

SU2STL Exporter/Importer for SketchUp v6 and higher V 1.3

D. Bur, November 2009

This script is intended to read/write STL ASCII files (don't expect it to read BINARY STL files) of your models or selections.

It has been tested with SketchUp 6 (Pro and free) and SketchUp 7 (Pro and free).

1. Installation:

Put the file "su2stl.rbs" in your Plugins folder. Restart SketchUp. You should find a "Export STL file" and "Import STL file" items in your "Plugins" menu.

The sample STL in the archive is for test and reference.

2. STL Format:

For your information, it is recommended to have a look at these pages where the STL format is described:

http://en.wikipedia.org/wiki/STL_%28file_format%29#Binary_STL

<http://www.ennex.com/~fabbers/StL.asp>

This script doesn't read STL files with colors or materials keywords, only pure STL...

2. Exporting a STL file:

1. Select "Export STL file" from the "Plugins" menu.

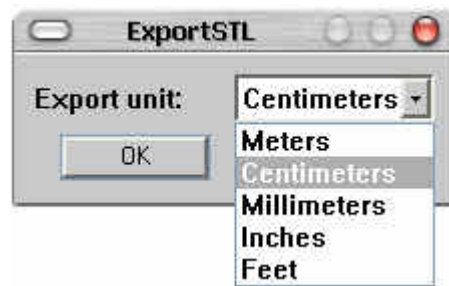
If you didn't select anything in your model, you'll be prompted with this:



Click on "No" cancels the export, click on "Yes" will export all faces of your model in the STL file.

If you selected objects first, then only this selection will be exported

2. Select a unit for the export:



Select your export unit in the list. No matter which unit you are currently using in SketchUp, the 3D data is converted in the selected unit.

Which objects are exported ?

Faces, groups and components are supported, all other entities types are ignored.

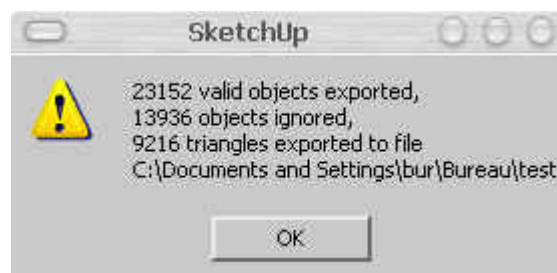
Groups can be nested at any level(s), components as well, groups can contain components and vice-versa, so you don't need to explode your groups and components before exporting.

3. Select an output file name:

Type a name (with or without the ".stl" extension) in the "Export STL file" panel.

When exporting a huge model, watch the status bar in the bottom left corner of the SketchUp window, it displays a progress bar with percentage done and estimated time end.

A simple message box reports what has been done:

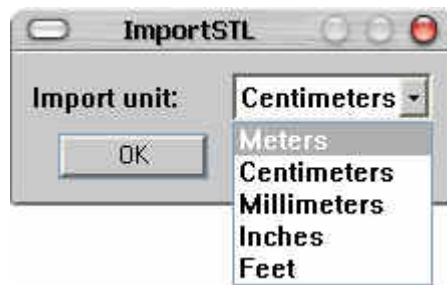


2. Importing a STL file:

1. Select "Import STL file" from the "Plugins" menu.

Browse your disk to find the STL file (only files with ".stl" extension are visible the "Import STL file" panel).

2. Select a unit for the import:



Select your import unit in the list. No matter which unit you are currently using in SketchUp, the 3D data is considered in the selected unit for input in SketchUp.

The script starts to read the file, searching for the keyword "solid". If it doesn't find one, it is probably a binary file or there is a wrong file header. When the keyword "solid" is found, a layer is added and all the STL triangles are put on that layer. The layer name is the solid name.

When importing a huge STL file, watch the status bar in the bottom left corner of the SketchUp window, it displays a progress bar with percentage done and estimated time end.

Which objects are imported ?

Triangles of course, and only triangles. The script tests if a triangle is "flat" and if two points are equal. In these cases the triangle is skipped.

A simple message box reports what has been done:

