PUSHING THE BOUNDARY WITH ARCHITECTURAL VISUALIZATION

SKETCHUP-UR-SPACE
THE FIRST EVER SKETCHUP MAGAZINE

Cover story

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Review of Drop Vertices Extension in SKetchUp

Review of SketchFX Ex for SketchUp

Review of Two inputs for the Move tool

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Details of some 3D Warehouse Tools from SketchUp Extension Warehouse

Methods to model Terrain and Other Rounded Shapes

Texturing an Arch in SketchUp using ThruPaint

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- **Top 8 Websites for Textures and Materials for SketchUp**

EDITOR DESK

A letter to the desk of the editor to letter from editor's desk

The sketchup-ur-space editorial team has published another exciting issue enriched with some in-depth articles and useful tutorials for global sketchup enthusiasts. This issue will also be a great resource for sketchup users. Besides, articles and tutorials, this edition comes up with latest news and happenings in sketchup.

In every issue, our editorial team gives their best effort to make the magazine more informative and interesting for the readers.

In the cover story of this edition, Henry Gross, the founder of architectural visualization studio, has shared his professional experience for transforming the architectural visualization process to the next level by integrating architectural basics into his elaborate, detailed presentations. He briefly explains the significance of an architecture background for producing stunning visualizations.

In the Article section, the readers will get detail information about three newest sketchup extensions alias AutoSmooth extension developed by Thomas Thomassen, Drop Vertices Extension developed by TIG, SketchFX developed by Fluid Interactive. In another article detail analysis is provided on skethup move tool.

AutoSmooth extension is used to make autofolded edges smooth and soft which are produced by native move, rotate and scale tools.

The Drop Vertices Extension is used to maneuver terrain borders or align edges to objects in sketchup.

SketchFX Ex for sketchup facilitates the users to export static images from sketchup and post process in photoshop inside sketchup view port. It embellishes your 3D creations visually appealing from bloom effects to colour corrections.

The article on move tool provides details about direction and distance. While moving an entity in sketchup, a direction and distance known or unknown is provided. Sometimes, the users exactly identify the specific direction and distance to move and provide that input to SketchUp by typing it in. Other times, the users provide the direction and distance by inferencing other points in the model.

In Tips and Tricks section, the readers will get brief insight about axes tools in sketchup (Axes Tools is a small utilty that reset the axis of components to their bounding box' centre or corners), some vital tips to design models for 3D printing (these tips will allow the users to create the design of prototypes for 3d printing as well as design their own objects which interact with phone, remote, camera, or any other object), review of some vital sketchup extensions for architectural workflows (an wide array of lists for useful sketchup extensions) and 8 important tips to navigate Model Interiors in SketchUp (Learn some useful tricks to model interior in sketchup easily and quickly) .

The Blog section sheds light on 1) how to add background images into sketchup efficiently, 2) some vital guidelines for beginners sketchup users to start modeling with sketchup; 3) Some vital tips on sketchup freehand tool to produce freehand shapes and hand-drawn lines 4) Some leading websites to acquire different types of materials and textures for creating stunning 3d rendering and modeling.

The news section covers some vital topics like 1) Creating Wall Cost Estimates in SketchUp with Quantifier Pro; 2) Details of some 3D Warehouse Tools from SketchUp Extension Warehouse; 3) Methods to model Terrain and Other Rounded Shapes 4) Texturing an Arch in SketchUp using ThruPaint.

Best wishes
RAJIB DEY
Editor
For any feedback and query please send mail to rajib@jobs2india.com

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ARTICLES

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Review of AutoSmooth Extension in SketchUp
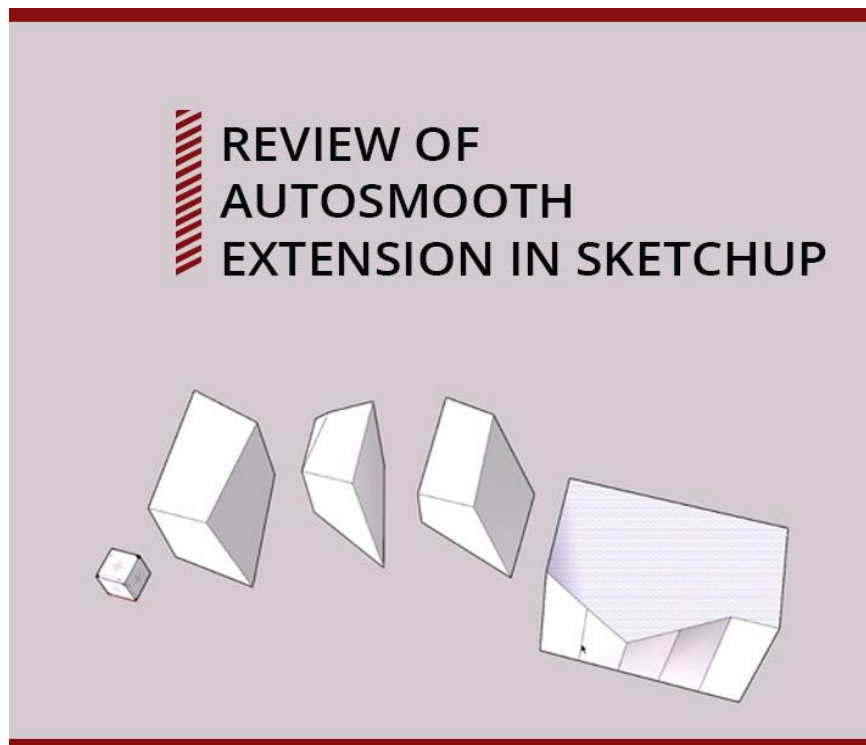
AutoSmooth is one of the amazing extensions invented by Thom Tom which automatically softens and smoothes autofolded edges.

The SketchUp Extension Warehouse is full of tools that enable users to review the model of users such as nested groups, model size and remove any unnecessary lines, marks etc. before uploading the model into 3D Warehouse.

About Extension Warehouse:

It is an online resource with various plug-ins developed made especially for SketchUp and these extensions help to add some special tools and

features to SketchUp. These extensions can be found for any particular application like drawing or 3D printing and some industry specified tools for architecture, interior design, construction and many more. So basically in this Extension Warehouse people can do the following things:\

- Users can search extensions by name or as per the functionality.
- They can also install various extensions with a single click of a button.
- Or users can also control all the extensions from easy-to-use location in the My Extension page.

About Thom Thom:

Thomas Tomassen is actually known as Thom Thom, he is a modelmaker with a large desire for physical, digital and traditional design in most kinds of the trade. He is also focused on web design or programming and 3D visualizations but he is specialist in 3D modeling, SketchUp, Web design, graphic design and web programming.

AutoSmooth

AutoSmooth extension by Thom Thom can automatically soften and smoothes autofolded edges which are made by the native Move, Rotate and Scale Tools. It works in the background as a representation of autofolding feature. He made this extension to make sure that every little object is made in SketchUp will be created with smooth edges automatically so that users don't need to work on them again.

Path

View **>** Toolbars **>** AutoSmooth

Requirements

TT_Llb2-2.7.0

Source: www.extensions.sketchup.com

Review of Drop Vertices Extension in SKetchUp

TIG's Drop Vertices extension in SketchUp can be perfectly used while manipulating terrain borders or align edges to objects in SketchUp.

The SketchUp Extension Warehouse is full of tools that enable users to review the model of users such as nested groups, model size and remove any unnecessary lines, marks etc. before uploading the model into 3D Warehouse

About Extension Warehouse: It is an online resource with various plug-ins developed made especially for SketchUp and these extensions help to add some special tools and features to SketchUp. These extensions can be found for any particular application like drawing or 3D printing and some industry specified tools for architecture, interior design, construction and many more. So basically in this Extension Warehouse people can do the following things:

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Vertex Tools generally take control over each vertex editor for SketchUp. The soft selections are an immediate for organic modeling and the manipulator gizmo gives the users great control while modeling. While, Drop Vertices extension drops/Moves edges' vertices to different positions.

In this article we will learn to use TIG's Drop Vertices extension in SketchUp which can be perfectly used while manipulating terrain borders or align edges to objects in SketchUp.

Drop Vertices extension can mainly be used when users want to soften the edges of a terrain. At first, users need to select the boundary edges of the terrain and need to go to the Extension menu in SketchUp to select Drop Vertices. After selecting this menu, it will show the nearly image which has zero value. Actually there are too many options to choose from the Drop Vertices option like showing a below edges image of the actual terrain or showing an up edge image of the actual one. So basically, Drop Vertices menu has several options that can be applied upon any terrain to give it a new ace.

Source: www.sketchucation.com
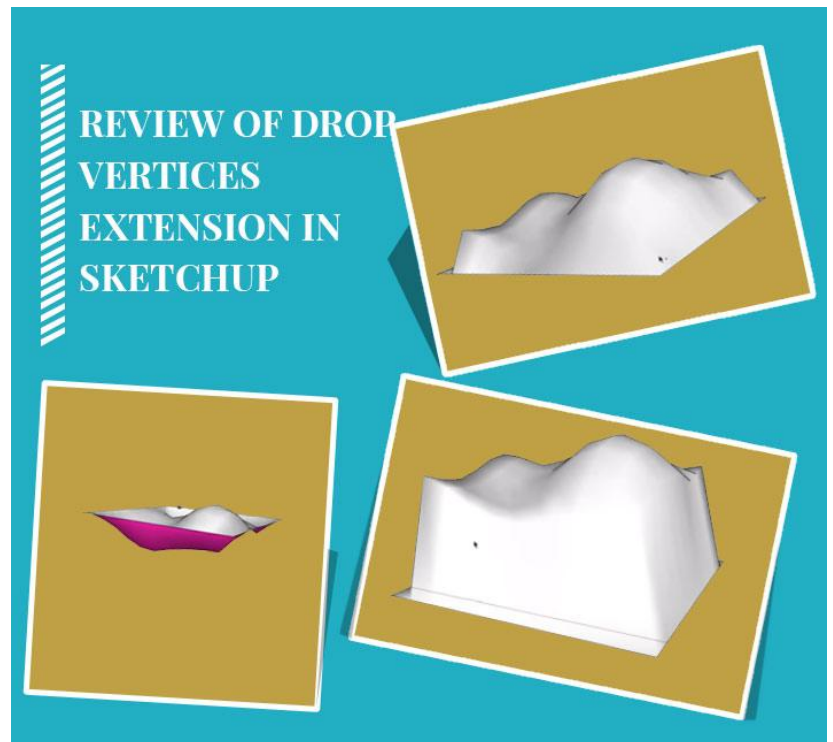
Review of SketchFX Ex for SketchUp

SketchFX Ex for SketchUp helps to give the same result directly within the SketchUp viewpoint and using the same layering approach as Photoshop, it utilizes a smart approach to stacking effects.

SketchFX: It applies a series of visual effects one after another in a bottom down order and it has three types of effects: Image, Filter and Mask.

The difference of SketchFX with other photo editing software is that it includes some combined effects that help to give a neat look in the model and more than that, each of these items in the list can be individually on and off to put effects. The items have more individual actions in their drop down options which can be named later and each individual will put an effect on the model, it is a fun thing to do. People can also apply various effects in a time and all of them will show clearly on the model without any mess which is a huge progress of this software. It also helps to show some details of mechanic drawings, though SketchFX misses some extra details but also adds some other information in the model which can't be found anywhere. SketchFX is an easier way to show and change different details of a model.

We have discussed about SketchFX Ex in the last article where we found the name of SketchFX Ex which has all the features of SketchFX Pro and adds support of rendering animations. In this article, we will know more about it.

About SketchFX Ex: Similar like SketchFX, it is an artistic rendering solution for SketchUp. SketchFX Ex is pretty similar to Piranesi except it all works directly in the SketchUp viewpoint. It adorns 3D creations with visual enhancements from bloom effects to color corrections. It is kind of a shortcut to create compelling illustrations from models in SKetchUp and achieves all this with one-click using out the box presets.

Method of work of SketchFX Ex: In this tool, each effect is build and blended over the next; the ranges of effects can be mixed together are quite extensive. Though it is bewildering, but after spending a little time reverse engineering the default presets users quickly become more known with the process. For breaking it down a little more the effect stack can be divided into 4 parameters. Image adjustments are managed using Hue, Saturation and Value, Brightness/Contrast and Exposure filters. Image improvements are managed though Bloom, Blur, Vignette, Paint and Depth of Field filters. Image layering can be made using additional images of scene images and SketchUp Styles. After that, users can use various masks to target these layered effects.
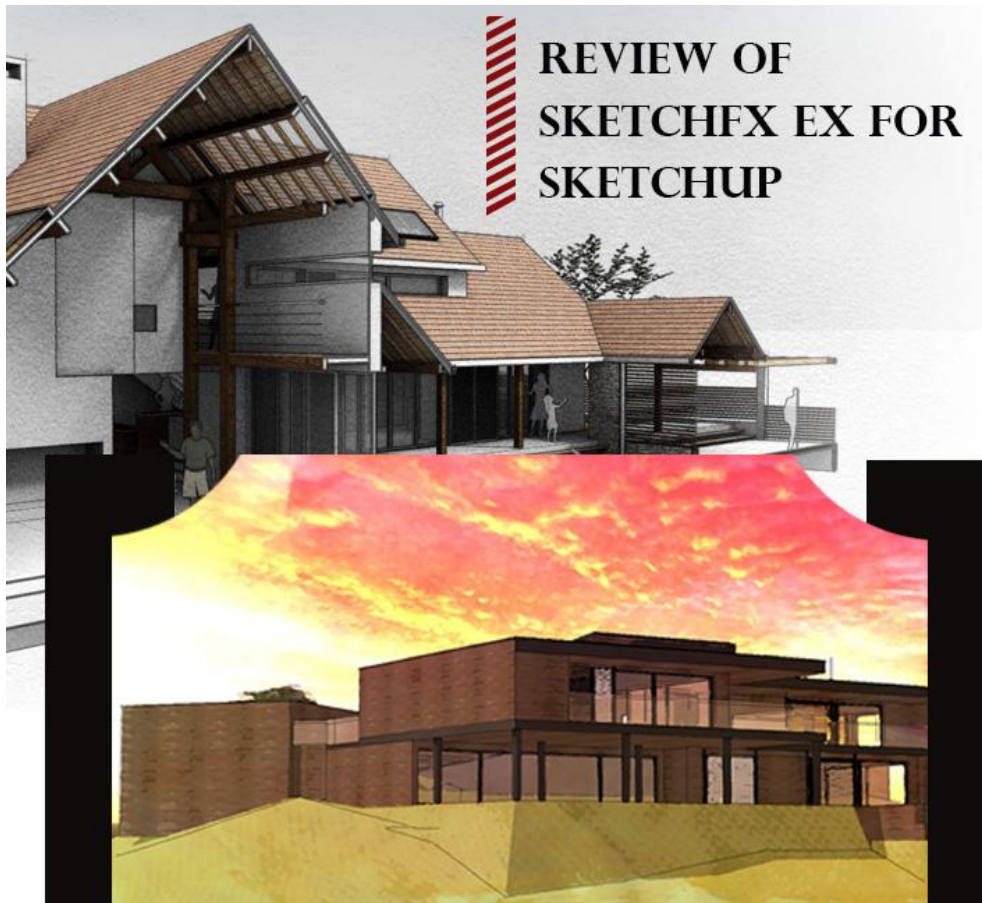
REVIEW OF SKETCHFX EX FOR SKETCHUP

Certain effects can have a parent-child relationship to the previous effect which allows targeting a specific effect on specific properties. Users can set SketchUp Line Style to be blurred and overlayed over another effect rather than globally blurring the scene. Basically, one of the strongest features of SketchFX Ex is the ability to overlay SketchUp Styles, external images and other scenes.

Benefits of having SketchFX Ex: It is a very good option for the people who can use it. Even with the default presets users get wonderful results. The newcomers to image editing can have a steep learning curve ahead. The actual way of creating own effects are very easy, the rendering times are fully dependent on the amount of effects to be applied and the computing input of that effect. The UI though is not the most approachable aspect of SketchFX as there are many toggles, sliders and dropdowns to contend with but it is clear what each option does. While the utter depth of option adds a labor intensive layer to create illustrations can save custom creation to file for re-use in other projects. So, SketchFX Ex is like a StyleBuilder for SketchUp, a standalone image enhancer for presentations but it is not a toll for novices as users need to spend a lot of time in Photoshop beautifying SketchUp output this could save a tone of time. SketchFX Ex is like a medium between not quite the SketchUp look and not the photoreal rendering look. It is aimed primarily at professionals who want to sell the sizzle of their designs.

Final words: Basically, SketchFX Ex is a very strong illustration tool for SketchUp but users need to know their preferences which will deliver impressive results with the default presets. But after spending time with SketchFX, users can be a pro in it.

Source: **www.sketchucation.com**

Review of Two inputs for the Move tool

Move tool in SketchUp has two things which help to move an entity in an easy and natural way. Users can use it without or with knowing the direction and distance

SketchUp's Move tool is a very natural and easy way to use but there are two things in SketchUp which are essential while moving an entity. After identifying those two things in SketchUp, users can unlock even more flexibility while moving things in SketchUp.

The two essential things which are needed to move something in SketchUp are:

Direction: With direction, users don't need red, green or blue axis.

Distance: It help to measure how far along the directional axis are the entities being moved.

Every single time while moving an entity in SketchUp, users will be given a direction and distance. Sometimes, users will know the specific direction and distance they need to move and provide hat input to SketchUp by typing it. If not, then SketchUp will provide a direction and distance by inferencing other points in the model.

Here are two scenarios described with their following steps:

Known Direction and distance: If the distance and direction is known by the user then the following steps are helpful:

- At first, users need to select the entities that need to move with the Select Tool.
- Then users need to activate the Move tool.
- Next they need to click once to start the move.
- Then they need to tap the Right Arrow Key to identify the direction.
- At last, they need to enter the known direction to identify the distance.

*here the users don't need to click on any particular point in the model or on the entity the need to move as long as the entity is preselected.

Unknown Direction and distance: There are sometimes, when users don't know the distance or direction that needs to move so here users have to rely on snapping to points in the model to define both of those inputs.

o At first, users need to select the entities that they need to move with the Select tool.
o Then need to activate Move tool.
o Next users need to hover over and snap to the first point on the object. Just click to start the move from the point.
o At last, users need to snap to last point or where they need to align to and click to finish the move.

REVIEW OF TWO INPUTS FOR THE MOVE TOOL
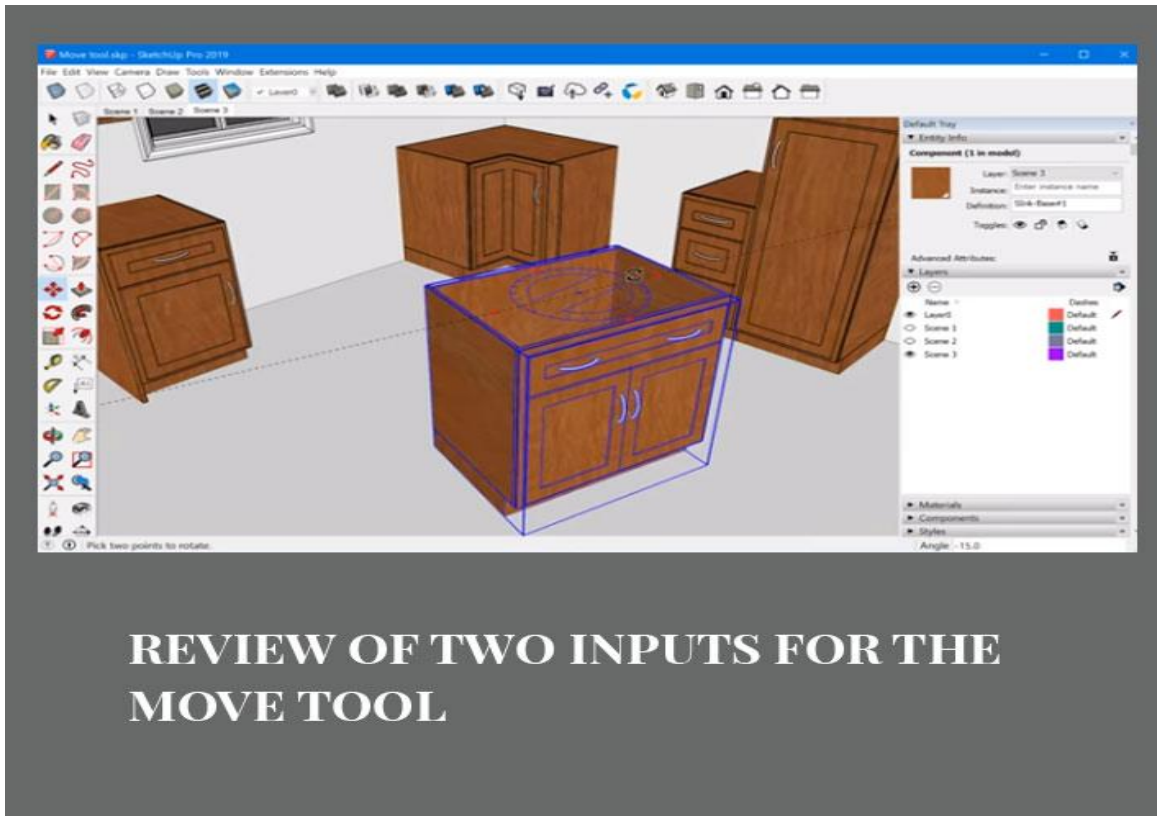
Known Direction and unknown distance: Unlike the other two, there may be other situations also, where users want to move an object along a specific location, to an unknown distance. Tape Measure tool can be used to figure out the distance.

- o At first, users need to select the light with the Select tool.
- o Then activate the Move tool.
- o Next Snap to the midpoint of the object need to move and click starts the move.
- o Then tap the Right Arrow key to define the direction along the red axis.
- o At last, move the mouse to the midpoint of the column.

Aligning objects: Another very common move workflow is aligning objects along each of the three axes; one at a time which makes it much easier to move as users can lock the direction during each step and only have to think about is the distance along each axis.

- o At first, users need to select the object with the Select tool.
- o Then need to activate the Move tool.
- o Next they need to click on a point on the object that needs to make a plane with another point or face in the model.
- o Next, they need to tap the arrow key to define the direction along that axis.
- o Then need to snap to the edge that needs to be in plane with and click to finish.
- o This process need to repeat on each axis.

Source: www.mastersketchup.com

Creating Wall Cost Estimates in SketchUp with Quantifier Pro
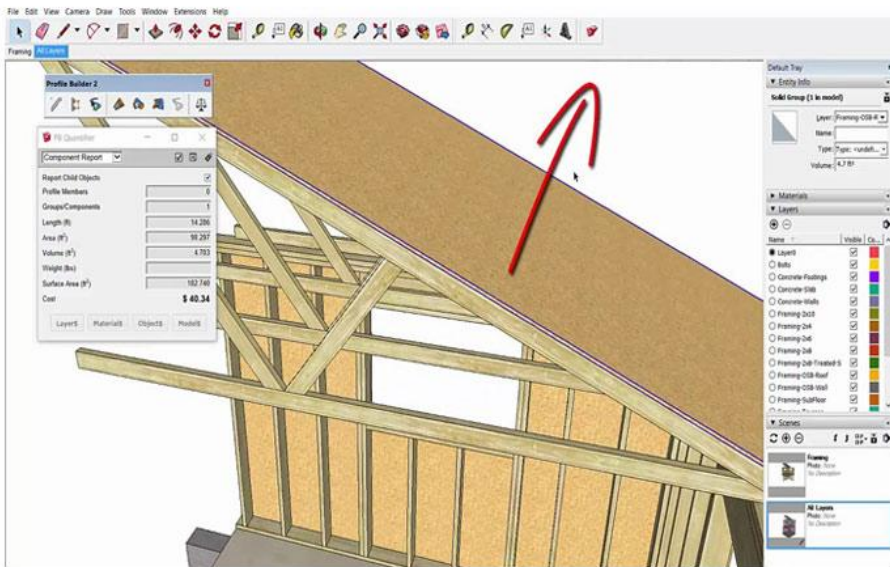
CREATING WALL COST ESTIMATES IN SKETCHUP WITH QUANTIFIER PRO

Quantifier Pro is an essential tool for creating cost estimates in SketchUp. Users can use this extension to estimate the exact cost of the walls.

In this article we are going to discuss about Quantifier Pro tool in SketchUp through Geis's tutorials and here are some information about this tool.

Quantifier Pro: SketchUp 2016 or the newer version is suitable for Quantifier Pro and it is also compatible with both Mac and PC. This is the ultimate tool to get instant quantity and cost information from the SketchUp model. It has various features like:

o Selecting the objects in the model will instantly show the total length, area, volume, weight and cost
o After using the model all the reports are model-driven and automatically update while the model will change.
o Fully Customizable Component Reports are found there which will show length, width, height, projected area, surface area, volume, weight, cost and many more things.
o There are also detailed cost reports.
o Instant Material Report will show the surface area of all materials in the model
o Assign re-usable cost rules are shown by layer, material, object or to the whole model
o Cost Inspector tool will show total cost calculation for the selected object to verify accuracy

- In Windows, Microsoft Excel is used to share unified cost data across many SketchUp models
- This extension also supports many languages and international currency
- There are full control of units and accuracy shown in reports
- If Profile Builder 3 is added with this extension, then it will be even more colorful.

This Plugin cost $79 alone and if it is bundled with Profile Builder 3 then it will cost 25% off of each extension

Estimating Wall costs with Quantifier Pro: This particular extension is designed to help in quantifying and price in different things within the SketchUp models; at first the users have to select different objects within the model and then apply cost data to them within quantifier. Within quantifier, users can select different objects and can be viewed within the quantifier dialog. It should be kept in mind that while using quantifier, users have to put the objects on the same material on their own layers; as an example if one is going to quantify a block wall then he/she will try to put all the block wall objects on a block wall layer. After this, this extension will allow the users to apply various cost properties to the objects on the layer. Moreover that, this extension can be used to apply costs to objects by other units within the model like length; and it also works with profiles that have not been created with Profile Builder or by the users themselves. Users can also apply costs based on SketchUp materials also and this will calculate the cost based on materials that have been applied to front side faces only to avoid double counting back side materials. It is also possible to directly overrule the cost added with an object using the object opinion and while modeling an object that are punching a bunch of holes it; then it is better to model that as standard geometry rather than a profile builder assembly as they actually calculates using the bounds of an object. Finally besides all of these one can create reports within quantifier that can either viewed within SketchUp or can be exported to Excel, theoretically one an import cost data from an Excel spreadsheet also.

Wall costs estimation process follows same procedure as creating any type of cost estimation in SketchUp but here users can create some walls in their model and can estimate the cost by following the exact processes shown by Justin in his tutorial video. Justin has estimated costs within two mwthods, the first one is made without using Quantifier Pro and Profile Builder while the second one has both init.

Source: www.thesketchupessentials.com

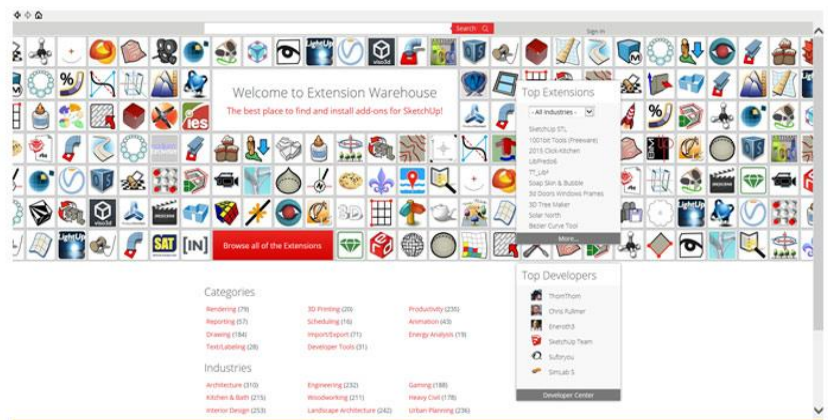# Details of some 3D Warehouse Tools from SketchUp Extension Warehouse

SketchUp Extension Warehouse has some quality check tools that help to review every little things of the model of users and help to remove unnecessary things before uploading the model.

The SketchUp Extension Warehouse is full of tools that enable users to review the model of users such as nested groups, model size and remove any unnecessary lines, marks etc. before uploading the model into 3D Warehouse.

DETAILS OF SOME 3D WAREHOUSE TOOLS FROM SKETCHUP EXTENSION WAREHOUSE

About SketchUp: SketchUp or Google SketchUp is owned by Trimble Inc., a mapping, surveying and navigation company. It is mainly a 3D modeling computer program that is used for a broad range of drawing applications used by architects, interior designer, landscape architects, civil and mechanical engineers, film and video game designers also. It SketchUp can be getting as a freeware version named SketchUp Make and a paid version with many more extra benefits called SketchUp Pro. SketchUp is software from Trimble Company and there is an online library of free model congregations and 3D Warehouse to which users can add other models; besides that, the program has drawing layout functionality with variable 'styles', supports third-party 'plug-in' programs hosted on the Extension Warehouse to supply other abilities and enables placement of its models in Google Earth. As SketchUp users are most of architects, designers, builders, makers and engineers etc.

who works hard to give a nice shape to our physical world, they need great tools to do the work. SketchUp is in mission to bring their best to produce some great tools for drawing as drawing is the key thing of the SketchUp users. They draw to search ideas, to identify the things and to show other people their work that they do with love and love to build; SketchUp understands it truly and trying to improve their software day by day. SketchUp is a worth useful software for its ease of use, it can be downloaded or installed o computer and right after

that user can work on it. Though SketchUp can easily handle but still there are some sides where people will find some difficulties and lots of solve also are there like YouTube tutorials upon SketchUp or visiting SketchUp website or search Google etc. But people will get confused to have lots of information from different places upon one thing so there should a proper place or website where all the answers can be found.

Here are the details of some tools:

o Show Nesting Levels: It is a visual way of testing the structure of a selection or the whole model. This tool creates a layer for every nesting level that is found in the selection and sets the model display to Color by layer. The layers use ordinary AutoCAD colors like red-1, yellow-2, green-3, cyan-4, blue-5, magenta-6, and silver-7.
o Save Screen Image: This tool allows users to notate the model directly in SketchUp, then catch the screen as a jpg file for communication and further analysis. It also saves the image in the same folder as the model and at any time through the review, they are numbered consecutively for users.
o Model Report: Users can use this tool to view information about the selection or the entire model. The Top Level information shows users the number of components and groups at the first level when editing the component. The second half of the report shows the whole polygon count which is very

o Quick Check: This is a menu item that counts all the needless elements in the model based upon the 3D Warehouse checklist and highlights them for visual inspection.
o Count Stuff: This menu items allows users to count just one type of element in the model and can highlight it for users also.
o 3D Warehouse Cleaner: This tool allows users to decide which things to remove from the model based upon the 3D Warehouse checklist. The default is all items. Users will have a summary and can see all the items disappear from each dialog, simplifying the model.

Source: www.extensions.sketchup.com

Methods to model Terrain and Other Rounded Shapes

3D modeling has become better and easier after using SketchUp, users can also model Terrain and Other rounded shapes in SketchUp using Sandbox Tools.

Terrain is important thing for many modelers in SketchUp who wants to create a ground to stand on or modeling the ground itself to create a landscape. Terrain can be made by using SketchUp's Sandbox tools, but it also can create forms completely unrelated to terrain. Though, terrain can include in all these other possibilities because the secret is hidden in the geometry. That's mean, while modeling terrain or other shapes with Sandbox tools users actually sculpting a special kind of geometry called a TIN (triangulated irregular network) which generally mean "a group of comprised of triangles" .

In this article, we are going way of start modeling to find Sandbox tools and geolocate TIN. to describe the TINs, the path tell about
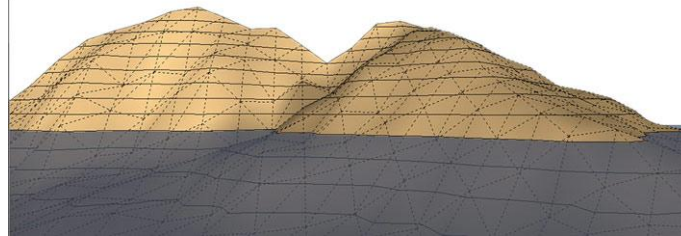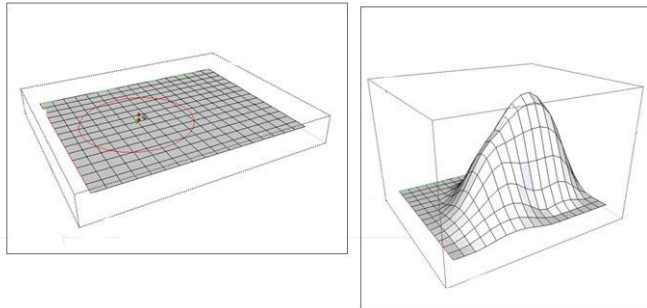

Getting started with creating TIN, users can lines from another import terrain from through SkethcUp's built- can also transform contour drawn into a TIN or may **TINs:** For import contour program or Google Earth in tools. Users lines which are draw a plain

flat rectangular TIN. After having a TIN in SketchUp users can toggle terrain between visible and hidden with SketchUp's layer feature as controlling visibility is the whole reason of layers. After creating or importing terrain, it must be made sure that all the terrain geometry is organized into a single group and then assign that group to layer to control the visibility of terrain. The next step is to sculpt and fine-tine its features by smooving gills and valleys, detailing terrain and flipping edges. The last step is to place other items on its surface.

Enabling the Sandbox tools: To find the Sandbox tools users need to go on the Sandbox toolbar or select Tools>Sandbox and select the tool of choice from the submenu. In SketchUp Pro, the Sandbox Tools are enabled by default. While in SketchUp Make, users also have access to the Sandbox Tools but it needs to be enabled at first.

Geolocated Terrain: While modeling terrain, users can geolocate it or embed geographical coordinates that place terrain at a specific point on the Google Earth. There are a huge number of advantages in the Geolocated models, such as:

o It can study the sunlight and shadows at different times of day and on different days of the year and they both have huge benefits like shadow studies can tell users about if adding a second story in the house will turn a sunny garden patch into a shady place or not. Users can also get an idea of how the sunlight shines into an interior space at different times of day.

o Users can view their models in Google Earth which comes in both free and paid versions that can be downloaded to the computer and it is full of aerial imagery and models. So users can view the model on the site where users plan to build it.

Source: www.help.sketchup.com

Texturing an Arch in SketchUp using ThruPaint
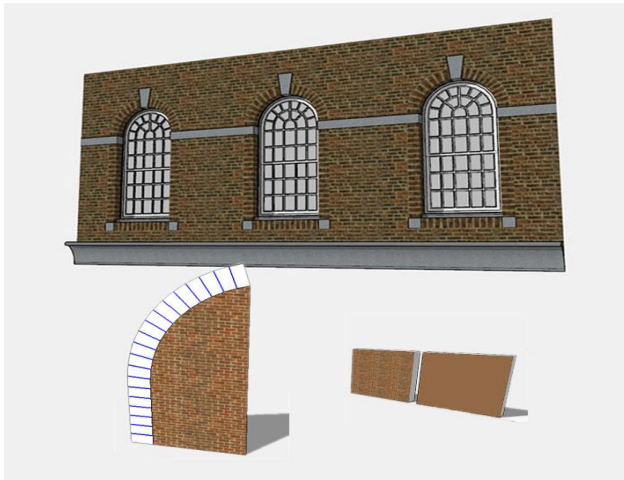
Fredo's ThruPaint is used to texture an Arch using its QuadMesh UV feature and this technique is particularly useful for Architectural models which reflect the real world construction.

SketchUp is full of tools and extensions, all these extensions are found in the Extension Warehouse of SketchUp. FredoTools groups have a number of standalone plugins and come as a single package. It reduces the footprint on SketchUp and avoids individual installation of each plugin in it.

In this article, we are going to discuss about the method of using Fredo's ThruPaint to texture an arch using its QuadMesh UV feature. This technique is only useful for Architectural models that reflect the real world construction using only a texture.

ThruPaint is a plugin for SketchUp that expands the native SU Paint tool with some functions like painting across the boundaries of components and groups, control of the faces and face side, texturing with continuity and texturing edition. It can be found in SketchUcation.

o First things first: But at first, users need to install both FredoTools 2.9 and LibFredo 6.9 into SketchUp from SketchUp's Extension Store directly. After installing them, users can access ThruPaint via Tools > FredoTools > ThruPaint or via FredoTools toolbar. For adding a dedicated ThruPaint icon to SketchUp users need to go to Tools > FredoTools > Default Parameters and under the option "Icons Visible in the Toolbar" they can select ThruPaint option. It will set the icon on SketchUp starting window so user can use it directly from there.

o The topology needed to properly texture in SketchUp: While beginning the work, user will need the geometry to be compliment with ThruPaint QuadMesh UV method. Every face of the arch must be a quad for ThruPaint for applying the texture in a right way.

o Setting ThruPaint to paint QuadMesh UVs: After activating ThruPaint the on screen options need to be set for painting the mesh correctly. If users hover over a face in SketchUp, they can

see ThruPaint highlight one edge Green and the other Red, it is very important as this is related to the orientation of the texture.

o Painting and editing textures with ThruPaint: This extension is used to paint the texture and the option 'All Connected Faces' is selected so, ThruPaint will align the texture correctly. If manipulating the texture is needed further then users can click the surface again to enter Visual Edit mode. The Visual Editor of ThruPaint allows scaling, rotating and translating textures interactively in SketchUp by dragging tool for SketchUp on the right handle.

Finally it can be said from the upper discussion that ThruPaint is a wonderful texture mapping tool for SketchUp which is also easy to use.

Source: www.sketchucation.com

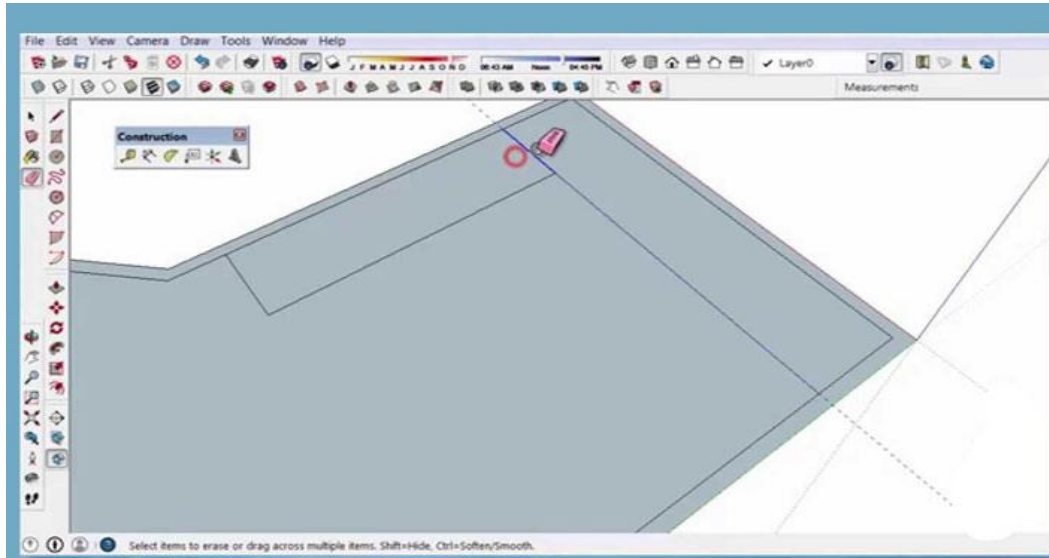TIPS & TRICKS

Details of Axes Tools in SketchUp

Axes Tools is a small utility that reset the axis of components to their bounding box centre or corners and can be found in the SketchUp Warehouse.

About SketchUp: SketchUp or Google SketchUp is mainly a 3D modeling computer program that is used for a broad range of drawing applications used by architects, interior designer, landscape architects, civil and mechanical engineers, film and video game designers also. SketchUp can be getting as a freeware version named SketchUp Make and a paid version with many more extra benefits called SketchUp Pro. SketchUp is software from Trimble Company and there is an online library of free model congregations and 3D Warehouse to which users can add other models; besides that, the program has drawing layout functionality with variable 'styles', supports third-party 'plug-in' programs hosted on the Extension Warehouse to supply other abilities and enables placement of its models in Google Earth. As SketchUp users are most of architects, designers, builders, makers and engineers etc. who works hard to give a nice shape to our physical world, they need great tools to do the work. SketchUp is in mission to bring their best to produce some great tools for drawing as drawing is the key thing of the SketchUp users. They draw to search ideas, to identify the things and to show other people their work that they do with love and love to build; SketchUp understands it truly and trying to improve their software day by day. SketchUp is a worth

useful software for its ease of use, it can be downloaded or installed o computer and right after that user can work on it. Though SketchUp can easily handle but still there are some sides where people will find some difficulties and lots of solve also are there like YouTube tutorials upon SketchUp or visiting SketchUp website or search Google etc. But people will get confused to have lots of information from different places upon one thing so there should a proper place or website where all the answers can be found.

SketchUp Warehouse has various extensions and plugins that allow the users to design quickly and accurately and like all other extensions, Axes tools can be used to bulk reset of group and components axes. This article is going to discuss about another tool named Axes Tools which is used less by users.

DETAILS OF AXES TOOLS IN SKETCHUP

About Extension Warehouse: It is an online resource with various plug-ins developed made especially for SketchUp and these extensions help to add some special tools and features to SketchUp. These extensions can be found for any particular application like drawing or 3D printing and some industry specified tools for architecture, interior design, construction and many more. So basically in this Extension Warehouse people can do the following things:

- o **Users can search extensions by name or as per the functionality.**
- o **They can also install various extensions with a single click of a button.**
- o **Or users can also control all the extensions from easy-to-use location in the My Extension page.**

About Thom Thom: Thomas Tomassen is actually known as Thom Thom, he is a modelmaker with a large desire for physical, digital and traditional design in most kinds of the trade. He is also focused on webdesign or programming and 3D visualizations but he is specialist in 3D modeling, SketchUp, Webdesign, graphic design and web programming.

Axes Tools: It is actually has a small utility that reset the axis of components to their bounding box centre or corners. This is useful for them who imports pesky DWG files where the insertion point of the blocks are too far that makes components jitter.
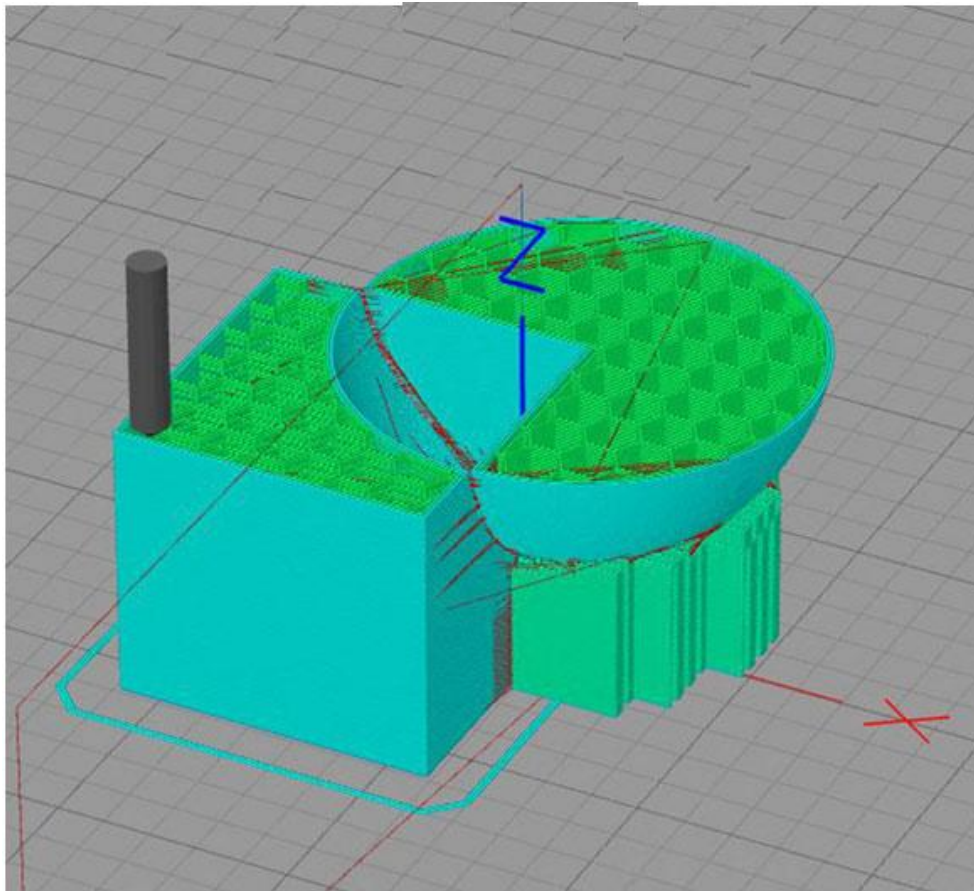
Menus and Toolbars: Plugins > Axes Tools

Requirements: SketchUp 7 or Newer, TT_Lib2 (v2.2.0)

Source: www.extensions.sketchup.com

14 tips to design models for 3D Printing

Nowadays 3D modeling is a famous way to represent works but while using 3D printer to print models, users need to follow little tips for better modeling.

3D printing or additive manufacturing is way of making three dimensional solid objects from a digital life. The creation or making of a 3D printed object is achieved using additive processes and in this process, an object is made by laying down successive layers of material till the object is created. Each of these layers can be visible as a thinly sliced horizontal cross-section of the eventual object. So basically 3D printing is the opposite of subtractive manufacturing which is cutting out a piece of metal or plastic with for specimen a milling machine.

Owning a 3D printer, everyone wants to model something new and excellent but there are some tips that can make your works easier and these tips can be applied on every 3D printing project. Most of the tips can be used with any 3D modeling software, not just SketchUp and they will surely save time, model more accurately, create a stronger model and reduce warping.

Here are the tips for modeling a project in a 3D Printer in a better way:

1. Research previous models: The first step of every modeling is to do some research while working on any software to find out designs before working on it. The purpose of searching for existing models is to reduce the time of making a model twice and also it will help to reverse about the model or help to know some new improvement to create a model.
2. Start with one profile: it is advisable and better not to work on entire model at a time, always identify the critical parts that need multiple iterations and then go on. It will help to create a model in a clear way and the work will complete faster.
3. Brackets are required: To take the perfect measurement of any object, calipers or brackets is needed which allow users to take interior, exterior and depth measurements very perfectly.
4. Use paper to model profiles: It is very important to get an accurate model of a real life project into a 3D modeler but it is also difficult that's why it is way better to design the rough idea on a paper before the final project.
5. Planning the orientation of model: The orientation of a model is critical so it is better to have a rough idea of the shape of model before starting.
6. Taller layers save time: With these early prototypes, using a larger layer height while printing can help to print faster.
7. Use straight lines when possible: If it is possible, use straight lines as they will help to make changes.
8. Always save copies of model at different stages: Saving design at its different phase and creating a copy of the component help to keep a record of the design process that can be useful later.
9. Create a rough model of the attached object: It is a good idea to add a rough model of the object hat need to be attached as it will help to make the model perfect.
10. Integrate other models in project: Sometimes users can import the model and join it to the existing model which will be a reference.
11. Test the prototype: After printing out the model, it needs to be tested thoroughly as it will help to change or add something in the model before the final outcome.
12. Round corners on final model: After creating a final model, make sure to round the corners of the model which will remove sharp edges and give the model a smooth finish.
13. Add breaks on the bottom layers: One of the challenges of 3D printing is wrapping which occurs when the bottom layers of the print cool faster than the top ones. Adding physical breaks in the model will help to reduce the speed.

14. Add reliefs in the middle: Having a model with a large surface area on the bed, users need to try raising some areas up a few millimeters to reduce the amount of filament on the first few layers.

Source: www.mastersketchup.com

Review of 5 most helpful extensions for architectural workflows

SketchUp Extensions make the 3D modeling in SketchUp easier than before and there is a huge list of extensions in the Warehouse, but there are 5 top most useful extensions to work with.

SketchUp Extensions are wonderful and help users to speed up the workflow but there are a huge number of extensions found in the SketchUp Extension Warehouse and for a beginner it become little difficult to find out which ones help most. This choice is based on workflows.

In this article we are going to talk about a list of helpful extensions that have used multiple times in the SketchUp community.

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1.   **1001 Bit Tools:** It is a Freeware with an upgraded professional version. 1001 Bit Tools is a group of tools that simplify the drawing of geometry associated with drawing a structure in 3D.

2.   **Profile Builder:** Profile Builder tool can be used to draw any type of walls, railings or fences. After release of the new version 3, Profile Builder can be schemed "Follow Me" on steroids which allows users to put together arrays of geometry that are copied along the stretch of a user-defined path.

3. **Framer:** Though framing is not used often in the models, but if users want to use it then Framer is the best option. Framer is created by the same guy who created Estimator for SketchUp and Framer makes the work quick and easy to add wall framing into the model.
4. **Vali Instant:** There is a LOT to look at here. With extensions that do everything from cladding to curbs, the Vali instant group of extensions adds great looking detail to the model.
5. **Medeek Extensions:** Originally offering a truss layout tool, the extensions from Medeek have increased into a group of tools that will help users to frame a whole structure from foundation to peak.

Source: www.blog.sketchup.com

8 important tips to navigate Model Interiors in SketchUp
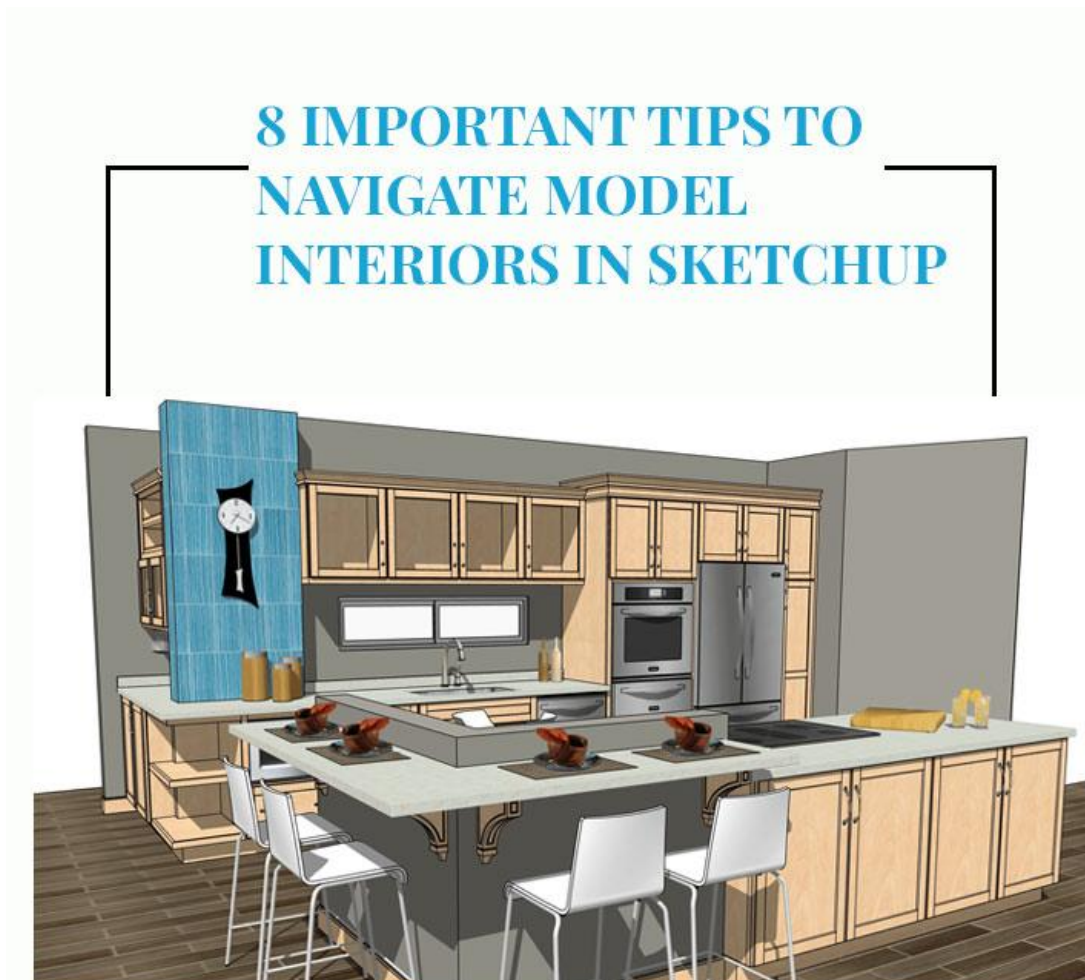
Modeling interior in SketchUp is a tricky job, but there are some simple tricks and tips which can make this tricky works easier. Justin Geis has showed them through his tutotrial.

Justin Geis: Justin Geis is the founder of The SketchUp Essentials and started using SketchUp while he was working as a general contractor in 2008 and after using it he found that SketchUp is extremely powerful that he just started to use it in his personal works also. Then he started The SketchUp Essentials as a place where he could share his ideas of using SketchUp easily through some tutorials and tips to help other users controlling the power of 3D Modeling in everyday lives.

Modeling in SketchUp is easier as the mouse works here as navigation tool that shows each and every corner of the model. While modeling a big house or office modeler need to view and control every position so that he/she can create the model as a live one. Interior design is actually a little bit tough job as here modeler needs to design each and every bit of a model, but navigating a model interior is tougher than that. Here are few tips depicted below which will help every modeler to navigate their models:

1. **Creating a working view:** It is the easiest way to navigate a model without panning camera everywhere in the model, especially orbit tool works as a camera here but most of the time orbit tool doesn't help to view the model properly. Creating a working view will help to navigate a model from top to bottom.
2. **Using a section plane to access hard to reach areas:** working on other parts of a model is little bit tricky as user need to off all the pother layers and then focus on the layers on by one. While using section plane on the model will allow user to work on the hard areas easily and can work in all the areas in one time.
3. **Navigating with the First person camera tools:** Orbit tool may help to navigate the different part of model but it will not deliver a crystal clear view, that's why using the First person camera tools will help o navigate the views.
4. Saving camera views for future use: saving is a great option in SketchUp, while modeling on the interior part it is advisable to save every little changes of camera as it will help in further works.
5. Using Position Camera to set precise camera locations: It will help to go through the model form a fixed point and while navigating camera it will view the inner area of the model clearly.
6. Setting camera height with the Look Around Tool: If user will set the Look Around Tool at a good height it will cover the upper locations and will give a view from the top.
7. Using a wider Field of view to see more in space: it helps to zoom in every corner of model to make the model perfect.

8. Using Walk Around and Collision Detection to move around: These two commands help to walk around and move around a model which gives the user a feeling that he/she is walking into the model and looking every corner of it.

Source: www.thesketchupessentials.com

BLOG

Adding background images to a SketchUp model in four different ways
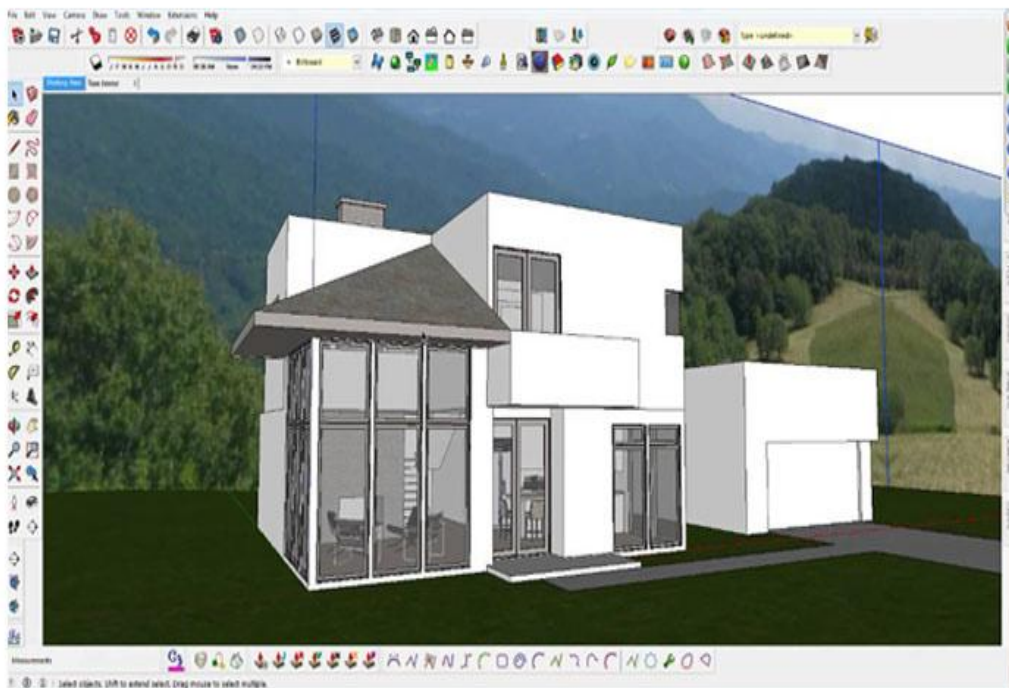
ADDING BACKGROUND IMAGES TO A SKETCHUP MODEL IN FOUR DIFFERENT WAYS

3D modeling in SketchUp has become easier with SketchUp and adding some background images to a SketchUp model can be easier using four different methods.

While working with a SketchUp model, often users want to add some kind of background image through creating some kind of geographical context like adding an image of sky, mountains etc. In this article, we are going to tell you some other way to add a

background image to the model.

Justin Geis has explained this tutorial through his video we are just going to give you a detailed written description of the tutorial.

Justin Geis: Justin Geis is the founder of The SketchUp Essentials and started using SketchUp while he was working as a general contractor in 2008 and after using it he found that SketchUp is extremely powerful that he just started to use it in his personal works also.

Then he started The SketchUp Essentials as a place where he could share his ideas of using SketchUp easily through some tutorials and tips to help other users controlling the power of 3D Modeling in everyday lives.

Here are four ways to add background images in the SketchUp model:

o   The first way is simple one where users just need to draw a face in the background and apply the background image to it. Though it is a simpler version but it is often limited to a few camera angles.
o   In the second method, users can add a watermark to the image; instead of adding actual geometry to the image users can create a watermark in the styles section of model using the background image. This thing will always stay behind the model though it will be a bit difficult to get the scene set up.
o   The third way is to create a curving background behind the model which has many benefits like it allows users to adjust camera angle and while rendering the model, users should get some reflection of the sky in the glass which make it look more realistic.
o   The last way is to download a sky dome which is basically a dome drawn in SketchUp with a sky material applied to it. This sky model can completely covers the model though it needs some UV mapping/advanced texturing to make.

Source: www.youtube.com

6 important things every SketchUp beginners must know

SketchUp is a great tool for 3D modeling, sharing thoughts, making bonding with other users and most of all to learn new and different way of modeling which make a beginner a pro.

SketchUp is a great tool for 3D printing and creating wonderful designs and models. It is free, handy and easy to tackle as there are lot of tools and extensions has added in this software. The SketchUp Extension Warehouse is full of tools that will help in every possible way to model the idea of user and will help to print the best 3D print. But working in it as a new user is a little

bit challenging as new user can get puzzled of seeing too much features in it, so here is a little guide for them. There are 6 main tips every SketchUp user needs to remember which can help them creating their models in a better way easily.

This article is going to describe those 6 must remembered tips that can help every new beginner at the starting of their SketchUp experience. At first we will give a vast description about SketchUp and then the tips are described.

6 IMPORTANT THINGS EVERY SKETCHUP BEGINNERS MUST KNOW

6 most important tips for SketchUp beginners:

1. **Understanding the User Interface:** As SketchUp is a great tool for modeling, users need to be fully aware about the surroundings. There will be many more involved functions can be found by users which are hidden from the view. There are many more things beside normal sketching in it like creating own custom style or adding a material library or exporting model to a different format which need an expert grip on the paths. While knowing the User Interface better, users can explore more menus and become familiar with features and functions which are not available in toolbars.

2. **Using more Shortcut keys:** SketchUp is full of tools and extensions which are hidden in different area of SketchUp so it is impossible and very much time consuming to find them every time while following the path. Rather it is easier to remember them with their Shortcut keys as it is less time consuming and makes the work faster. Developing muscle memory is an important thing in becoming master in SketchUp as it will make work faster, smoother and smarter.

3. **Saving everything:** Software is fickle by its nature and SketchUp is not stable to the old crash. So it is better to save every little thing and set SketchUp to make backup files and the Auto-Save must be set to at least 5 minute intervals.

4. **Using Extensions:** SketchUp is itself pretty powerful software where many tools can be found in toolbars for every need but besides that, there are lots of other tools in the SketchUp Extension Warehouse which will help to modeling a way better.

5. **Keep updated SketchUp:** Working on the latest and greatest version of SketchUp makes it sure that users have the best chance of reducing crashes accessing new tools and being at the cutting edge of CAD design. SketchUp also encourages users to update for each of its major releases so it is sensible to use the current version at every time.

6. **Join a User Community:** Starting of any unknown journey is a challenging task but fortunately, SketchUp has a plenty of awesome communities to share, find and discuss all things related to SketchUp. There are lots of people available in the SketchUp Forum or SketchUp Help Center all the time who will find solution of every little problem.

Source: sketchucation.com

Guide to draw Freehand Shapes

SketchUp's Freehand Tool helps to create hand-drawn lines, like the planter decorations or simple lines and in this article we will describe the way of drawing Freehand Shapes using Freehand Tool.

There are many tools within SketchUp which are useful in creating 3D models or geometry and one of them is the SketchUp Follow Me Tool. It is the Pied Piper of 3D geometry that controls a face collaboratively a path for creating a 3D shape and it is the only thing this tool does. But it has a multitude of applications and enables users to draw complex 3D models with only a few clicks. Follow Me tool is users favorite tool as it is very handy in modeling finishing details that track a perimeter or edge like crown modeling or gutters and also make easier to work with modeling boarded objects like a spindle and curved vessels etc.

About Freehand Tool: SketchUp's Freehand Tool is a handy tool which will help to trace imported drawings, create a2D sketch and decorate models. This tool will help to create hand-drawn lines, like the planter decorations or simple lines. This tool can be found in the following places:

o   Getting Started Toolbar (Click the drop-down arrow next to the Line tool)
o   Drawing toolbar
o   Large tool Set Toolbar
o   Draw > Lines submenu

Drawing Freehand curves or polylines: Users can draw freehand curves on existing faces or individual from existing (but aligned to an axes plane). Here are the steps to follow to draw a curve:

o At first, users need to select the Freehand tool and the cursor will change to a pencil with a curve.

o Then they need to click and hold the tool to place the beginning point of the curve.

o Then the cursor needs to drag for drawing and while drawing, the color of the line matches to the axis perpendicular to the drawing plane. For creating a ployline, users need to hold down the Shift Key while drawing.

o If the mouse button released to stop drawing then the line will turn black.

Editing a Freehand curve: Users can change the length of a curve entity as long as it doesn't bind a face and here are the following steps to edit a curve:

o At first, the Move Tool is selected; it changes the cursor to a four-way arrow.
o The cursor needs to hover over the curve to locate an end point.
o Next the cursor needs to click and drag at the end point to adjust the curve. When the drawing is done, users need to release the mouse.

Source: www.help.sketchup.com

Top 8 Websites for Textures and Materials for SketchUp

3D Rendering and modeling is getting easier in SketchUp with the help of different materials and textures. There are different websites where SketchUp users can find their textures.

Justin Geis: Justin Geis is the founder of The SketchUp Essentials and started using SketchUp while he was working as a general contractor in 2008 and after using it he found that SketchUp

is extremely powerful that he just started to use it in his personal works also. Then he started The SketchUp Essentials as a place where he could share his ideas of using SketchUp easily through some tutorials and tips to help other users controlling the power of 3D Modeling in everyday lives.

We all know that SketchUp models can be made easily with the help of textures but users can only download or find different SketchUp textures from SketchUp extension Warehouse. In this article we are going to address 8 different websites from where users can get their favorite textures for modeling in SketchUp. Here are the details:

The places to find new Textures and Materials for SketchUp:

TOP 8 WEBSITES FOR TEXTURES AND MATERIALS FOR SKETCHUP

o **3D Warehouse:** The first place to find different materials is the SketchUp 3D Warehouse. Here users can find different materials here can download the materials section and use them in their models.

o **SketchUp Texture Club:** Here users can log in as a free member, download textures and materials and can use them in their models. But for rendering the maps or other things it is better to be a member in SketchUp texture Club.

o **Textures.Com:** Here users can download textures for free, logging in as a free member will help to download some different textures for free of cost also.

o **Texture Haven:** Similar as other 3 websites, Texture Haven is also a free website where the textures come with different mapping options, comment sections etc. These textures are in very high quality and come with options to ask for fitted materials so users can easily find their things to use.

o **Shares Textures.Com:** This website is similar as Texture Haven and includes a huge number of free downloaded materials and textures for SketchUp.

o **CCO Textures.Com:** This website includes some cool PBR Materials and textures which are free of cost to download. The textures look seamless and high-quality to use.
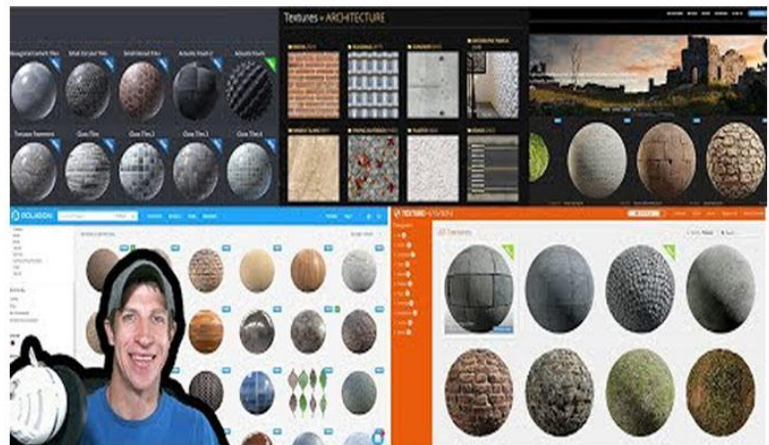
- o **Polligon.Com:** Though this site doesn't have high-quality textures but the textures can definitely be used in the commercial purpose. The free textures come with different maps, ground materials and after signing in they can be easily downloaded.
- o **Quixel Megascans:** It includes a program called Mixer where users can blend different textures and materials together to create a new one. Besides Materials, they have a whole library of different contexts, textures etc. They also have a huge collection of previous used or created textured maps for a guidance of users. They have a certain monthly payment option for users.

Source: www.thesketchupessentials.com

PlaceMaker – A powerful sketchup extension to make 3D cities into models quickly

Placemaker refers to a useful extension for SketchUp that can be used to create 3D cities into your model quickly with a single mouse click.

It fetches geographical data and generates streets, paths, buildings, bodies of water, and more. It is also capable of fetching high resolution map data in SketchUp as well as importing buildings, trees and forests.

Placemaker also allows for importing OpenStreeMap roads, buildings, paths, water bodies, trees, as well as high resolution aerials and transferring these to functional site reference model ideal for rendering or exporting into other applications.

This sketchup plugin is well suited with SketchUp 2016, SketchUp 2017, SketchUp 2018, SketchUp 2019 as well as AutoCAD, Revit, 3ds Max, Rhinoceros, Bentley and Lumion.

The followings are some exclusive features of the plugin :-

Imagery - Mapbox and Nearmap
It can import up to 2.8" (7cm) high resolution aerials directly into SketchUp.

3D Buildings
It can quickly import numerous real 3D building massing models for select locations and cities.

Trees and Forests

With a single mouse click, it can import 3D Forest for different locations and areas.

Roads and Paths

Arrange 3D roads, walks, paths and water into your model. All objects are modeled and render ready.

Model on Terrain

[Placemaker](#) can model and drape buildings, 3D roads and paths directly to terrain.

Building Bundle

It comprises of more than 300 detailed building components.

Export to Revit

With the use of export to Revit function, it can import your model into Revit.

Instant Site Base

It can generate instant site base files to be utilized for modeling, design and rendering.

To download PlaceMaker, click on the following link

Create Smart Building Automatically with Profile Builder

Profile Builder 3 is a useful sketchup extension that can be applied to produce smart buildings automatically with skin, columns, beams, and more. Profile Builder can also be used to reiterate components and extrude profiles with the purpose of generating buildings, walls, and other objects in SketchUp.

Profile Builder is compatible with SketchUp 2016, SketchUp 2017, SketchUp 2018, SketchUp 2019.

Profile Builder is considered as a rapid and compliant set of parametric modeling tools for SketchUp. Profile builder facilitates the users to accelerate their modeling speed significantly. Besides, the models become smarter and adjustable to all the design modifications.

Profile Builder has similarity with Follow Me tool. Profile Builder comprises of an extensive library of pre-configured and custom profiles to extrude which can be repurposed on every project. Your own profiles can also be made and saved to the library.

Profile Builder is user-friendly and the users can adjust how they require the profile to be extruded by modifying its offsets, scale, and orientation along the path.

The most updated version of Profile Builder is 3.0.5 that contains some vital bug-fixes and usability enhancements. The built-in sample assemblies are also upgraded.
Assembler elaborates on the functionality of Profile Builder by extruding numerous profiles in one step. Assembler will be able to add pre-configured components together with extruded path at set intervals. It is ideal for fences, stairs, railings, etc.

Click Here to Try Profile Builder 3 OR Get a Full License