SimLab Template Designer

SimLab Designer

SimLab Designer is a standalone application used for designing templates to be used for exporting 3D PDF files, as well as exporting Html5 (WebGL). SimLab Designer is used in SimLab Composer, and other 3D SimLab Plugins. In the PDF Settings window, Template tab, clicking the New or the Edit buttons will open SimLab Designer.

SimLab Designer Toolbar

The application toolbar includes the buttons shown and described below.

New File Button

Clicking this button will open the Page Size dialog box, where a user can input the page size, orientation, and resolution. This dialog can also be accessed from File menu, to change the page size/resolution. In the image shown on the right A4 page size was selected, and the resolution was set to 72 dpi. Clicking the Ok button will create a new empty template file, and will display the page Fill Mode property on the left. If the property is not displayed select the page in the middle of the application window.
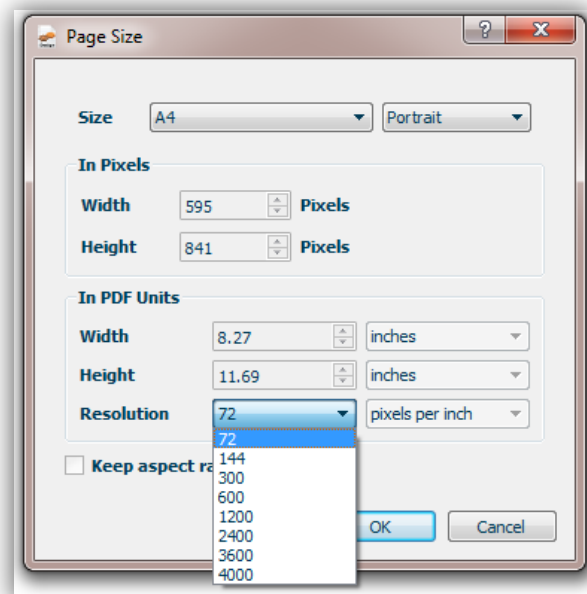

Page Size

In this dialog a user can choose the orientation of the created 3D PDF template page, to be Portrait or Landscape. The page size can also be selected from the drop down selection box, and in case of selecting Custom size the Width and Height boxes will need to be filled. The size of the new page will also be displayed in PDF (inches) units. A user can change PDF pages' resolution in this dialog. Increasing the resolution will increase the size of the generated 3D PDF file; improve the image quality, which will be better for printing.

Fill Mode

Fill Mode can be a Single Color, a Linear Gradient or an Image. If the Single Color fill is selected click the choose-button to display the Fill Color window, where you can select the fill color you want.
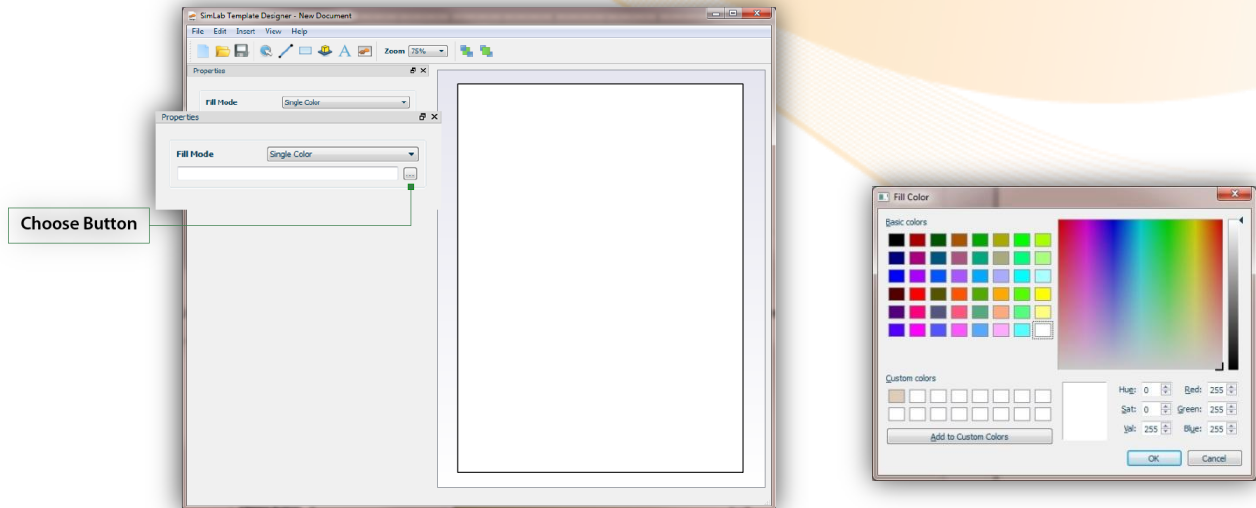
If the Linear Gradient fill mode is selected, a default gradient will fill the page, and again clicking the choose-button will display the Gradient Dialog where you can set the color and its gradient degree.

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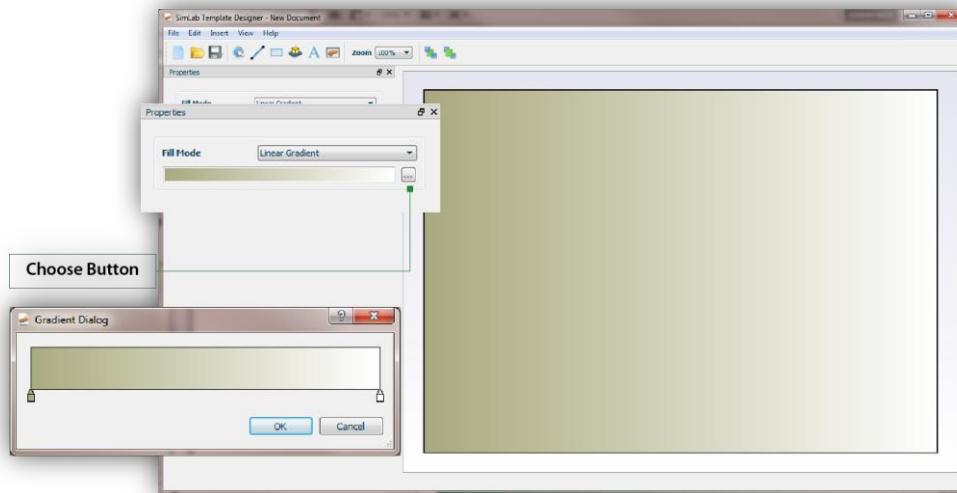
In case of selecting the Image Fill Mode, the Image Source can be either From File, or From Dictionary. In case of image from file, click the choose-button to browse to a background image.
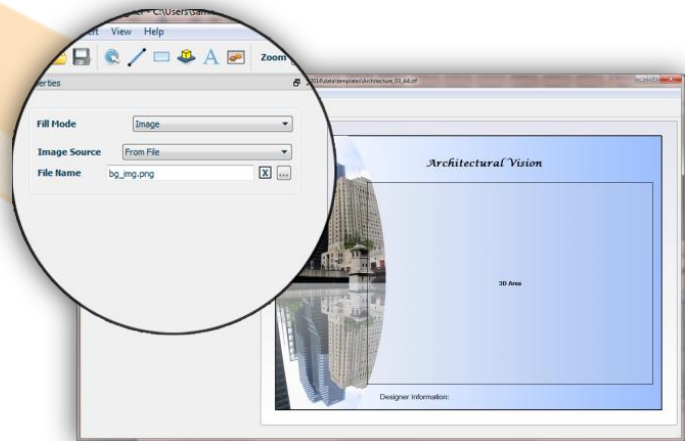
For images from dictionary, the user has to input a Default Image, in case the dictionary value was not found in the defined location. As shown in the image bellow the user has defined 'template background' with an image value, in the Dictionary dialog. Fill in the Dictionary keyword field with the name defined in the dictionary, and the Dictionary value will be automatically filled. For more information, go to SimLab Designer Dictionary section.
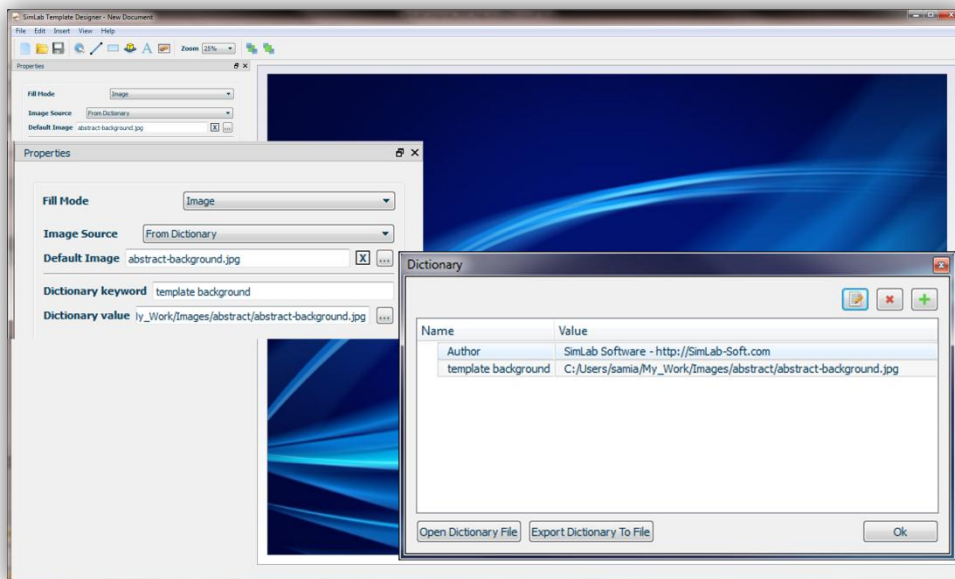
Line Button

Clicking this button will add a line to the template, in the chosen location. The line properties will appear on the left. The Start and End locations indicate the X, and Y coordinates of the line's end points.

Line Color enables users to change the color of a line, and Line Width to change its width. A user can pull any of a line's end points on the template page to change its length and orientation.
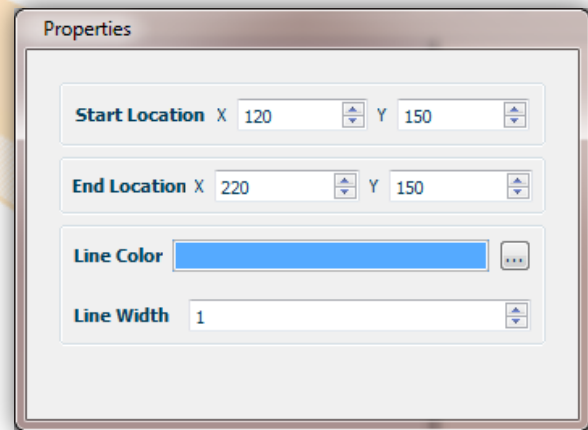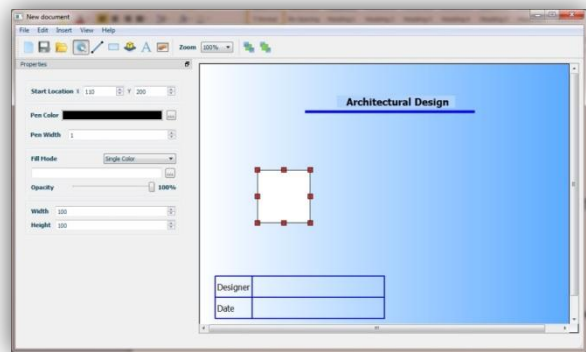
Rectangle Button

Clicking this button then anywhere on a template page will create a rectangle, filled with single white color.

Rectangle Properties

Start Location; can be set by specifying the X and Y values of its location. The coordinates are those for the upper left point of the text bounding box. You can also drag the rectangle anywhere on the page, to set its location.

Line Color and Line Width; can be used to set the color and width of the lines of the rectangle.

Fill Mode; can either be Single Color or a Linear Gradient, as already described under the New File Button. The Opacity it is how transparent the filling of the object, in this case rectangle, is.

Width and Height; these two values can be used to set the dimensions of the rectangle. Another way to do that is by dragging any of the handles of the rectangle on the page, which in turn will change the values in these fields.

3D Area Button

3D Area is where the 3D model will be placed, in the exported 3D PDF file.

3D Area Properties

Start Location; can be set by specifying the X and Y values of its location. The coordinates are those for the upper left point of the text bounding box. A user can also drag the 3D area anywhere on the page, to set its location.
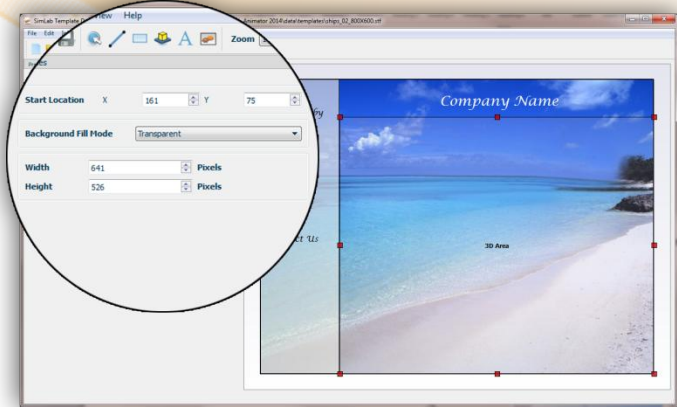
Background Fill Mode; is where a user can set the background of the 3D model. The Background Fill Mode can be Transparent, Single Color, or an Image. If the Transparent fill is selected the 3D area's background will show the fill of the template page.

For Single Color mode click the choose-button to display the Fill Color window, where you can select the fill color you want.
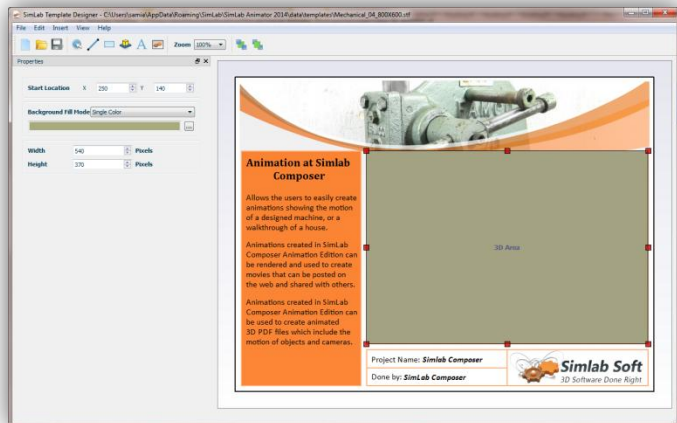

The Image fill mode requires browsing for an image file to be your 3D area's background.

The Width and Height of the 3D area can be changed by either setting values in these fields, or by dragging any of the handles of the 3D area on the template page.

Text Button

To add text to your template page click this button, then click where you want to add the text on your template page. The Font Dialog window will open, and if it is your first time to click this button in this session, it will take few seconds to load the fonts.
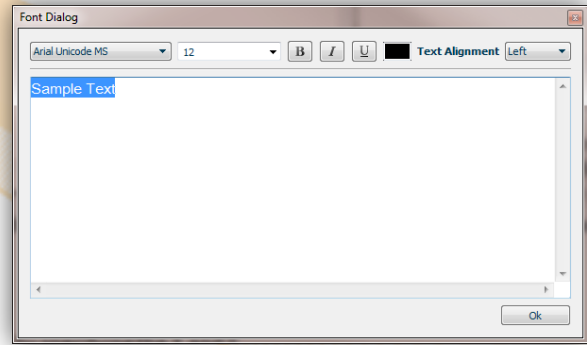

In Font Dialog you can input the text and choose its font type, size, color, and other properties. When satisfied click Ok, and the text will appear on your page. If you need to edit anything in the text, just double click it on the page and this will open the Font Dialog again.
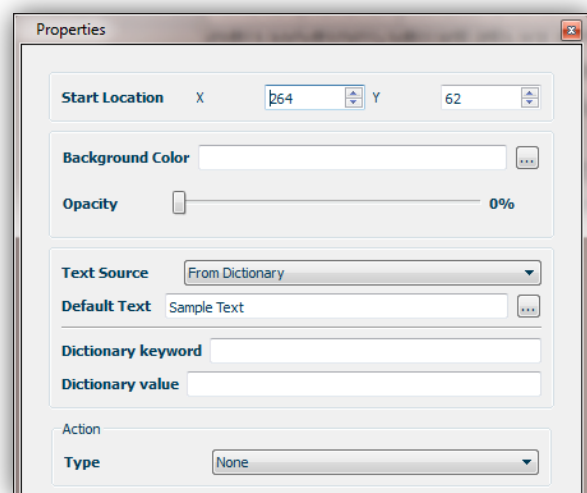
Text Properties

Start Location; can be set by specifying the X and Y values for the text location. The coordinates are those for the upper left point of the text bounding box. A user can also drag the text box anywhere on the template page, to set these values.

Background Color; is by default White. Click the choose button to open the fill color window to choose a new color.
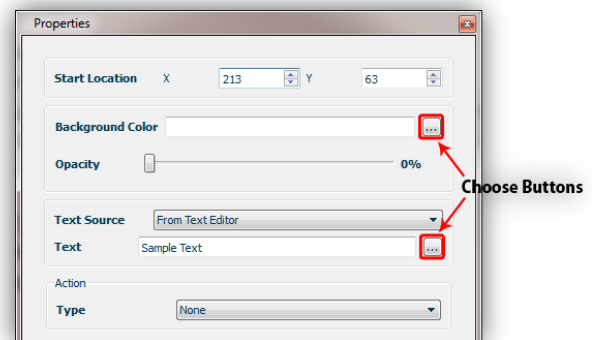
Opacity; if set to 0% then the text will be completely transparent, and the background fill will appear under the added text. If the user changes the Opacity of the Text to 100% the Text fill color will appear on top of the page color. Values between 0-100% can also be specified for this property.

Text Source; can either be form Text Editor, or From Dictionary. Text editor is the font dialog, mentioned earlier. Upon choosing text from dictionary, the properties dialog will change, as shown. The user will need to input default text, in case the dictionary value was not found in the defined location. Then input the already defined dictionary keyword, and its value will be filled automatically form the dictionary. For more information, go to SimLab Designer Dictionary section.

Action Type; links certain predefined actions to the text added to a template page. URL is one type of action, which links the added text to a certain web location. For more information, go to SimLab Behavior/Actions Support section.

Image Button

This button can be used to add an image to a template page. When a user selects this button and click anywhere on the page the Open Image dialog will automatically open to browse to an image file. A user can also change the image file from the File Name property.

Images can be used to show a company's logo, or to represent different products in a 3D PDF file.
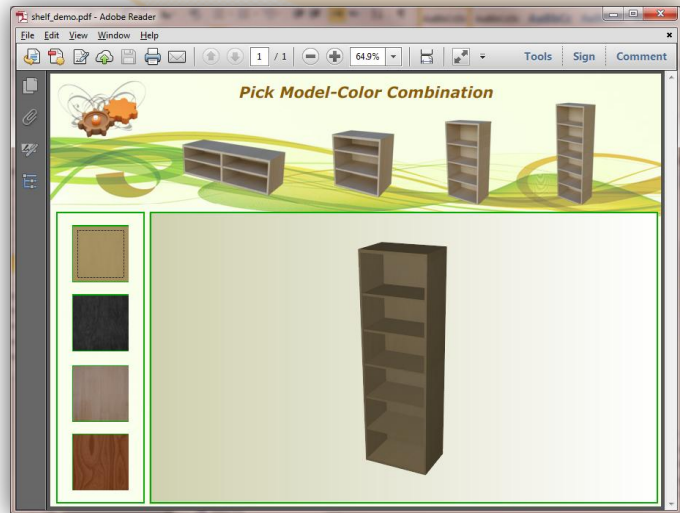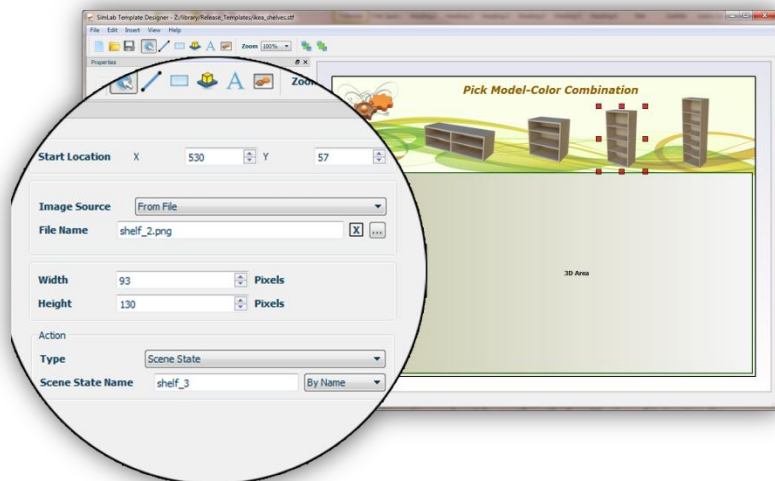

Image Properties

Start Location; can be set by specifying the X and Y values of its location, the coordinates are those for the upper left point of the text bounding box. A user can also drag the image anywhere on the page, to set these values.

Image Source; can either be From File, or From Dictionary. In the From File option, by clicking the choose button on the side of the File Name text box, the Open Image dialog will appear. The user can select the image to add to the template page.

Choosing image From Dictionary option, will change the properties dialog, as shown. The user will need to input default image, in case the dictionary value was not found in the defined location. Then inputs the already defined dictionary keyword and its value will be filled automatically form the dictionary. For more information, go to SimLab Designer Dictionary section.

Keep Aspect Ratio check box; with image element already set on the template page with a specific size, checking this option will place the image, set in the dictionary, while keeping its original aspect ratio.

Width and Height; these two values can be used to set the dimensions of the image. A user can enter values in these fields, or drag any of the handles of the image on the page, which in turn will change the values in these fields.

Action Type; links certain predefined actions to the image added to a template page. Scene State is one type of action, which links the added image to a scene state/cameras in the exported 3D file. For more information, go to SimLab Behavior/Actions Support section.

Zoom

The Zoom drop down selection box can be used to set zoom percentage for viewing the PDF template page.

Send Back & Bring Front

When a user starts having more than one object on a template page, these two buttons can help arrange things, by sending some object to back and bringing others forward.
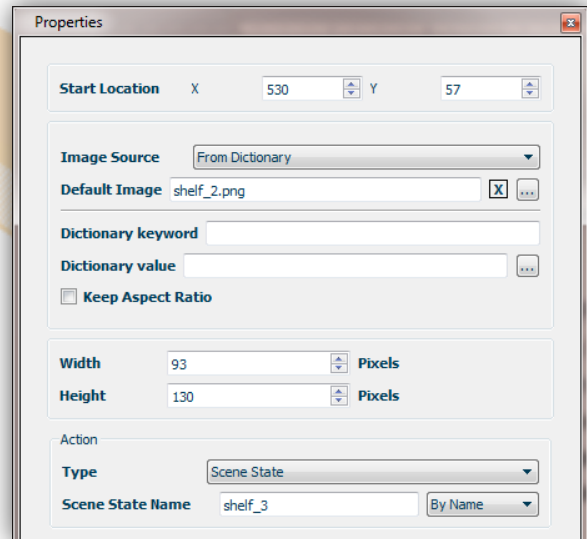
SimLab Designer Dictionary

Users of SimLab designer can define their own dictionary. Values defined in dictionary can be used for automatic replacement of Text/Image components in templates.

Selecting Dictionary from the Edit menu will open the Dictionary dialog. In the image shown to the right items were already added to the dictionary. Users can edit, delete, or add items to the dictionary. Items added in the dictionary can have text or image files values. In case of image file the user can navigate to it from the Insert Items dialog.
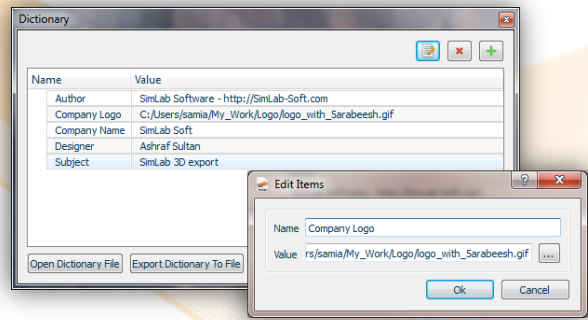
To use the values defined in the dictionary the user has to specify the component(s) in the template(s) that will have its source form the dictionary. In the image shown to the right, the source for the logo image component is set to be From Dictionary.
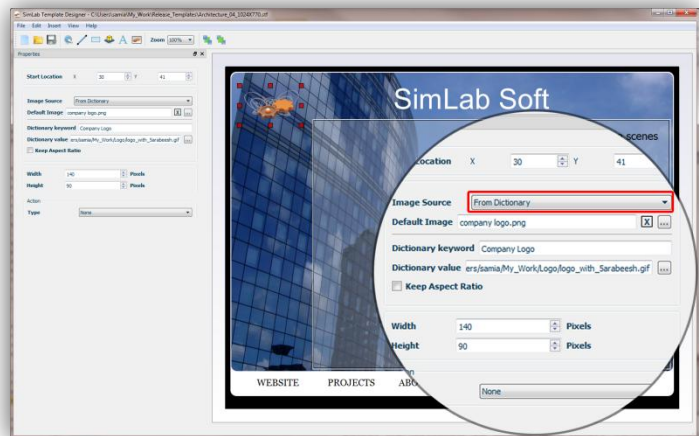
The Open Dictionary File button will embed values defined in the opened dictionary to the current values. Export Dictionary To File button will export the dictionary for sharing with others. Dictionary files extension is (*.df).

Preferences

Selecting preferences from the Edit menu will open its dialog, as shown in the image to the right. In this dialog the user can set the unit grid size, and can choose to check the snap to grid option. Showing the grids on a template page, can be done by checking Grid under the View menu, short cut 'G'.

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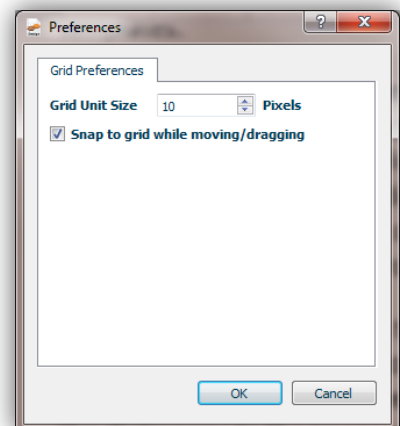
SimLab Behavior/Actions Support

SimLab Composer, and other 3D SimLab plugins support a number of predefined Actions that can be applied upon clicking Templates' elements. Advanced users can write their own script to define new actions. Applied actions can be exported to 3D PDF files, as well as HTML (WebGl).

Action	Effect	Required Fields
URL	Links 3D geometry OR Template element with the entered web address, that will be opened On Click.	Url textbox; to include the web address.
Message Box	Displays a message box upon clicking 3D geometry OR Template element. The user needs to enter the Message and its Title.	Title textbox; to include the message title. Message textbox; to include the message to display.
Animation Play *(in case of animation support)*	Plays scene's animation upon clicking 3D geometry OR Template element. One animation is supported for a scene; (supported only in SimLab Composer)	--------------
Animation Stop *(in case of animation support)*	Stops playing scene's animation upon clicking 3D geometry OR Template element; (supported only in SimLab Composer)	--------------
Script	Enables users to write their own script to be executed upon clicking 3D geometry OR Template element.	Java Script dialog to include scripts to execute.
Scene State	Executes a scene state upon clicking 3D geometry OR Template element. Scene states can be selected by Name or Index. Scene States are equivalent to camera's in 3D SimLab plugins, so if the 3D SimLab plugin supports exporting cameras this field is applicable.	Scene State Name, or Scene State Index; to include the name or index of the state depending on the option chosen in the By combo box.
Multi Action	Executes a number of actions upon clicking 3D geometry OR Template element.	*described below*

Multi Action Option

Upon selection this action type, a user can enter a list of actions to be executed upon clicking a 3D geometry or a template element. The user can also change the order of the actions' list, and the way they are executed.

Swing; runs the actions' list upon click in order, then backwards again. That is action_1, 2,3 …, then 3, 2, 1.

Loop; runs the actions' list upon click in order, then from start again. That is action_1, 2,3 …, then 1, 2, 3.

Random; runs the actions' list upon click randomly.

Run All; runs the actions' list upon click in order one time.

Actions can be executed in 3D PDF, and HTML files.