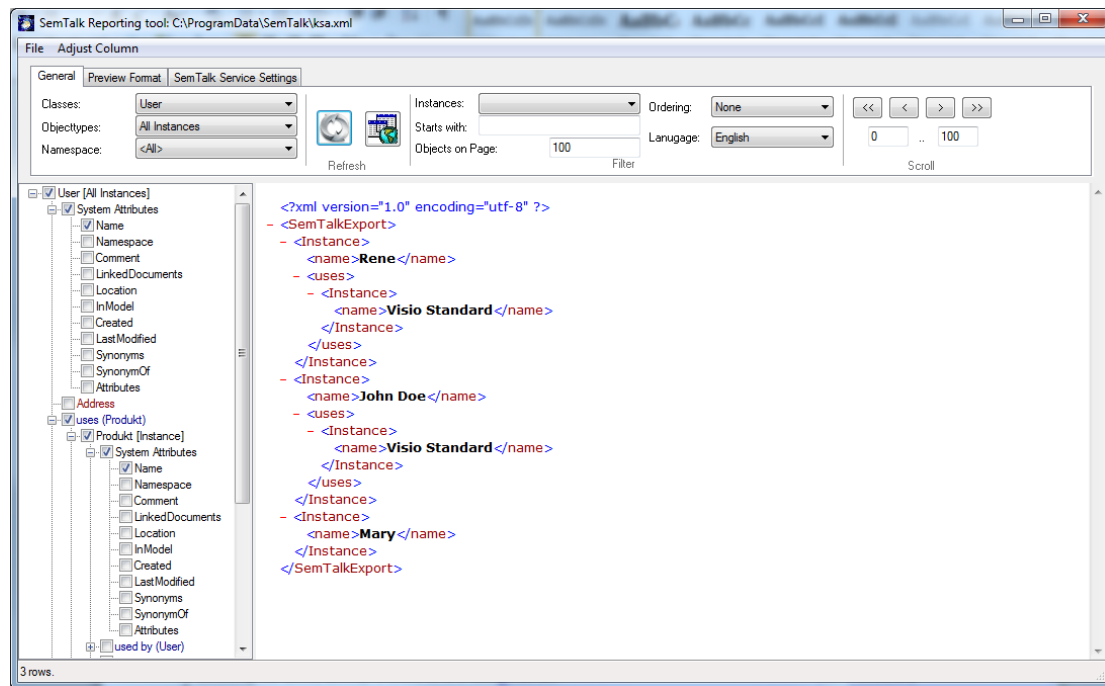
In addition to the above ways to view your business process, SemTalk also offers a comfortable way to generate reports about the content of your models.

To create new reports open SemTalk Report Editor selecting **Report → Report Editor**.

With SemTalk Report Editor you can create reports, save and reuse report formats. The tree structure shows the logical structure of the query and the attributes included. The right part shows the result of the query as XML or as a table.

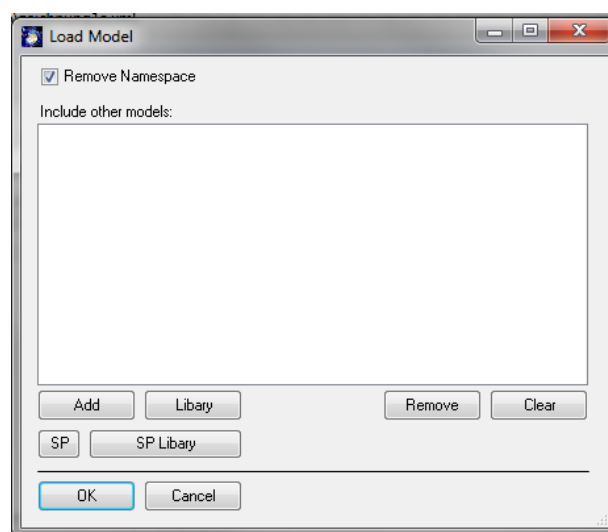
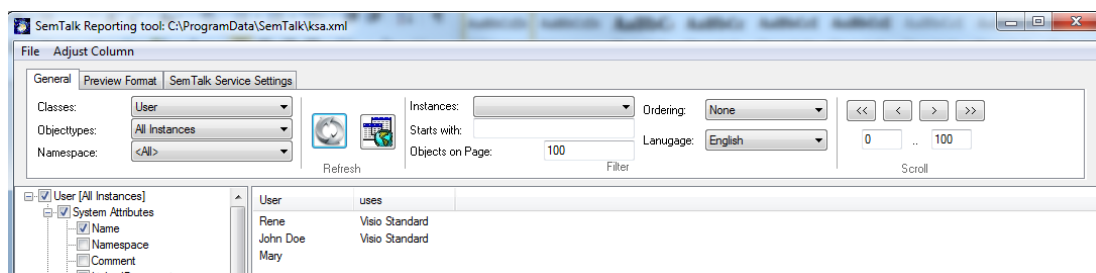
In the left combo box, select "User". The option "All Instances" will list direct and indirect instances of User. You can now see the attributes and related objects in a tree view.

Now select in the tree view User / System Attributes / Name, User / System Attributes / Class, User / System Attributes / OnDiagram and uses / Product / Name to see a list of Banks along with the name of the treasurer who works there and on which page they are found.



The objects, attributes and associations in the model determine the structure of the reports. Queries can be nested into as many levels as you need.

The XML output can be saved as an XML file, as html table, which can be opened in many tools including MS Excel, directly to Excel or to a SharePoint list.



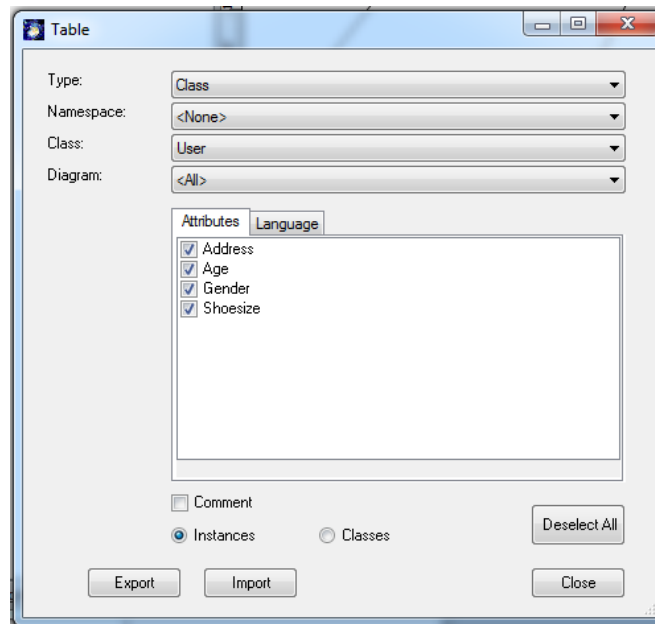
Use **File → Load Model** to specify additional report options.

Allows the selection of other models to be included when running multi-model reports. Other models will be merged before the report is being executed. Please make sure that you are using models with a compatible meta model.

Extras and Tools

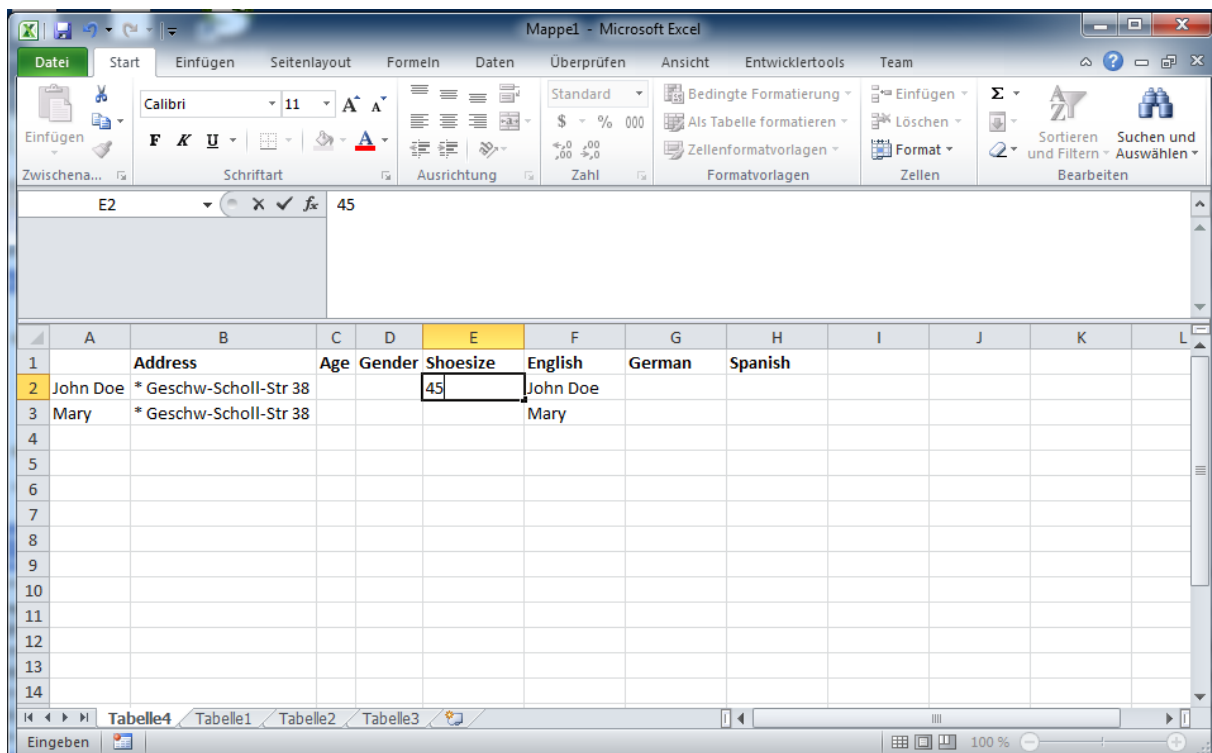
Table Editor

Table Editor gives you another way to edit information in your models. You can create and use Microsoft Excel tables to visualize and edit information about classes and instances in your models.

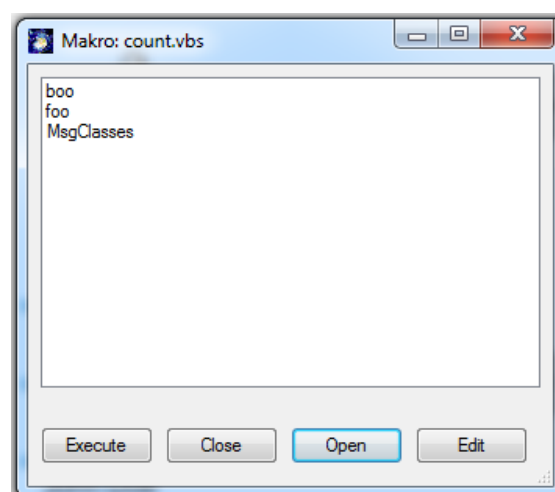


Type	Used to filter SemTalk's abstract objects: Attribute, Class, Method, Relation, State
Namespace	Use to filter according to namespaces. <None> for classes with no namespace. <All> for classes regardless their namespace.
Class	Select a class to see a list of its attributes (if any). <All> to list the attributes of every class in the model.
Diagram	Select a diagram as filter argument. <All> to take into account every diagram. <None> to list those object that do not appear in any diagram, but exist in the object base.
Comment	Check to include the corresponding 'comment' in the table.
Instances	Select to generate a table with instances of classes based on a set of filter arguments.
Classes	Select to generate a table with the subclasses of the classes you have set as filter arguments.
Export	Generates an Excel table according to filter arguments.
Import	Imports the values you changed in the generated table.
Language	Used to translate objects name into different languages and import them into the model.

You may now edit attribute values in Excel:



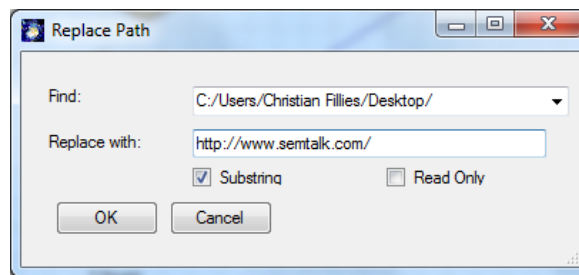
Macros



Macro commands allow you to run small SemTalk complementary applications written in a script language.

The example shows three subroutines contained in the file count.vbs. You can open a new macro file by clicking **Open**. Edit will open a script editor (not part of SemTalk). **Execute** will run the selected subroutine.

Replace



Replace is used to globally replace strings (rename) in different object properties. The following options are available:

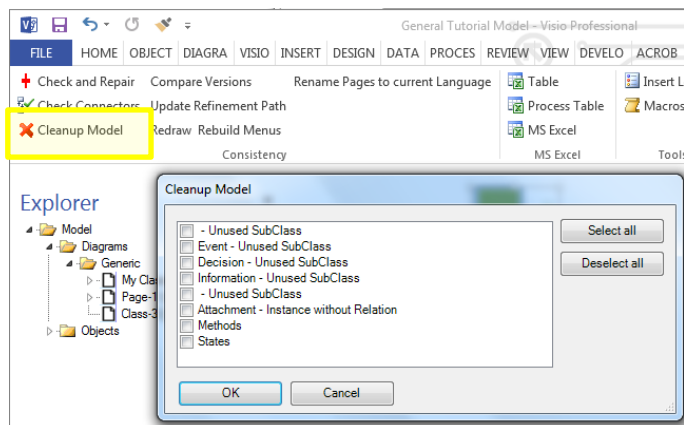
Name	Globally replace the name of an object with another character string.
Location	Globally replace a referenced objects location path with a character string.
Document Path	Globally replace the location path of attached files (e.g. documents) with a character string
Namespace	Globally replaces the name of an object with another character string.
Refinement	This globally replaces the location of a refinement with another character string. (e.g. used after moving the file of an external refinement to another directory)
Substring	This checkbox must be checked if you do not want to match single documents e.g. changing a directory path
ReadOnly	Include ReadOnly objects

Check & Repair

Fix model consistency (e.g. before importing objects from other models or if you are concerned that your model is inconsistent) by using **Tools→Check and Repair**. Use caution because there is the possibility that some inputs could be lost using this function, especially objects that are in Visio and not in SemTalk.

Cleanup Model (Delete Objects Not Used)

In the "Tools" Consistency tab there is a „Cleanup Model“ function that removes from the model, objects that are no longer used. Not Used means that an object exists as SemTalk object, but it is not used on any drawing pages nor is it related to an object currently in use. Click on the Cleanup Model icon to open the following dialog box.



In the example, there are subclasses that are not used. If the checkbox is enabled and you click the Ok button, SemTalk will delete the objects.

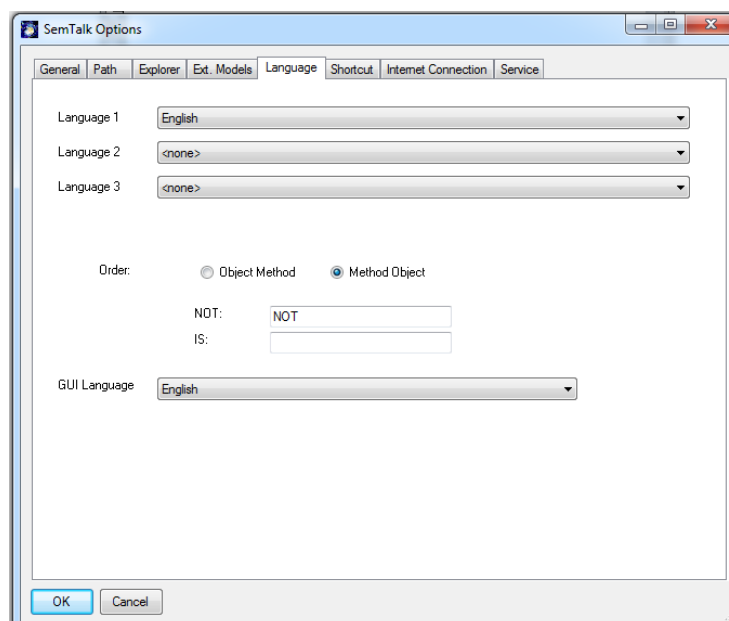
The same principle applies to all other SemTalk object types. It is also possible to select all the object types at the same time and thus completely remove all unused objects.

SemTalk Options

SemTalk configuration options are found under the menu command **Options** (Tools → Options)

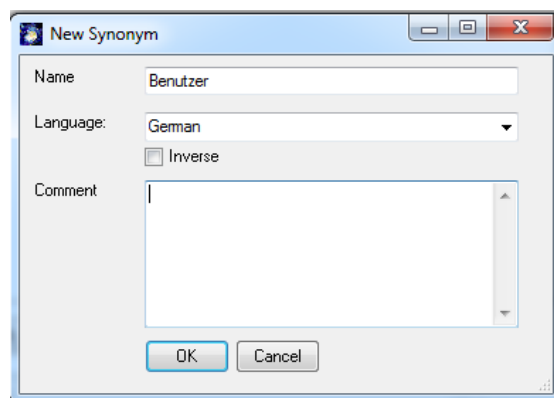
SemTalk Language Options

In the tab **Language**, you can specify the language priority for your models. You may specify a neutral default language (option "<None>") to develop a standard version of your model. In our example "English" is specified as our model language. Languages 1-3 are used to specify alternative languages. e.g., Language 1 is English and Language 2 is Medical (as technical language). If there is no definition in Language 3, Language 2 is used. If there is no definition in Language 2, Language 1 is used.

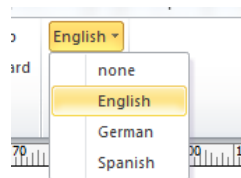


Object Method and **Method Object** are used to indicate the semantic order of the name in which classes and instances of activities are identified. For example, in English, an activity would be expressed as **Method Object [Read (verb) book (noun)]**, but in German, it is expressed as **Object Method [Buch (noun) lessen (verb)]**.

GUI Language	System	Windows Operating System language
	Current	Your Windows's Language settings. (Check under Start → Window's Settings → Control Panel → Regional and Language Options)
	Visio	Visio's language settings. (Check under Start → Programs → Microsoft Office → Microsoft Office Tools → Microsoft Office 200X Language Settings)
	German, English, Spanish, Japanese	SemTalk's predefined languages

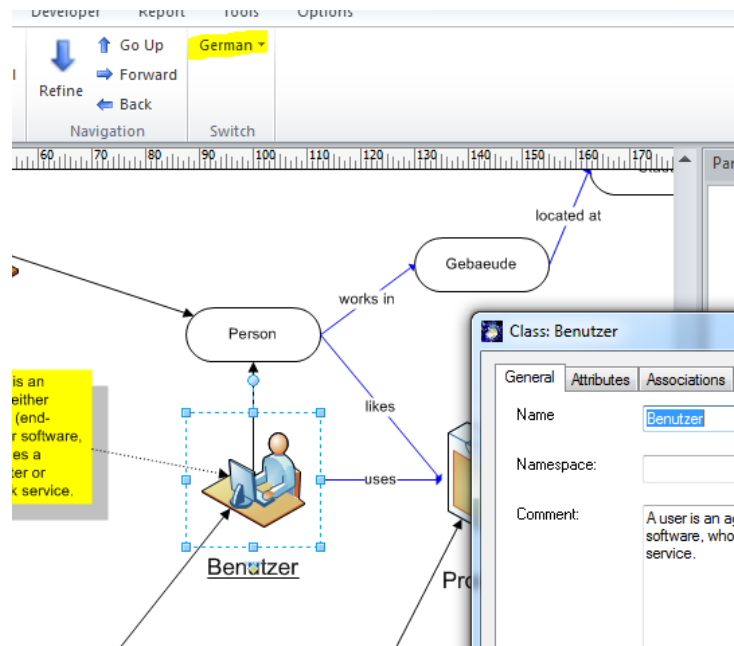


Let's add another language. Please open the edit dialog for the class "User". Under the tab **Language** press **New** enter the German term for user "Benutzer" and press OK. In the next Synonym dialog, please enter German as the language.



You should be able to see now on the menu toolbar German as one of the optional languages for your model.

If you are working with multilingual models, it is recommended to choose a non-assigned ("None" option) language when developing the first version of your model. Then add the translations so that you can change to a different language to specify the object synonyms in the other language.



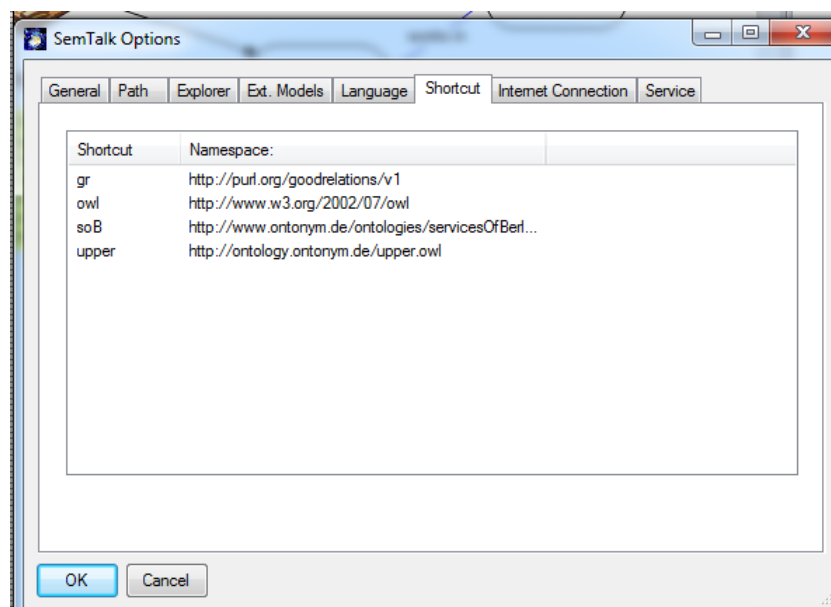
If you specify “German” as Language 1, every object that has a synonym in German will appear with the assigned shape. The label will be in German, as well as the name in the edit dialog.

Shortcuts

If you are using references to external models, namespaces (URNs) can be quite long. In the **Shortcuts** dialog you are able to define namespace shortcuts to be used in all SemTalk dialogs. Shortcuts are assigned for the current user and apply to all objects in the current model.

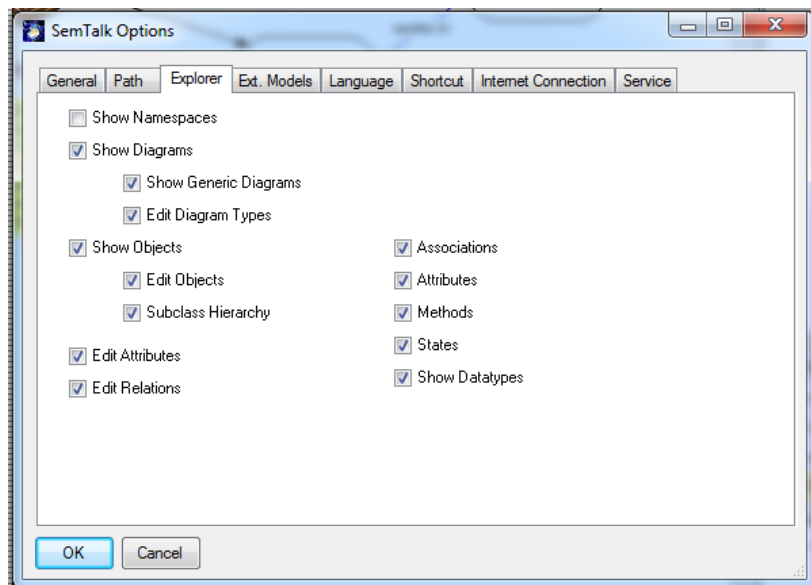
Using **New/Delete/Edit**, you can add and assign shortcuts for namespaces used in the current model.

OWL Import will automatically add all those namespaces and shortcuts found in the OWL file.



Explorer

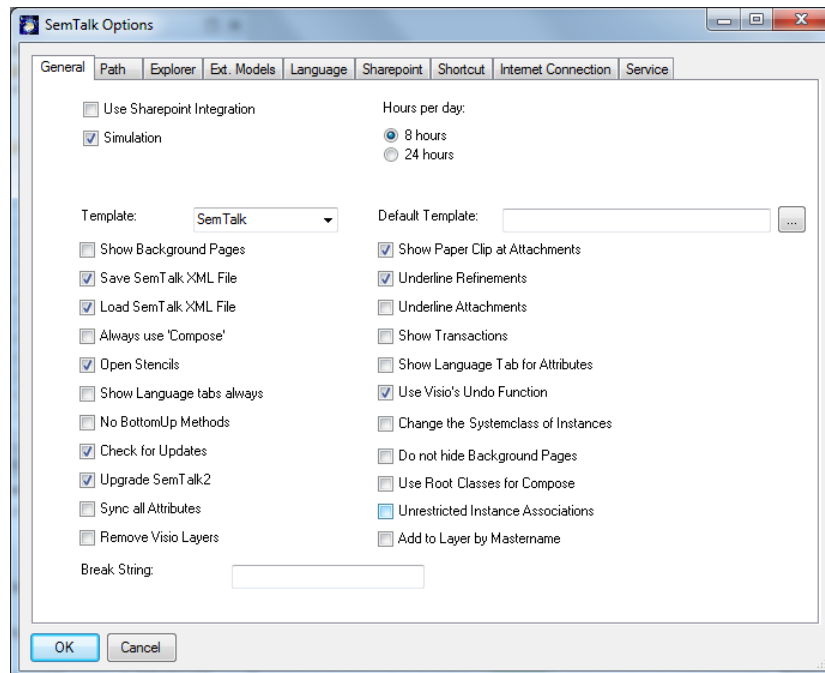
Explorer options allow you to customize the appearance of SemTalk's Explorer. **Explorer** options are saved with the model (xml-file).



Show Namespaces	Displays the object identifier in the tree view: Namespace#Name
Show Diagrams	Shows the Diagrams subtree.
Show Generic Diagrams	Shows diagrams without a specific user-defined type. These are often the meta models.
Edit Diagram Types	Creates, edits and deletes diagram types
Show Objects	Shows the Objects subtree.
Edit Objects	Creates, edits and deletes objects from the browser
Subclass Hierarchy	Show subclasses as an inheritance hierarchy. If you do not select this option, classes are listed alphabetically.
Edit Attributes	Edit and deletes attributes.
Edit Relations	Edit and deletes relation types (association types)
Associations	Shows the Associations subtree.
Attributes	Shows the Attributes subtree.
Methods	Shows the Methods subtree.
States	Shows the States subtree.
Datatypes	Shows the Datatypes subtree.

General

On the **SemTalk options General Tab**, you can define the following options:

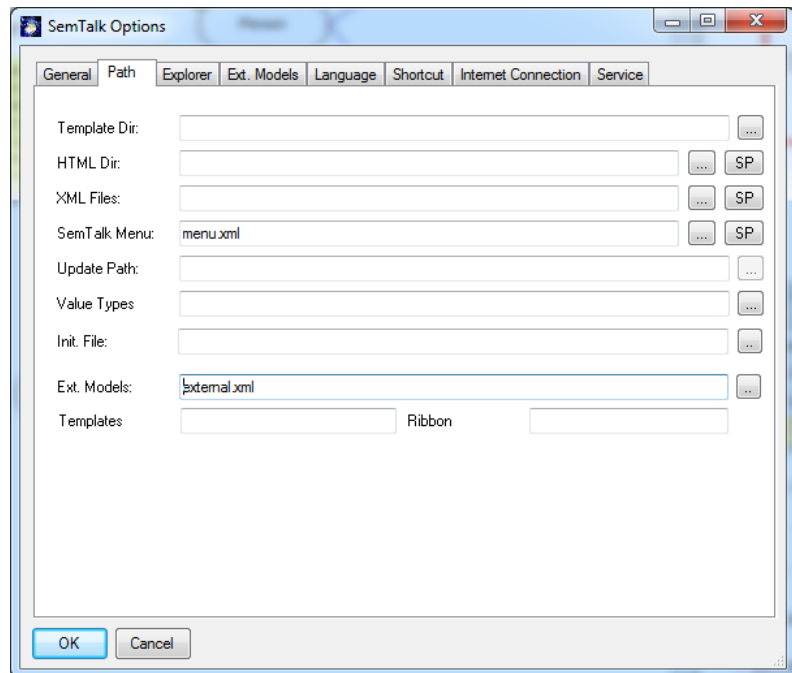


Use SharePoint Integration	Optional SemTalk Functions supporting collaborative work with SemTalk.
Simulation	This option allows to die the Simulation tab in process modeling methods.
Hours per day	Specifies how many working hours a day has. Used in business process models and simulation.
Template / Default Template	Defines the template that will be loaded when SemTalk starts. If the last template is not available in the current SemTalk model, the "Default Template" is used.
Show Background Pages	Background pages are hidden by default. Check this option if you need to change them. SemTalk objects cannot reside on background pages.
Save SemTalk XML File	Check this option to create an xml file of the current model without graphical information. Used to reference models.
Load SemTalk XML File	If unchecked SemTalk uses only the XML stored inside the Visio document.
Always use 'Compose'	Intended for process modeling. Applies Object → Compose to every new activity.
Open Stencils	SemTalk opens the appropriate Visio stencil assigned to the current page type.
Show Language tabs always	Language tab is always visible in Edit dialogs without customizing each individual class.
No BottomUp Methods	Intended for process modeling. At Object → Compose new verbs may be entered that are not defined in a class model.

Check for Updates	If checked, SemTalk tries to read the current version information from www.semtalk.com once every day.
Upgrade SemTalk2	Changes the way attachments are stored.
Show Paper Clip at Attachments	Activities/Functions in the process modeling notations will have a paper clip if they have attachments. Please note that this only works on master's shapes built on SemTalk's Activity master shapes.
Underline Refinements	Underline the text of objects having a refinement.
Underline Attachments	Underline objects having an attachment. Alternative to the paper clip.
Show Transactions	Functions with transaction will get a thicker border.
Show Language tab for Attributes	This option allows you to specify language specific values for attributes. Please note that this is only supported for the "Attributes" tab in the Edit Dialog. All other attributes entered e.g. in "Measures" tabs are not supported.
Use Visio's Undo Function	Visio's Undo is disabled by default, since changes made cannot be undone in SemTalk. Undo may be used when repositioning shapes. After using Undo a SemTalk consistency check is made.
Change the System Class of Instances	Instances of system classes cannot be changed to other existing classes. This option will allow you to do this even though it is not recommended.
Do not hide Background Pages	SemTalk automatically hides all background pages as soon as you change the active page. This is done so that you do not model on background pages.
Use Root Classes for Compose	Compose builds activity names from nouns and verbs. This is done via the main business object modeling class (Object or Information in CSA). This option gives you more options in that you can use other modeling elements such as predefined physical resources to be combined with a verb.
Sync all Attribute	For each value changed in SemTalk, a Visio data attribute will be created that holds a copy of the value. This may be used with Visio Services.
Remove Visio Layers	Determines if you remove the Visio Master layers in SemTalk.
Unrestricted Instance Association	Allows you to create associations even when it is not allowed in the meta model.
Add to Layer by Mastername	Determines if you add the SemTalk layers in Visio.
Break String	SemTalk allows you to pre-define text strings that when they appear, will insert line breaks in your text. E.g. If you define "- <BLANK>" to be a line break in SemTalk Options, every time a "- <BLANK>" appears in any SemTalk text, a line break will occur. This is especially useful when importing EPC because "- <BLANK>" is the standard line break command for ARIS.

Path

The SemTalk Options Path tab has these settings

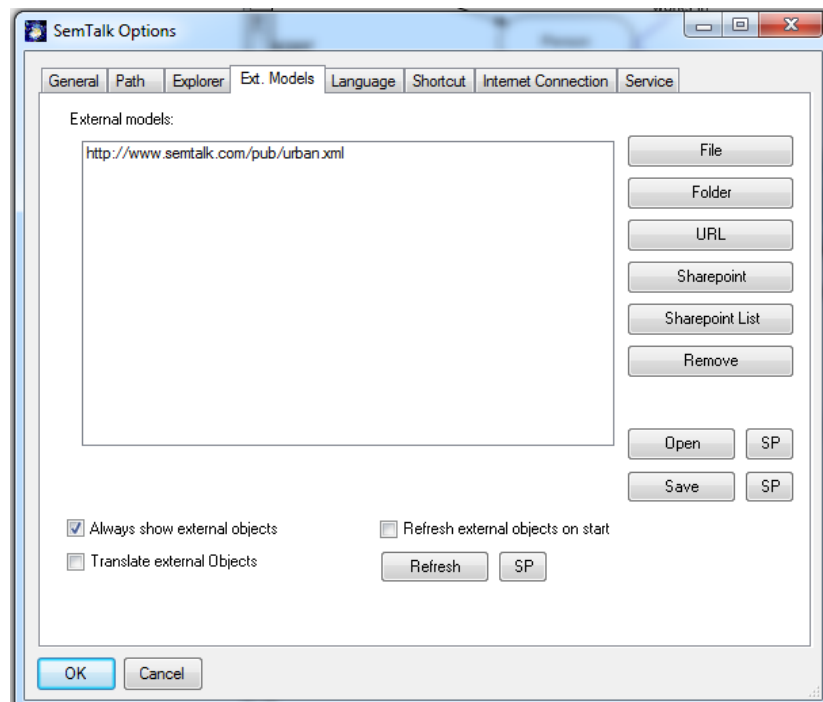


Template Dir	File directory where SemTalk templates are located and where you have at least reading rights. As default, SemTalk saves templates to Program Files\Common Fillies\SemTalk.
HTML Dir	File directory where an HTML version of a model with its external model objects is located. If this text field is empty, SemTalk uses location path of the original XML file of the model to locate the HTML model.
XML Files	Store XML files in a specific directory (e.g. a SharePoint folder).
SemTalk Menu	XML file that specifies which menu option will be shown in the SemTalk GUI.
Update Path	Specify an alternative location for SemTalk version information.
Values Types	Here you can specify your own value types for attributes. See wss-stdt.xsd for an example.
Init Files	Specify an alternative VBS file.
Ext. Models	A file that contains a list of external models which are loaded at startup time. You may specify an absolute path as a finename relative to the opened document. It works locally or in a SharePoint library.
Templates	List of available templates in the non-Addin version.
Ribbon	VSTO Visio Ribbon used by the SemTalk Visio 2010 Addin.

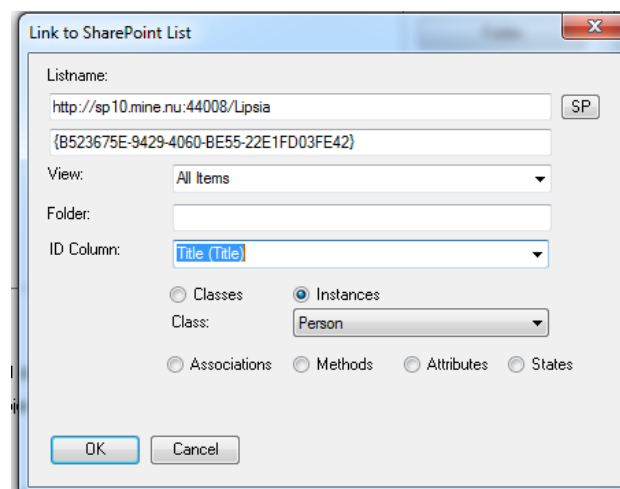
External Models

You can predefine a list of external models, so that they are automatically loaded and shown in SemTalk's Explorer when you open a model.

You will find this feature very useful if you use regularly information scattered in different models. For example, you can use organizational charts for your process models or process libraries on a regular basis. Next time you create a new model you will not have to load them manually. SemTalk will keep the models semantically consistent.



External models can exist as XML files in your local file system, published on the Internet, in a SharePoint Workspace or as well in SharePoint lists. You may Open (Load) and save those list to XML files. "Refresh" is a special functionality to update references into external lists after they have changed locations.

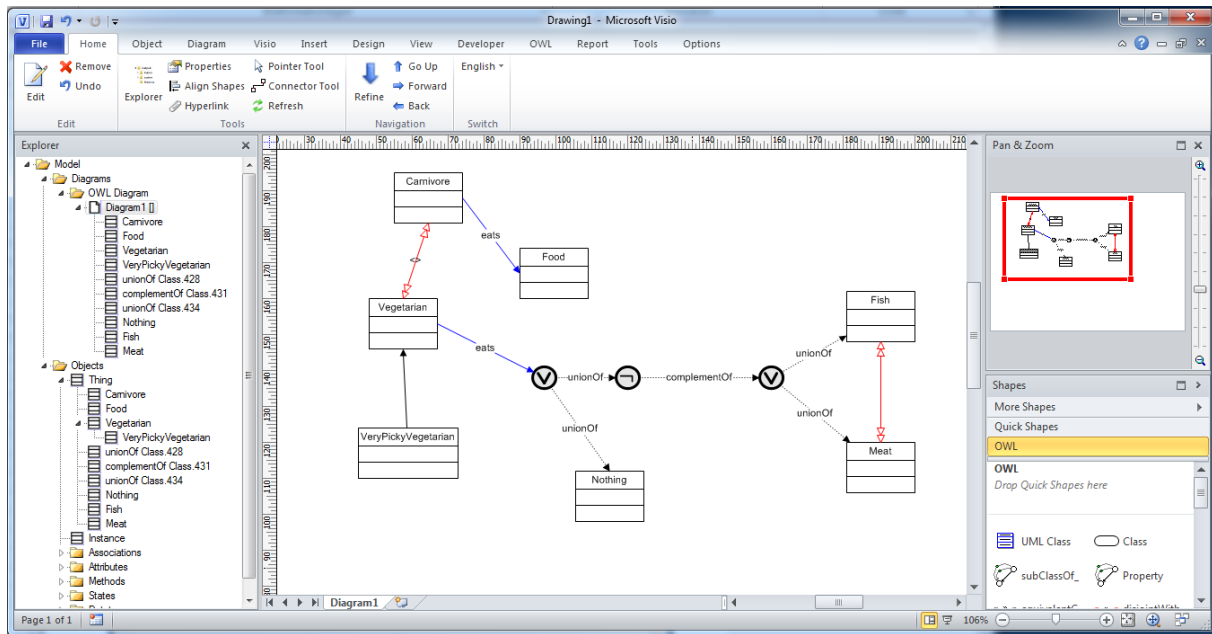


Any SharePoint list can be assigned to any SemTalk Class to be able to use list item as subclasses or instances.

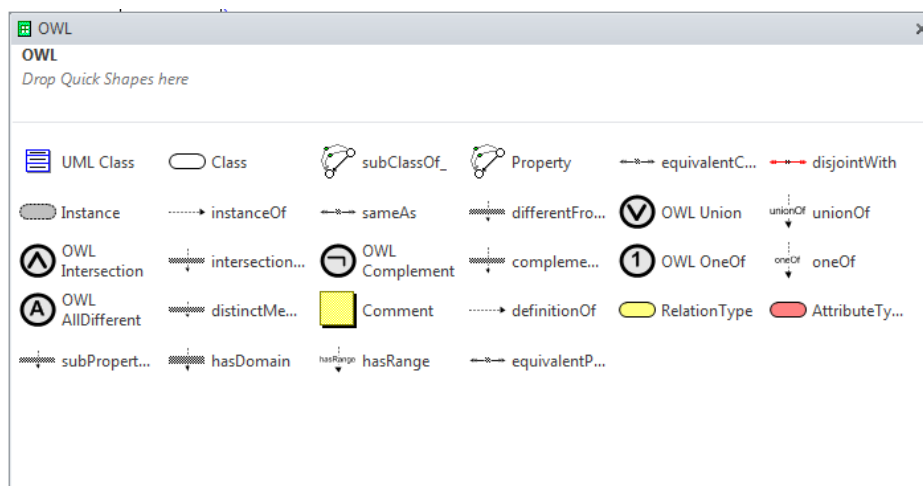
Using OWL.vst

Open the OWL template to use SemTalk as an OWL editor . File->New SemTalk and select OWL.vst.

This tutorial does not intend to teach you how to apply OWL to the modeling of your business needs. Please refer to the Spec (<http://www.w3.org/TR/owl-features/>) or to OWL tutorials out on the web (<http://www.cs.man.ac.uk/~horrocks/ISWC2003/Tutorial/>) to learn about the underlying ideas of OWL.

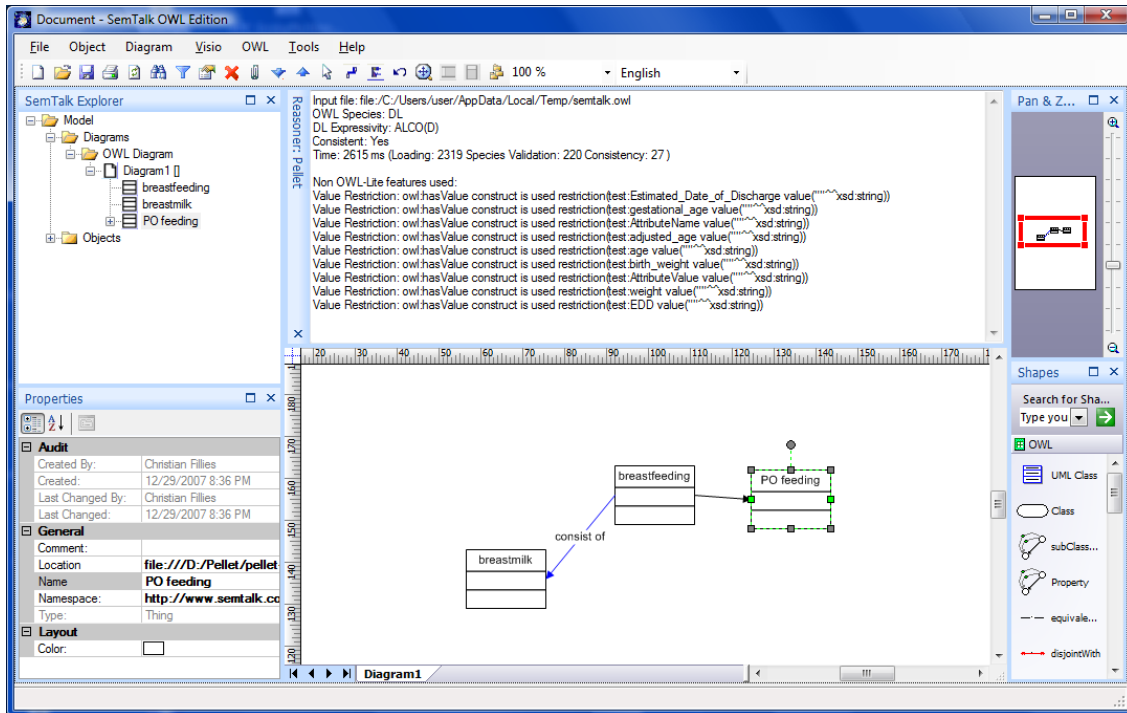


The OWL template contains additional shapes to create OWL Diagrams. An OWL diagram is a class diagram, which also allows instances but with more restrictions. The OWL stencil has some additional shapes compared to the standard SemTalk class stencil:



The main difference compared to standard SemTalk is, that SemTalk assumes “Closed World Semantics” while OWL assumes “Open World Semantics”. “Open World Semantics” assumes that every two object can denote the same concept unless someone states that they are different. This is crucial for the global vision of Semantic Web.

For everything ignored by SemTalk, you could also use a reasoner. For SemTalk you might use PELLET as a reasoner (OWL->Reasoner):



equivalentClass	Two classes actually denote the same concept. Ignored by the SemTalk Engine but exported to OWL.
disjointWith	Instance is not allowed to be an instance of both classes. Ignored by SemTalk Engine but exported to OWL.
Instance	Just an instance.
instanceOf	Graphically displays that the object is instance of a class. An instance can be instance of multiple classes. Supported by the SemTalk Engine.
sameIndividualAs, sameAs	Two instances denote the same object. Ignored by the SemTalk Engine, which assumes closed world semantics
differentFrom	Two instances are denoting different objects. Default for SemTalk.
OWL Union	An abstract class describing the union of a set of other classes. Use the unionOf relation to specify that set. Ignored by SemTalk Engine but exported to OWL.
unionOf	Relation from a OWL Union class to other classes.

OWL Intersection	An abstract class describing the intersection of a set of other classes. Use the intersectionOf relation to specify that set. Ignored by SemTalk Engine but exported to OWL.
intersectionOf	Relation from a OWL Intersection class to other classes.
OWL ComplementOf	An abstract class describing that instances of the class are not instance of another class. Use the complementOf relation to specify that other class. Ignored by SemTalk Engine but exported to OWL.
complementOf	Relation from a OWL ComplementOf class to other classes.
OWL OneOf	An abstract class that describes that instances of that class are one of a set of other instances. Use the oneOf relation to specify that set. Ignored by SemTalk Engine but exported to OWL.
oneOf	Relation from a OWL OneOf class to instances defining that class.
OWL AllDifferent	Operator specifying that all related instances are different. (Default in SemTalk)
distinctMember	Member of an AllDifferent Set.
AttributeType	Graphically displays an Attribute Class. ("DataProperty" in OWL)
RelationType	Graphically displays an Association Class. ("ObjectProperty" in OWL)
equivalentProperty	Two AttributeTypes or RelationTypes have same meaning. Ignored by SemTalk Engine but exported to OWL.
subPropertyOf	Subclassification of properties. Partially supported by SemTalk Engine but exported to OWL.
hasDomain	Relation from a property to its domain. This can also be specified using the edit dialog Details tab. Supported by the SemTalk Engine.
hasRange	Relation of a property to its range. This can also be specified using the edit dialog Details tab. Supported by the SemTalk Engine.

Options

The Help command provides the user useful functionalities.

Index	Opens a short menu reference in HTML format.
Tutorial	Opens this tutorial from the www.semtalk.com .
Check and Repair	Checks the consistency of a model and repairs any detected inconsistency. This function deletes corrupt information and objects that are inconsistent.
Check Connectors	Checks to see if the selected connector is attached to objects.
Update refinement path	Updates the breadth crumb navigation.
Redraw and Rebuild Menus	Rebuilds menus after the import of SemTalk 1 models.
Rename pages to Current Language	Sets the names of the pages of a multi-language model to the current modeling language.
Registration	Registers your SemTalk license (SemTalk Key).
Startup Screen	Opens SemTalk's initial screen and provides information on SemTalk modeling methods.
Install Visio COM-Addin	Installs SemTalk Addin for Visio
Check for Updates	Verifies if new versions and/or hot fixes have been released.
About SemTalk	Version and license info