



SimLab Plugin for 3DS Max

Benefits

SimLab plugin for Autodesk 3DS Max, adds powerful capabilities to 3DS Max.

Added capabilities include:

1- Direct import of different file formats

Support for importing the following file formats is added by the plugin:

File Format	Source Package
3dxml	CATIA
3dm	Rhino (up to ver 5)
Sldprt, Sldasm	SolidWorks (up to ver 2011)
par, asm	SolidEdge (up to ST3)
Step	Standard format
U3D	Standard format
3D PDF	Adobe Acrobat (U3D Based)
Skp	SketchUp (up to ver 8)
Zim	SimLab Archive

2- Direct export of different file formats

3- Creating interactive 3D PDF files from inside 3DS Max

3D PDF files can be opened using a free version of Adobe Acrobat reader, which is virtually available on every machine.

Sharing 3D models as 3D PDF files, enables the designer to communicate 3D models with technical and none technical users, without risking the original model, and without requiring the file recipient to download an external application.

4- Exporting 3DS Max model to iPad

Using the plugin, the user can export 3D models from 3DS Max to be opened using the free application **SimLab CAD Viewer** for iPad.



Requirements

The plug-in is supported on the following versions of 3DS Max (2009, 2010, 2011, and 2012), (32 and 64 bit).

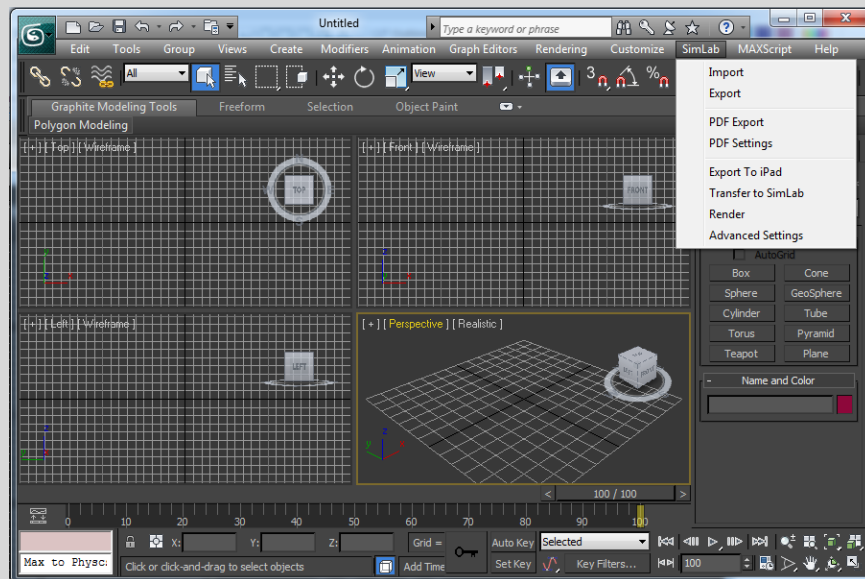
The file recipient will need a free version of Acrobat reader 9.0 or later on Windows or Mac to open the 3D PDF file.

Users who have any version of SimLab Composer 2.31 (or newer) will need to download the integration component only.

Users who do not have SimLab Composer 2.31 will need to download and install the full version of the plugin. The full version of the plugin includes SimLab Composer 3D PDF edition.

Using the plugin

Installing the plugin will add the top level menu **SimLab** to 3DS Max. Added functionality will be accessible using this menu.

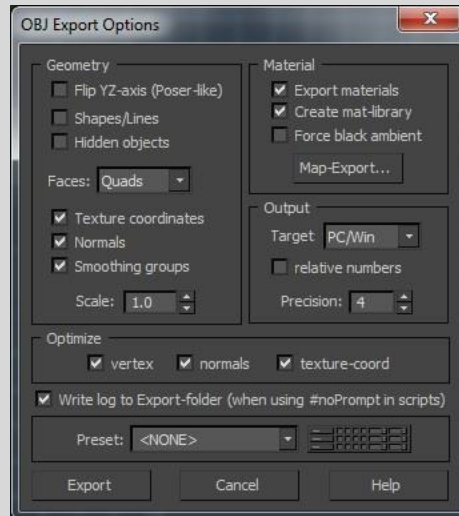


Internally the plugin utilizes the OBJ exporter included in 3D Studio Max. The OBJ Export Options dialog will appear to the user whenever an export is done. The user should make sure the following options are set:

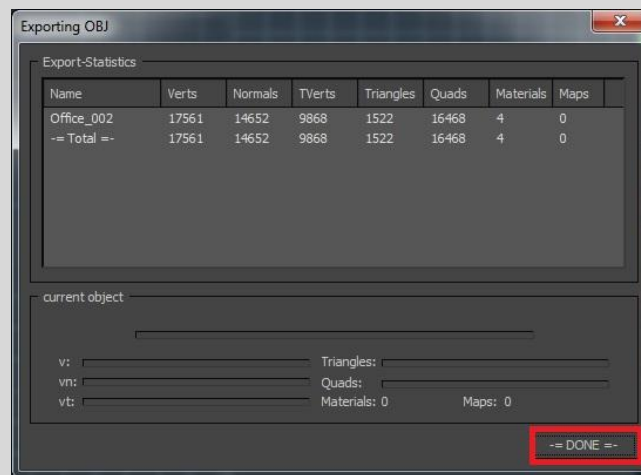
Flip YZ-axis is **UnChecked**

Texture coordinates is **Checked**

Normals option is **Checked**



When the OBJ file export is completed, the user should click **Done**, before navigating to the exported file.

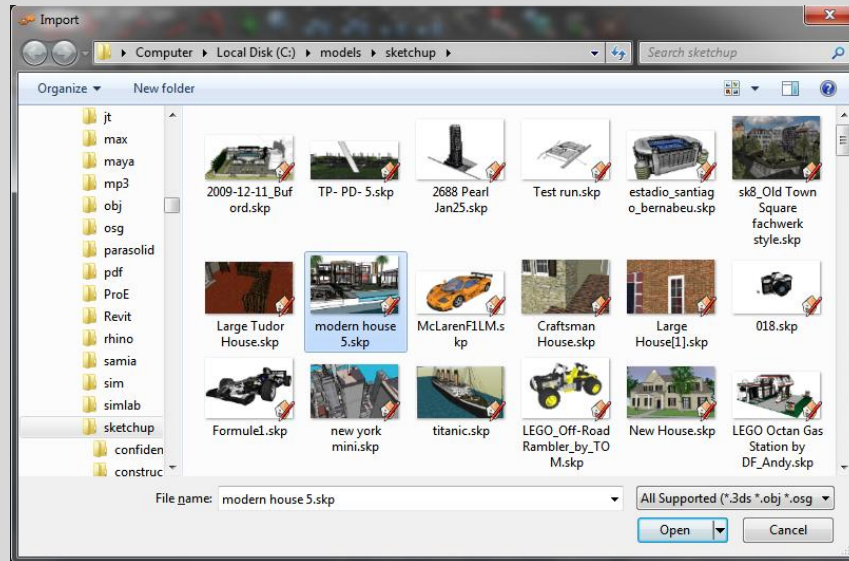


Importing models

Importing a file using the plugin can be achieved by doing the following:

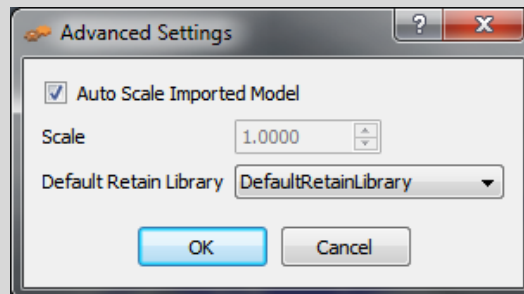
- 1- Click Import under **SimLab** menu (this will show the file import dialog)

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- 2- Select the file to be imported (any of the supported file formats)
- 3- Click Open
- 4- The model will be imported

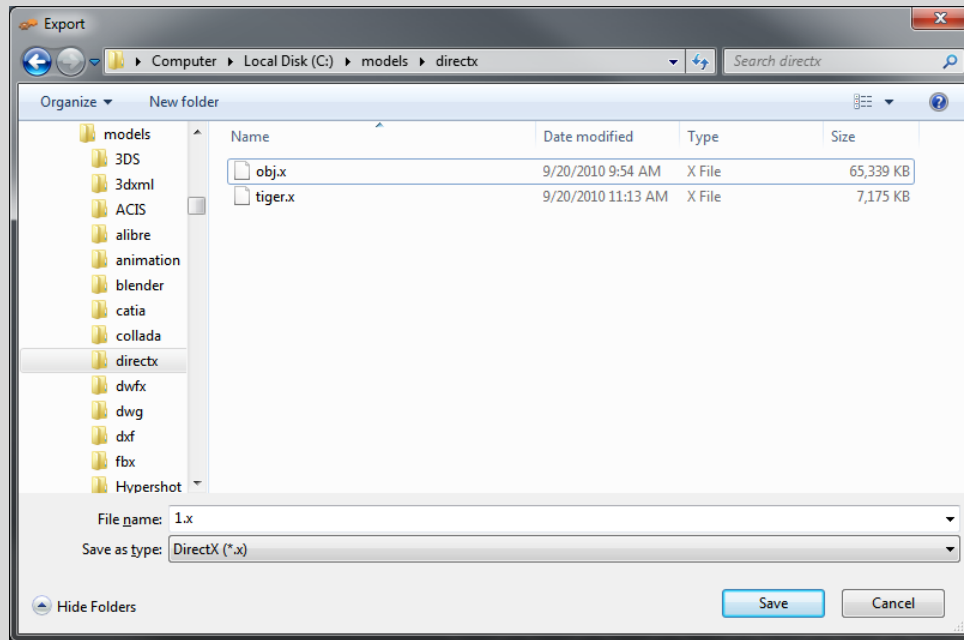
By default the model will be scaled to be visible to the user. The user can disable scaling by unchecking **Auto Scale** **imported models** in **Advanced Settings** (under the SimLab menu).



Exporting models

The user of the plugin can export current scene by:

- 1- Clicking Export under **SimLab** menu (this will show the file export dialog)

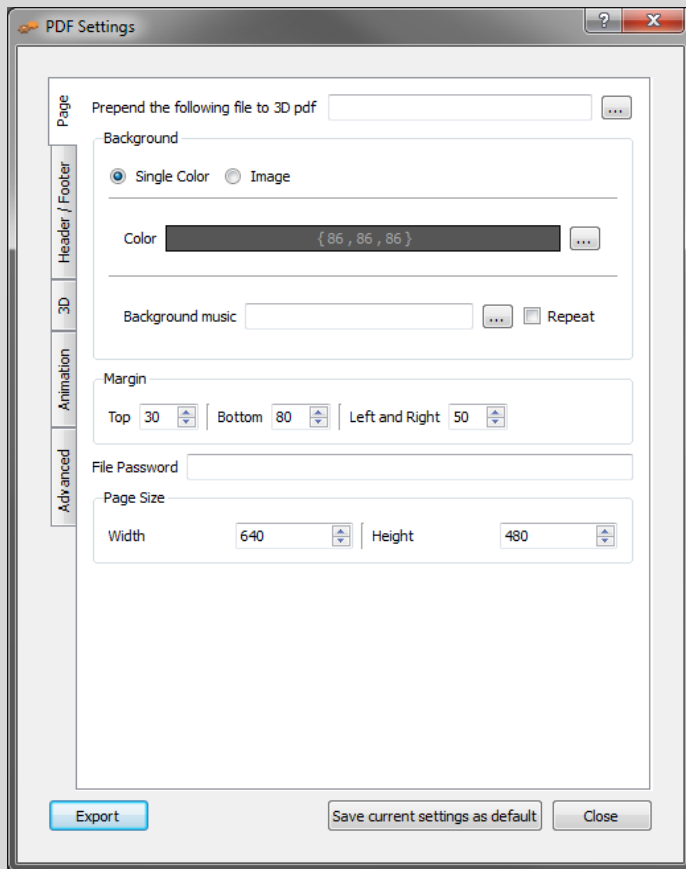


- 2- Selecting the file type, name of the file to be exported
- 3- Clicking Save

Creating interactive 3D PDF files

3D PDF Settings dialog enables the user to control the generated 3D PDF file. The dialog can be opened by clicking PDF Settings under the **SimLab** menu.

Page Settings

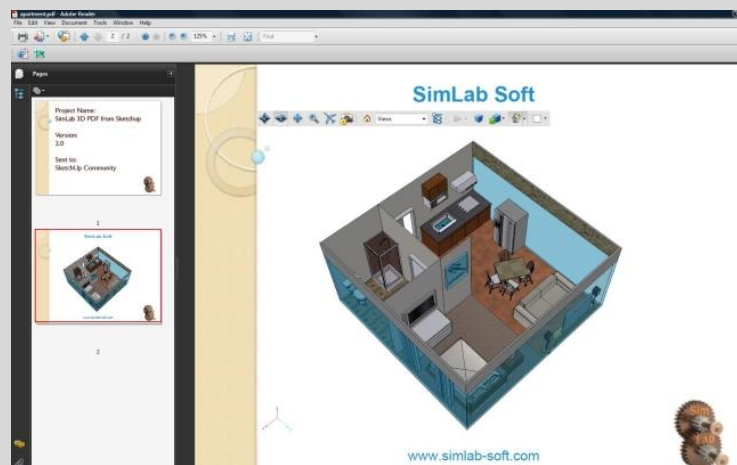


Prepend the following file to 3D PDF: this option is used for appending two PDF files together. This can be used to append a 3D model to a company's header, or a project description available in PDF format. PDF files can be generated using different programs, such as; Acrobat, WinWord, PowerPoint, or Open Office.

Background: This option controls the appearance of the section of the PDF document out of the 3D area. The user can set the background to be either of a single color, or to be an image. The **Scale To Fit** option is available if the image needs to be scaled to fit the background area.

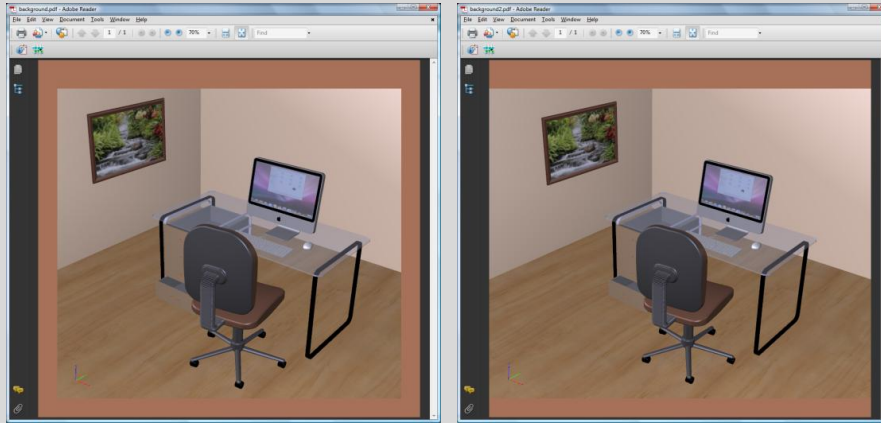
Background music option is available for users to add music, in '*.mp3' format, to the created 3D PDF files. Selected music will be automatically played while the 3D PDF file is open, the file recipient can optionally turn off the music. Checking the **Repeat** option will cause the mp3 file to automatically repeat itself. The selected mp3 file will be automatically embedded inside the 3D PDF file.

The following example shows a 3D PDF file added to an existing PDF template file.



Margins of the 3D PDF page determine the 3D model area.

In the left image, left and right margins were set to 40, while in the image on the right both left and right margins were set to 0.

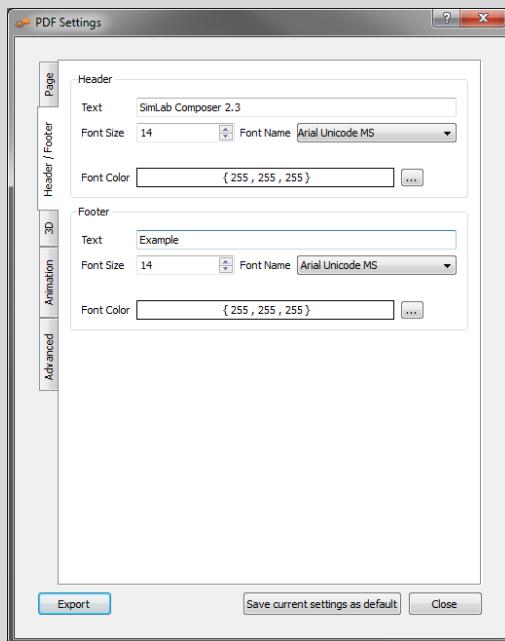


File Password: using the optional password will protect the contents of the generated 3D PDF file; the recipient will need to use the password to view the 3D PDF file.

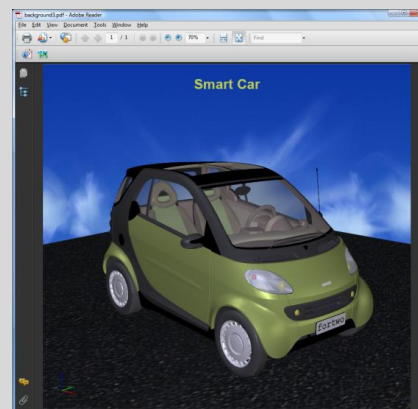
Page Size setting enables the user to input the required page size of the created 3D PDF file.

Header/Footer Settings

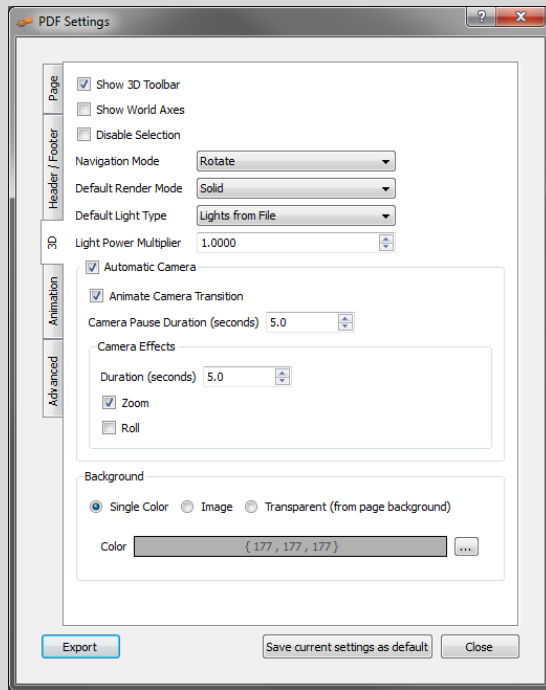
The user can use the header/footer settings to input text, color, font, and font size for both header and/or footer for the created 3D PDF file.



In the image bellow a header was added to the generated file. This file was created by selecting the **Image** option in the **Background** setting, under Page tab. For the image to cover the 3D model's area the **Transparent** option was selected in 3D tab.



3D Settings



Show 3D Toolbar: shows or hides the 3D toolbar in Acrobat reader when opening the 3D PDF file.

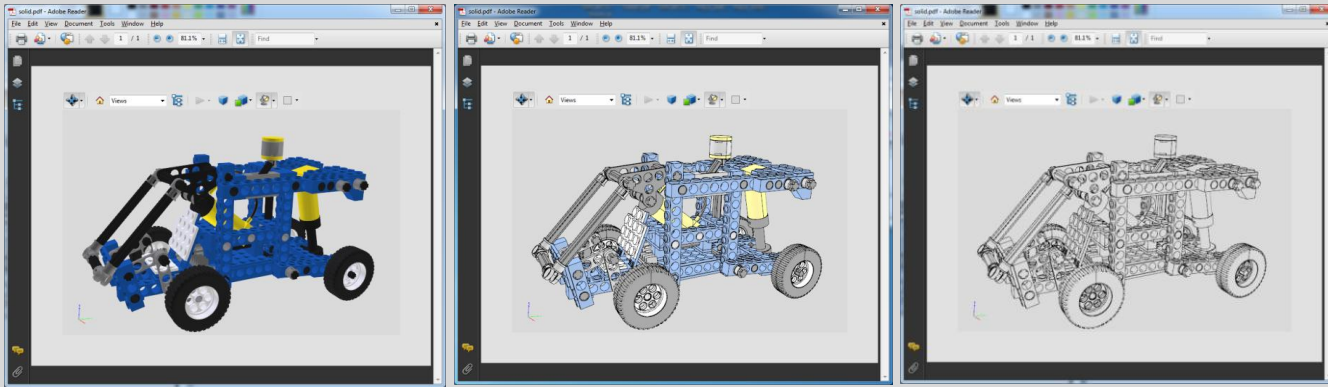
Show World Axes: shows or hides the world access in the lower left part in the 3D PDF file.

Disable Selection: disables or enables selection of geometries in the 3D PDF file.

Navigation Mode: the user can set the default navigation mode when opening the 3D PDF file to be one of the following **rotate**, **spin** or **walk**. The user of the 3D PDF file can choose to change this default mode inside the 3D PDF file.

Default Render Mode: using this option, the user can select the default render mode to be one of the following (Solid, Solid Wireframe, Transparent, Transparent Wireframe, Illustration, Shaded Illustration, Solid Outline, or Bounding Box).

The following images show the same model using different render modes.



Default Light Type: light type can be one of the following **white**, **day**, **night**, **bright**, **CAD optimized**, **cube**, head **lamp**.

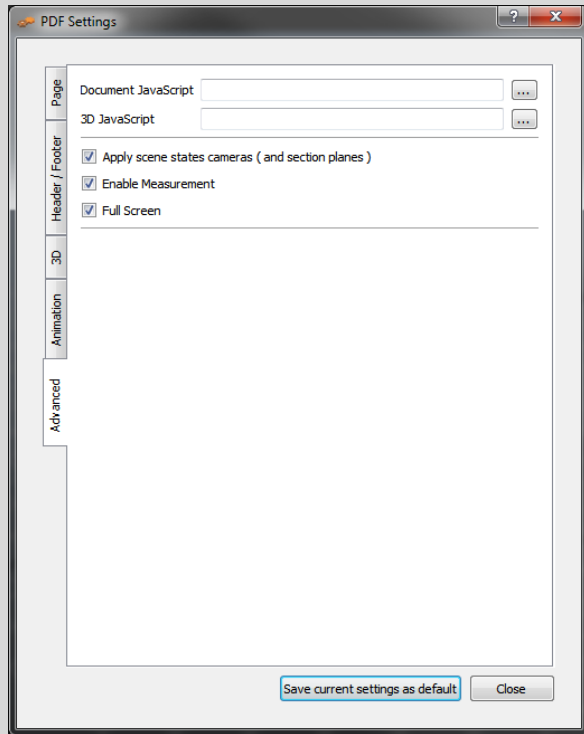
Light Power Multiplier: increasing this value increases the brightness of the generated 3D PDF file.

Automatic Camera: This option enables automatic switching between the different cameras in the scene. When automatic camera is enabled, the user can select the **Camera Pause Duration**, which is the time in seconds for which the camera will stand still before camera effect starts.

The user can select the **camera effect** to be **zoom**, **roll** or the two combined. The camera effect will take place for the **camera effect duration**.

Background option controls the appearance of the 3D area. The user has the option to set the background to either a single color, or an image. If the user wishes the 3D area to use the same background used in the page settings, he can select the **Transparent** option.

Advance settings



Advanced users can use those settings to insert Java scripts to control both, the PDF document, and the included 3D model.

Details about Java script support in 3D PDF files can be found at <http://www.adobe.com/devnet/acrobat/javascript.html>

Using advanced settings the user can Enable/Disable measurements in the generated 3D PDF file. And make the 3D PDF file start in Full screen mode if needed.

Exporting models to iPad

Models can be exported as SimLab Archive files (*.zim) by clicking the menu **Export to iPad**. Zim files can be viewed and manipulated using the free iPad application **SimLab CAD Viewer** available in iTunes.

Information exported to iPad includes: geometries, normals, materials, textures, and cameras.

For including advanced scenes states to the generated zim file the user can transfer the model to SimLab Composer.

