SU2Odeon version 1.09

SU2Odeon109 is the Odeon is a plug-in for SketchUp (*SU*) version 2013 to 2017 on the Windows platform. The plug-in works for the Make as well as for the Pro editions of Sketchup.

Installation

1) Unpack the SU2Odeon109.rbz file from the SU2Odeon109.zip file
2) Open *SketchUp (SU)*
3) Enter the Window|Preferences menu entry
4) Select the Extensions field
5) Click the Install Extension… button
6) Select the SU2Odeon109.rbz file

Usage

Once a surface model has been created in *SU*, export it to Odeon, using the Odeon icon in the toolbar of *SU* or from the Odeon entry in the Extensions/Plug-in menu of *SU*. The Odeon icon may be floating on its own undocked toolbar - in that case, drag it to the main toolbar area - this need only be done once (note that on a dual monitor PC it is probably located on the primary monitor even if SU is displayed on the secondary monitor).

The exported file is a standard Odeon *.par* geometry file which will reside in the same directory as the *SU* geometry file *(.skp)*. While extending and remodeling the geometry in *SU* it is perfectly alright to re-export the model from *SU* and then reload it into Odeon again. When copying a room project from within Odeon using Odeon 11.23 or later, the *.skp* file is automatically copied with the room files.

A number of tutorial videos showing how to use *SU* and the Odeon SU2Odeon plug-in are available at:

http://www.odeon.dk/room-modelling-0

and an extensive number of instruction videos for the SU software is available at the Sketchup homepage at:

http://www.sketchup.com/intl/en/training/videos.html

Functionality of the plug-in

In order to make use of the *SU* models in Odeon as easy as possible, a number of conversions of and checks on the *SU* model are automatically performed on the *SU* model upon export to Odeon:

Consistency check

- Redundant points are removed, e.g. points almost coinciding are merged.
- Surfaces with no area are not included in the exported geometry.

Point list

A point list is compiled so each coordinate only appears once in the *.par* file.

Layers

Layers are included in the *.par* file if there are any in the *SU*-model. It is recommended to make use of layers in your *SU* models as this can make it easier to assign materials inside the Odeon software (use the *Ctrl+L* shortcut in the *Materials list* in Odeon to enable or disable selected layers).

Only layers that are enabled in *SU* when exporting to Odeon will be included in the exported model – this gives an option to exclude some details or parts of the model you do not wish to see in you model inside Odeon.

Persistent surfaces

Properties assigned to surfaces in terms of materials, reflector coverage, grids surfaces and surface sources inside Odeon are maintained even if surfaces have been added or deleted in *SU* after the model was exported the first time. This is accomplished by the *SU2Odeon* plug-in by having the *SU* model remember the surface numbers as they were exported to Odeon.

Auto explode

Groups and components are automatically ungrouped/exploded - from any level - upon export from *SU*. This is a requirement from SU in order to enable the 'persistent surfaces' mentioned above. For this reason, if some groups or components need to be moved or changed – it is highly recommended that this is done before the export to Odeon is performed. Furthermore, since the plugin is saving the model after explode is performed, you may consider to make a copy of rooms containing groups and components before exporting to Odeon so information about groups and components remains in the copy.

Modifying surfaces for full compatibility with Odeon

Complex surfaces in *SU* are defined by an outer loop, describing the outer perimeter of the surface, and a number of inner loops describing holes in the surface.

To make that type of surface definition compatible with Odeon, the outer loop (outer perimeter of a surface) is automatically stitched with the inner loops (if any) of the surface (holes in the surfaces) so each surface exported is defined by one loop only which can be understood by Odeon - inner loops are inserted using an insertion point on the main loop which is estimated by the plug-in to create visual appealing surfaces which are also compatible the way *3DOpenGL* visualizes surfaces in Odeon.

Known problems and limitations

- On very rare occasions' complex surfaces with many holes will not be rendered correctly in the *3DOpenGL* display inside Odeon. This has no consequences for calculations. If manually cutting

such a surface into some smaller and less complex pieces within *SU* (by drawing a few lines from edges to holes), this may solve this visualization problem.

- Exporting complex geometries with the SU2Odeon plug-in may take quite a while - *SU* may appear as "Not responding" and you might assume that it has crashed - however be patient - WAIT - the process may succeed if given an hour or two (or more.....). If you have modeled the geometries in *SU* yourself this problem probably doesn't exist - if the model has been imported into *SU* from another CAD package e.g. in the *.dxf*, *.ifc* or *.ifcxml* formats (using some other plug-in) - it is likely to be the case.
- In *SU*, the Odeon export icon may not appear docked immediately after the *SU2Odeon* installation - if this is the case - search your screen(s) for this 1-icon-toolbar - then mouse-drag it to a location on the *SU* toolbar.

Revisions

Version 1.00, first release may 2010.

Version 1.01, 8. June 2010

- Fixed/improved algorithm for removal of redundant points.

Version 1.02, October 2010

- Updated for *SU* version 8, avoiding to export the *SU* Origo figure (named Susan) to Odeon.
- Fix: repeated points problem fixed (a rare problem occurring in complex geometries). These incorrect surface definitions are automatically corrected or discarded upon export.

Version 1.03 June 2011

- Enhanced export for better compatibility with OpenGL .

Version 1.04 September 2012

- Automatically saves Sketchup file when exporting model to Odeon – this way it is ensured that the .skp and .par file are always consistent (user does not need to save the *.skp* file manually)
- Order of point sequence in multi loop surfaces (surfaces with holes) are automatically modified in order to produce correct area estimates in Odeon.

Version 1.05 February 2013

- Fixed issue: Occasionally previous versions of the SU2Odeon plug-in failed to export geometry to Odeon when there were no components in the model. This typically happens when the scale figure (named Sang, Susan Derrick or Sang) which by default is present in new drawings has been erased by user.
- Fixed issue: Layer names containing letters such as æ, ø, å… are exported correctly – some character sets e.g. Chinese may still fail – in that case use Standard English characters.

Version 1.07 March 2014

- Support for SU 2013 and 2014

Version 1.08 March 2015

- Odeon will avoid the Steve component (the man at origo) from being transferred with the model to the Odeon .par file.

Version 1.09 October 2017

- Full support for any character set
- Fix for some cases where the plugin froze and no export file was created
- Not exporting the "Sketchup people" which is by default located at origo in a new Sketchup drawing (the following person components that will currently be omitted in the Odeon2SU export are Sang, Susan, Steve, Sophie, Derrick, Bryce(SU6), Nancy and Chris(SU2017).