

# COVER STROY 2019

**Editor**

*Subhra Bera*

## SKETCHUP-UR-SPACE THE FIRST EVER SKETCHUP MAGAZINE

### " REVIEW OF A NEW SKETCHUP GUIDE: THE DEFINITE GUIDE TO GETTING STARTED "

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Five ideas to innovate Floor plans and Elevations



SketchUp Talk: About Mastering SketchUp with Matt Donley



Methods to design moving parts in SketchUp for 3D Printing

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## COVER STORY

### REVIEW OF A NEW SKETCHUP GUIDE: THE DEFINITE GUIDE TO GETTING STARTED

Both SketchUp Beginners and Professionals will get a complete guide in SketchUp by following a guide book named “The Definite Guide to Getting Started” by Alex Oliver.

Alex Oliver is the Founder & Lead Instructor for SketchUp School which become a place where professionals go to learn and now more about SketchUp and wants to learn it. This institution established on 2005 and since then Alex and his team have taught SketchUp to over 25000 professionals around the world through SketchUp School’s online Video Course Library and have reached millions more through their popular YouTube Channel named “SketchUp School”. Recently Alex and his team jointly published a book named “The Definite Guide to Getting Started” which is a guide for professionals with detailed descriptions about way of working with SketchUp.

This article is the little overview of this exciting book; though it is a bit fat book to read but I must say it is full of interesting and useful topics on SketchUp and will definitely be a helpful guide to work with SketchUp.

A little about the book: The book is divided into two parts; the title of the first half is “Everything you need to know to get started” and the second half is titled as “Short Intros to Popular Professional Topics”.

The first half or Part I is classified into four wide chapters; among those chapters Chapter 1 is full of points which will definitely make you release the importance of SketchUp, Chapter 2 describes the method of choosing the right version of SketchUp as per your system, Chapter 3 is full of some necessary SketchUp tutorials for every beginner, while Chapter 4 will introduce readers with some advanced features of SketchUp that will help them to move in some critical

part of SketchUp which are described in Part 2.



Part II is little longer than the first half as it consists of seven chapters. Among them Chapter 5 will show the process to create Photorealistic Renderings with other extensions; Chapter 6 discuss about the method to create design presentations and construction

document with the help of SketchUp Pro and Layout; Chapter 7 will help to create Estimates, takeoffs etc. with SketchUp’s reporting tools; Chapter 8 is about creating models for 3D printing; Chapter 9 and 10 will help to use SketchUp in a CNC Workflow and Woodworking Projects, and the last Chapter help to know the experience of projecting a SketchUp Model in VR/AR.

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.

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**Best Wishes**  
**Subhra Bera**  
**Editor**

## EDITOR DESK

### **A LETTER TO THE DESK OF THE EDITOR" TO "LETTER FROM EDITOR'S DESK**

**Subhra Bera: Editor**

Wish our all readers a very Happy New Year; a new year comes with many new things like new resolutions to start, new promises to keep, new people to know, and new relationships to begin etc.

Let's start our first month of the year with new SketchUp related news, blogs, tutorials etc. It is a New Year gift for all our readers for helping them in their work, making their designs easier and better than before.

The last edition of SketchUp-Ur-Space, I mean the December edition was full of useful tricks and news; so in the New Year we thought to present some more new news to the readers again. We are overwhelmed by your support and reviews. Thank you for giving us your precious time, we hope this year we can also deliver you more and more exciting things related to SketchUp; hope you will stay with us and support us like you always do. Let's start our New Year surprise.

Our Magazine, SketchUp-Ur-Space never delays to deliver the latest news, tips and many more unique things about SketchUp for our valuable readers and our December edition is full of them. It has some trendy and exciting news for our eagerly waiting readers.

SketchUp-Ur-Space is a well known and lovable magazine that consists with some useful news and data for the beginner and experienced SketchUp users, designers, architects etc. Our magazine's editorial team always wants to give our readers new and interesting stories, news, blogs and many more other things to enhance the knowledge and skills. This January edition has come up with the same motto and various unknown surprising facts on 3D designing that will surely amaze you.

The cover story of this edition is much more special to us as it is about one of our reader Alex Oliver's new book "The Definite Guide to Getting Started". He and his team have jointly published a wonderful book and it can be downloaded from his online portal.

Next is the Article page having 4 different posts written by our editorial team that depicts about using SketchUp tools and making some new designs? The first article is about Transforming Houses with the description of Alejandro Soriano's work and life; second one tells about modeling a Bag of Chips in SketchUp using tools; third one is about Animating Sections with Scenes and the last one is about the works of Stack Rock Group.

The blog section has come with some detailed description of new ways of working. The first one depicts some interesting things about the SketchUp Essentials, second one is about new extension named TrueBend; third one is about work on Custom Material Libraries in SketchUp and the last one is the way of modeling Table and Stool legs.

Tips and Tricks section has come with some detailed work of various tools like The Outliner Tool in the first one; use of Follow Me tool; third one is about New Profile Builder 3 tool and the last one will tell the use of SubD Extension. At last our news section has come with different prospects this time; the first blog is about some easy and helpful way to use SketchUp Plugins, second one tells about some innovative ideas of renovating Floor Plans and Elevators; third one

is the experience of Matt Donley and the last one is some ways to design moving parts in SketchUp.

Too much there for our readers, hope this edition also pleases you as the previous ones, so enjoy your holiday with our December edition.

So it seems that this edition has published very effective sides of SketchUp and gives some new and interesting news also. Hope readers will enjoy this edition and discover some new side of 3D design.

If you have any queries concerning publication, subscription, troubles navigating the site, please mail us at <mailto:subhra@jobs2india.com>



**Best Wishes**  
**Subhra Bera**  
**Editor**

## NEWS

### “11 EASY TO USE & HELPFUL SKETCHUP PLUGINS”

SketchUp Warehouse is full of different useful extensions that are used in modeling in SketchUp by users but there are 11 extensions which are used frequently.

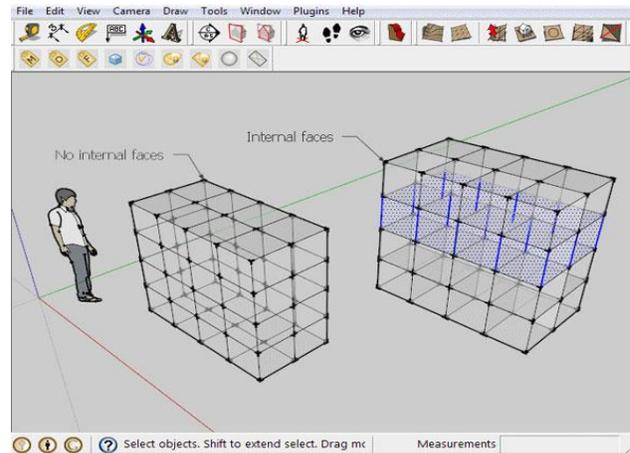
About Extension Warehouse: It is an online resource with various plug-ins developed made especially for SketchUp and these extensions help to add some special tools and features to SketchUp. These extensions can be found for any particular application like drawing or 3D printing and some industry specified 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.

The organization named Fat Pencil Studio uses SketchUp for their all works and among all the other benefits of SketchUp, the plugins which are generally known as SketchUp extensions make the work so great to do. There are lots of extensions or plugins in SketchUp which are used for different reasons and works but the team has chosen 11 great plugins which are best to use for their vast FPS toolbox.

This article will cover the plugins and their functions; the plugins or extensions are: Selection Toys, Selection Memory, Weld, Eneroth Camera Memory, Fredo Scale, Architect Tools, Dropgc, Zorro, Wire Tool, Instant Terrain and Loose to Groups.

1. **Selection toys:** Selection toys is a vital extension for all modelers and for any kind of modeling that allows the users to filter objects in and out of a previous selection. Users can both select and deselect only edges, groups, components or entities that have particular properties such as hidden, soft or smooth etc. the people of Fat pencil Studio, use this extension very much in a variety of ways like for hiding bounding edges, optionally applying materials and more.
2. **Selection Memory:** This extension helps users in remembering the selections made in SketchUp so people will not miss any selection for any model or size.
3. **Weld:** This extension adds the loose edges into a soft curve that can be selected in one click; Fat Pencil Studio uses this tool to prevent extra popping up edges while working with Push/Pull tool on traced geometry. Actually much long arrays will need an extra application of the extension and Weld is expert on this.
4. **Eneroth Camera Memory:** This is a wonderful extension that captures camera views from one model to another allowing remembering the users easily; basically it is a great idea while working between versions of models and wants to copy scenes. When the both models remain opened, it captures the view from the first model and choose "Put to Memory" option and in the working model, users can select "Retrieve from memory" to bring up the view.
5. **Fredo Scale:** It helps to scale normally with the help of native tools in SketchUp.
6. **Architect Tools:** This is a set of tools that comes in easy working on large models with buildings and terrain while the "flatten selection" tool helps to tracing the edges easily. There are two more tools like the "Contour Tool" and the "Project Down Tool".
7. **DROPGC:** It is a shortcut for dropping objects to a contoured surface and DropGC will create the PathCopy extension and fall cleanly onto a piece of terrain.



8. **ZORRO:** It is a wonderful tool to cut the fat and makes it easy to chop off geometry around the edges of the model which don't need to enter into components.
9. **Wire Tool:** It works greatly on drawing catenary curves.
10. **Instant Terrain:** It hangs a continuous, triangulated surface over everything; selecting into surface and using Selection Toys will garb the lines only.
11. **Loose to Groups:** This helps to gain the geometry by ungrouping it and organizing it in something useful.

**Source:** [fatpencilstudio.com/blog/11-stress-reducing-sketchup-plugins/](http://fatpencilstudio.com/blog/11-stress-reducing-sketchup-plugins/)



## “FIVE IDEAS TO INNOVATE FLOOR PLANS AND ELEVATIONS”

The SketchUp Hub has arranged many courses and tutorials for designers to upgrade their capabilities and here are five tips to innovate Floor plans and elevations.

### **About SketchUp Hub:**

Anita Brown has established the SktchUp Hub 3D Visualization and here are a range of courses for helping Interior Designers and students, creating exact floor plans and elevations with a professional touch for the extreme benefit of their business or studies. The SketchUp Hub's total vision is to authorize Interior Designers especially women providing right technical abilities for making exact drawings and creative illusions at professional standards. Besides that, SketchUp Hub creates an available, engaged and fully supported learning environment for presenting the development of STEM related skills to a female driven industry.

In the month of January this year, the Sketchup Hub had announced their first ever 5 Day Challenge where they had challenged designers and SketchUp users to create an awesome kitchen design with the help of Free SketchUp download. The event was a big successful one and many people showed their wonderful skills where the best got the winner prize and made a place for his/her design. After that the SketchUp Hub has focused on designing the Interior sides of houses with elevations, these elevations are actually some kind of visual tools that allow Interior Designers to transfer perfectly their vision for a space, specifically they can work on the design of a wall and other items within nearly view.

Previously there was a course arranged by the SketchUp Hub called the SketchUp Bundle Course which included some individual courses, free downloadable templates etc. Clicking on the course title helped the users to know more about the learning outcomes of every course; but this Bundle does not have the SketchUp Pro license so they have to download or purchase the software separately. Each course is aimed at Interior Designers, Interior Design students, Interior Decorators, Interior Architects, Interior Stylists and Home Staging Professionals without any previous or limited knowledge of SketchUp. Designers who have earlier taken part in the video tutorials for this SketchUp Bundle Course and also took part in their 5 Days Challenge got a beautiful watercolor illustration of a dreamy design scheme for their computer wallpaper that they had created earlier.

Creating this wonderful wallpaper or working hard on the new skills and techniques for designing a new catalogue of precise and professional technical floor plans and elevations doesn't matter at all as they will never give any benefit to the Interior Design business by gathering dust etc. There are some techniques to help designers in upgrading the work method and quality, like according to the professionals, to survive in this digital age and making the business firm and running one needs to stand out, inspire, engage and provide value to:

- **Increase the visibility of the brand**
- **Grab attention of the Target Audience**
- **Increase Sales**

Though applying these things in producing the plans and illustrations needs a lot of commitment, determination, skill and practice which are taught in SketchUp Hub's courses. The motto of these courses is to maximize the exposure of users, showcasing their new skill-set and the uniqueness of the regarded brand.

## Five ways to create Most of the SketchUp Plans:



1. Combine all the plans or illustrations into the recommended website content, for either adding visual appeal or a lovely chunk of creativity or for helping demonstrate the benefits of their service.

2. Including floor plans or elevations (either technical or illustrated) in the online portfolio will help to demonstrate the process of integrating SketchUp plans and elevations into the design process, also help to make benefits and communicate with the designs.

3. Creating engaging content and providing value to the target audience with included plans or drawing in blog posts will provide benefit to the design.

4. Interior designers as business owners

should always handy to use social media for increasing visibility of the brand and to drive traffic for increasing sales.

5. Designers should never miss the opportunity to communicate and promote their brands.

Source: [sketchuphub.com/sketchup-plans-elevations-interior-design-business](https://sketchuphub.com/sketchup-plans-elevations-interior-design-business)



### "SKETCHUP TALK: ABOUT MASTERING SKETCHUP WITH MATT DONLEY"

Sketchup team has been focusing on making their website and tools easier to use for their users, the also started a page called sketchup talk where people will find relative matters.

## 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 tremble 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.

## About sketchup talk:

It is a platform for the people who want to keep updated with sketchup knowledge themselves while they are not working with their computers; this platform offers them the recent talk about different objects. Every sketchup professional uses this platform to publish their wordings, thinking and new updates about different tools in sketchup.

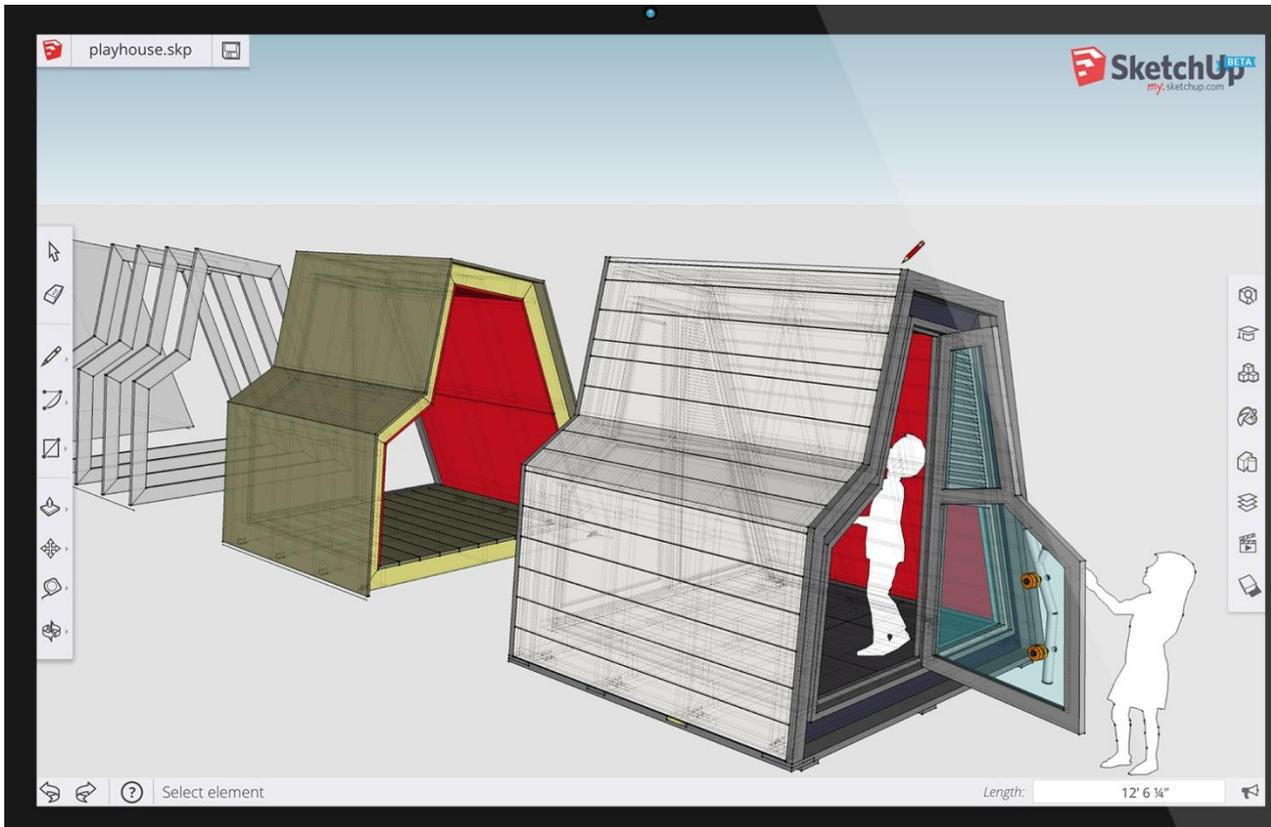
This time matt donley has taken part in the sketchup talk about the methods which help him to become a master in sketchup. Matt donley is one of the brains who are behind sketchup.com; this is an online training resource for sketchup users around the world. Besides being a sketchup professional, he is a carpenter and visual artist who were drawn to sketchup for its easy handling capability, use and the endless ways it can be applied to many projects.

This time in sketchup talk session, matt has shared his journey from being a tradesman to online trainer where he has become familiar with the sketchup team and writing and publishing his book "sketchup to layout for architecture."

This episode of sketchup talk, Caroline, Aaron and matt discuss on the following topics:

- **The average sketchup week for matt**
- **Building and launching an online training program**
- **How matt uses sketchup to find discrepancies in design**
- **Writing and publishing a book with nick sonder**
- **How the sketchup team met matt donley**

**Source:** [blog.sketchup.com/article/sketchup-talk-mastering-sketchup-matt-donley](http://blog.sketchup.com/article/sketchup-talk-mastering-sketchup-matt-donley)



## “METHODS TO DESIGN MOVING PARTS IN SKETCHUP FOR 3D PRINTING”

SketchUp is famous for its 3D printing models and objects but the method of creating design moving parts in SketchUp for 3D printing is a matter of practice.

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.

SketchUp is just made for 3D printing and designing in SketchUp is cool as 3D printing is something that moves is cooler and unique than that. In this article we are going to discuss about a few features that can be include by the users to make their creations more than just interestingly shaped hunks of immobile plastic. Aidan Chopra and Rebecca Huehls this time comes up with new tricks about 3D printing in SketchUp.

## Captive Joints in SketchUp:

A Captive Joint is basically a movable connection that comes out from the previously assembled and working 3D printer. Captive joints are mechanically simple links, ball joints and chain links but they are very powerful. A 3D printer can quickly made objects with hundreds of captive joints that may take a lot of time to build by hand. As there are many possible action figures, clothing and chainmail which are the examples of simple captive joints assembled into complex structures.

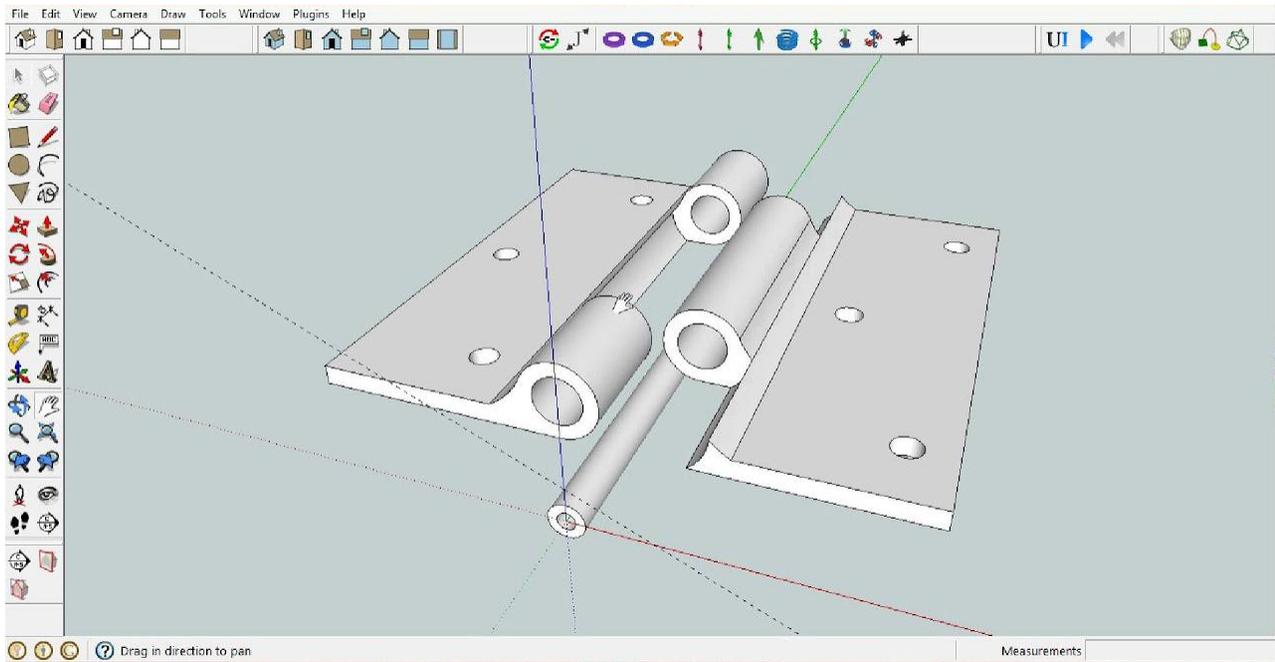
## Creating Captive Joints in SketchUp:

Though SketchUp is an easy tool of creating 3D objects though making captive joint needs many trial and errors. Users need to do experiments to get the perfect mixture of clearances and shapes. Here are some rules to keep in mind while working on captive joints:

1. Components should be used to build structures with captive joints as they let the users to modify all the joints automatically.
2. Designing on captive joints depend on using of the specific 3D printing technology; SLS-based 3D printers can build captive joints with millimeters across while FDM printers make strong joints.
3. As a structure is only as strong as its weakest part so a joint should be made a little mixture of fine and hard structure.
4. As 3D printing is cheap and with captive joints one is pushing the limits of technology so objects need to be tested before work
5. **SketchUp Pins:**
6. SketchUp pins are small, round cinch fittings that are pressed into the right place to create a connection and they can be a flexible replacement for hardware. As pins like bolts come in exact size and shape as per the need of users and they can also print more while running out.
7. While designing the pins, users need to make them one flat side as it will give them a way to build the pins without using support material but keep the tongues horizontal to create platform.
8. Making pins into components let them modify easily at once it is needed to do.
9. Designing a project with pin joints, create an effort to standardize around a small number of pin sizes as it will keep things clean and simplifies assembly.
10. **Loose to Groups:** This helps to gain the geometry by ungrouping it and organizing it in something useful.

Gears in SketchUp: They are great to create motions or transferring movement through a mechanism; they exist in every mechanical device like in some form or other since a long time and are the basis of an in calculable number of smart devices. Making of gears is fun thing and here are some steps of making it easily:

1. Gears need to have clearance between their surfaces to work well.
2. There is a SketchUp extension named Involutes' Gears that automates the process of making gears; this extension is not available in the Extension Warehouse so download it from sketchup gear plug-in through Google.
3. Creating optimized gears from scratch is a technical art form so practice is needed.



Source: [www.dummies.com/programming/google-sketchup/design-moving-parts-sketchup-3d-printing](http://www.dummies.com/programming/google-sketchup/design-moving-parts-sketchup-3d-printing)

## ARTICLE



### “TRANSFORMING HOUSES: ORI AND THE SHAPE-SHIFTING FUTURE OF DWELLING”

SketchUp user and Architectural Visualize, Alejandro Soriano has been working with SketchUp from a long time and has discussed about his works and interest in a current interview.

This article is dedicated on Alejandro Soriano and his awesome creations; here are some details about the creator and his creations. It is a description of the interview between Alejandro Soriano and Charlotte Sheppard.

In every city, where the areas are typically metropolitan based people face problems during the living and have to adjust, so Ori, Inc. is working on giving a new form of living in comfort.

Aristodimos Komnions is a well known SketchUp user; before joining SketchUp he worked as an Architect-Engineer and Urban Designer for more than ten years. He likes to find new ways of working in every field and is fascinating to imagine the future in a brand new way. So he has taken an interview of the CEO of Ori, Inc; it is a startup dedicated on smart furniture that increases the use of small flats and restricted spaces through shape-shifting practically. Hasier Larrea is the engineer, mastermind and present CEO of Ori who has shared his thoughts with Aris about working with SketchUp on the projects.

This article is the brief description of the conversation between them; Hasier has discussed and shared a lot about his works.

### **A little about Ori, Inc.:**

“Ori” the word derives its name from the word “Origami”, is a Japanese art of folding paper for creating beautiful and extraordinary things; Ori is a prefix for something magical to come; this company is fully informed about lack of interior space, especially in high-density metropolitan innovation places around the world. Places have become too expensive to be stagnant and unresponsive. Ori is inventing something incredible through the help of technology and design that will create lively environments that act and feel as they are virtually bigger.

### **Something about Haiser and their work:**

Hasier Larrea, present CEO of Ori is also a mechanical engineer, designer and an eager SketchUp user who has a different thought about managing the living space in the urban area. In his words, urban space has become too valuable to be motionless and unresponsive so it is the right time to authorize people to live large in a small footprint by carrying the robotics world into architecture. Their first launching product is just one little example of a world where furniture will have different roles; in 2017, they had used beta pilots in ten cities across North America and now they are going to deliver commercial systems starting at Boston, New York and DC.

### **Experience using SketchUp:**

Hasier has learned SketchUp while he was doing his internship in a small design firm in China that developed and fabricated new store ideas for European companies in Shanghai. His first SketchUp model was the store of a German Kitchenware Company and after that he just fell in love with SketchUp, with its smooth process, its tools, easy to handle things everything.

While designing he focuses on speed of repetitions and for him it is a main metric in prototyping phases; one can learn more in 5 minutes with a prototype than in 5 weeks of discussions and brain will help to produce much more quickly. SketchUp has helped him in two ways: he can now quickly sketch important concepts of new Ori systems and import models of their existing detailed Ori systems and show them in the context of architectural plans. They mostly use SketchUp for the earliest concept designs in the context of 3D apartments and use those models for internal discussions around whether the concept is right or not.

Haiser is a big fan of “Pencil Sketch with Darker Traced Lines” to make some quick models; they also used AutoCAD for furniture manufacturing, SolidWorks or Onshape for mechanical engineering. His favorite tools for quickly prototyping of a new concept are Arduino for electronics, Processing for software development and SketchUp for 3D design.

### The future thoughts:

In Ori, everyone is desire to help people seeing them space in a different way and prove that more square footage doesn't need more functionality and they have created a lot of space in the world that can solve the housing challenge.



Source [blog.sketchup.com](http://blog.sketchup.com)



### “MODELING A BAG OF CHIPS: NATIVE COMMANDS VS. EXTENSIONS”

Designing a simple pack of chips might sound easier using extensions but it can be also done by using Native Commands; here Aaron used both processes to know the easier one.

Aaron Dietzen this time comes with his new useful creation of importing and exporting via SketchUp Shop which is the newest thing for SketchUp users. This article will describe the whole process according to Aaron and his video tutorial where he used two different processes to design a simple pack of chips and there are also tutorial links given below.

### About Aaron Dietzen:

Aaron Dietzen is mainly seen in various SketchUp Live or any of the Skill Builder videos or been on the SketchUp forum, that means Aaron is fond of SketchUp and serving as a SketchUp employee for two years with more than ten years in the software. He is more than just a simple

Trimble employee; he is a true SketchUp fan. He spends his free time in designing things in SketchUp and loves adventurous works.

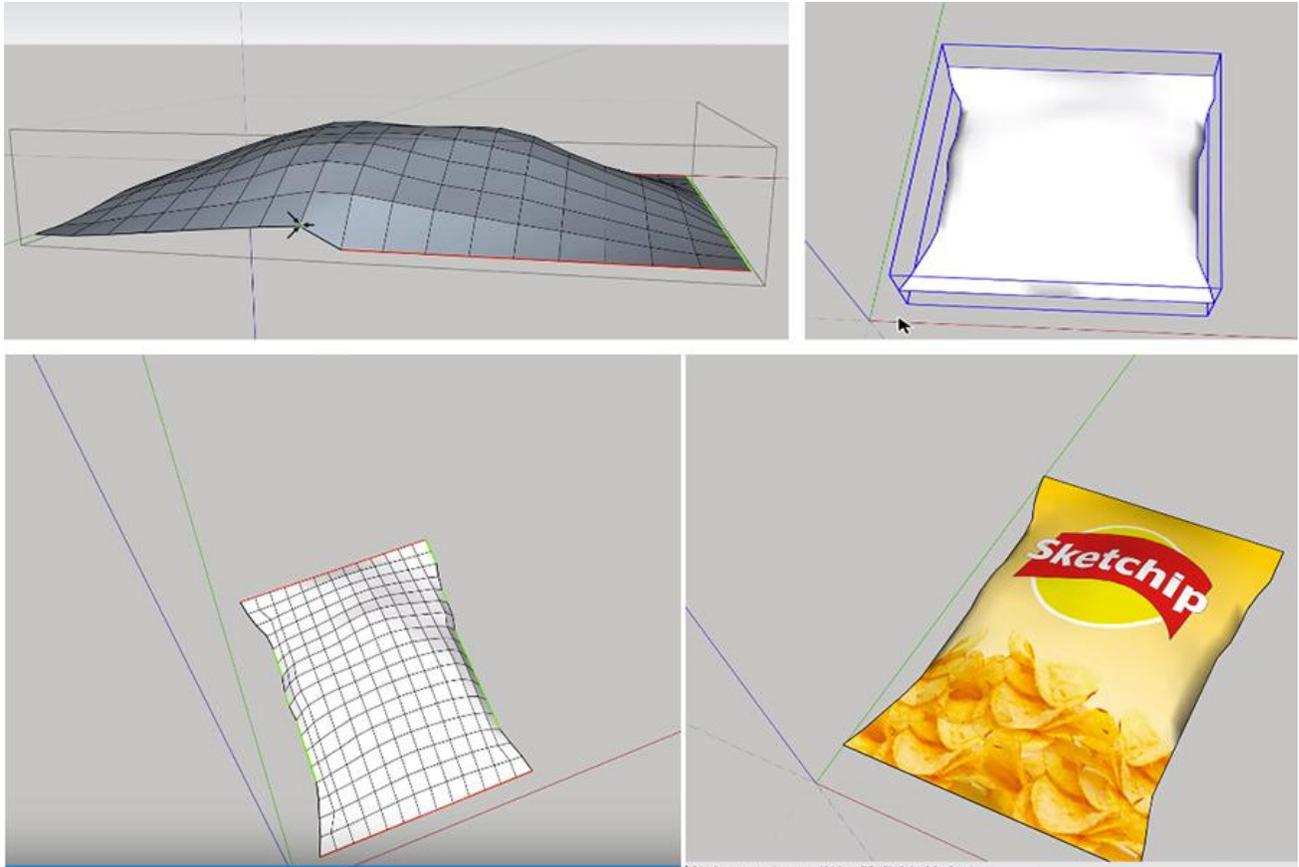
This time Aaron has decided to model something which is a little off the beaten path like a bag of chips using two kinds of tool; native and extensions.

### **Modeling a Bag of Chips using Native SketchUp commands:**

The Sand box toolset is a great set of tools helping in modeling things like sandboxes, landscapes etc. and this time this toolset is used to draw a simple bag of chips. So in the beginning of the model, Aaron opened the SketchUp pro window and at the left side there is the Sandbox toolset; he took the Grade command to draw rectangles representing a bag of chips; next he took the Smooth Tool and as a circle worked on it. Using the Smooth Tool can help to lift the ground base either up or down; he just lifts up the middle portion to give it a loaded packet; next he worked on the edges, actually he at first made the half of the bag and next made exactly other half. These halves are lined perfectly aligned with each other and shaped well; he just copied the half used the move tool and using group tool he flipped the other one. The two halves connected properly without leaving any space between them; it should be keep in mind that a bag of chips is not truly rectangular shape so using sandbox toolset anyone can easily lift or align any corner or line or center to any direction perfectly. To give the sides the exact shape of the chips bag; he used select tool, move them towards center and used smoothing line, clicked triple to make it a whole group. Then he used the paint bucket tool, used Import tool and imports an image of formerly created chips bag and placed it.

### **Modeling a Bag of Chips using bunch of extensions:**

This time Aaron has modeled the similar packet of chips but used some extensions also like: Soap Buble and Skin from Josef L, Vertex Tools from Thomthom and Fredo Tools from Fredo6. At first he started to draw a regular rectangle shape using normal Rectangle tool; next he selected the geometry and Click on the Generate Skin Button from the Soap Skin option; it actually create a new geometry upon the existing one on which he worked on. Then he selected Grade and clicked the Buble button he entered pressure towards enter that pushed the center of the object, the n he made the exact copy of this half and moved it aside. Next he flipped the other one and placed it upon the previous one; here the edges are aligned perfectly as the Soap Skin option does it already. Now he used Vertex tools to make the crumbles on the sides, smoothed the thing and can paint the whole model using many existed extensions an even can give a name also.



Follow the link for Native SketchUp commands [www.youtube.com/watch?v=2CJ6ddtBxtw](http://www.youtube.com/watch?v=2CJ6ddtBxtw)



### “ANIMATING SECTIONS WITH SCENES IN SKETCHUP”

SketchUp’s two specialist Aidan Chopra and co-author Rebecca Huehls has written the book the SketchUp for Dummies where the way of Animating sections is discussed.

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

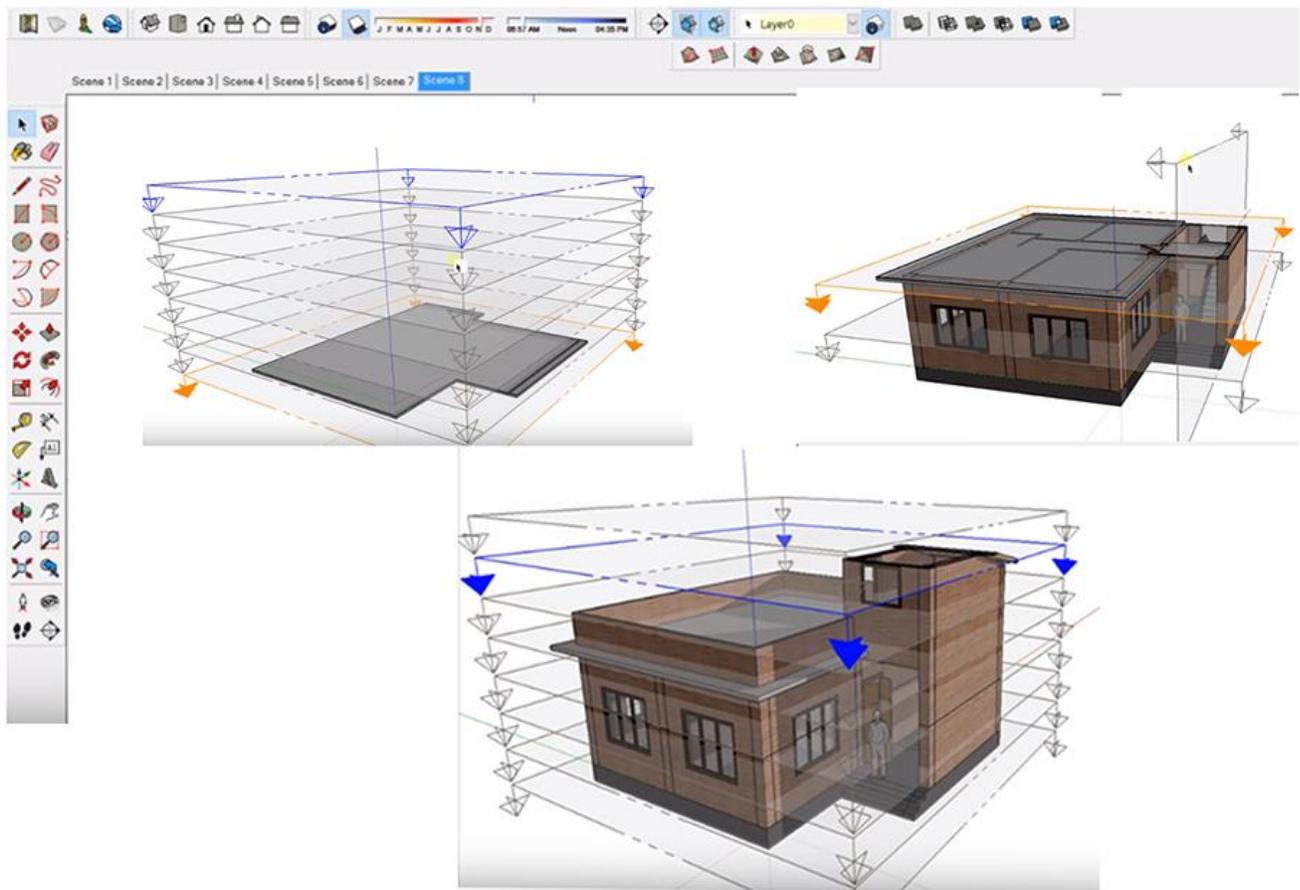
and love to build; SketchUp understands it truly and trying to improve their software day by day.

This article is going to focus on drawing some Animating sections with scenes in SketchUp and this tutorial is given in the SketchUp for Dummies site.

**Aidan Chopra** was a beloved member of the SketchUp team for 10 years; he is the creator of SketchUp Blog where SketchUp members and professionals share their new designs and tells some tips and tricks to design various designs that help users a lot. This Blog has attracted huge number of people and helps them to know more about SketchUp tools and extensions, moreover that users can now easily use SketchUp in their everyday life. Aidan also taught countless classes on SketchUp, he authored the SketchUp for Dummies Book.

### Animating Sections with Scenes:

Uniting section views with scenes for creating an animation is a useful and impressive way to exhibit the SketchUp models and it is a basic idea that scenes are used to create animations where the section planes can move inside the models. Here some reasons which are effective to use this technique, such as:



- If user has a building with many levels then he/she can create an animated presentation that will show a cutaway plan view of every level.

- An animated section plane is also used to “get inside” in the models easily and it is an easier act than simply hiding certain parts of it.
- To show a relationship between the plan and section views for a project with the help of an animated section plane helps the users to discuss the concept of different architectural views to 3D beginners. Some basic steps are listed here that will help to create a basic animation:
- First of all a section plane has to be added to the created model.
- Next a scene has to add to the same model.
- Now another section plane has to add to the model and it can be done in two ways: 1) the Section Plane tool can be used to create a brand-new Section plane and it is fur most the simplest option that makes it right choice for beginners. 2) Or users can use Move tool to copy an existing section plane but make sure that the new section plane is in the active mode which will cut through the model. In case it is inactive, context-click the section plane and select Active Cut from the Context menu.
- Then another scene has to add to the model which remembers the active section plane.
- At last the users can view their added scenes through the animations; here one can see an animated section cut as SketchUp transitions from one scene to the next. To enable scene transitions chose Window> Model Info> Animation Panel> check in the Scene Transitions box.

Source: [www.dummies.com/programming/google-sketchup](http://www.dummies.com/programming/google-sketchup)



### “THE WORKS OF STACK ROCK GROUP: A TEAM OF LANDSCAPE DESIGNERS”

The Stack Rock Group is focused on delivering wonderful projects to the world and in their every project they are using SketchUp that makes their work easier.

Trevor Ball is a designer and partner at Stack Rock Group, around 10 years earlier he was given free reign to choose a 3D modeler for making architecture designs and he chose SketchUp. After that in these 10 years he has become the lead 3D designer, Trevor and his team use SketchUp for all of their visualization projects. He has given an interview to Caroline Early where he has shared a lot about his company and his work, this article is just a little description of that conversation.

A little about Stock Rock Group: It is an eccentric and creative Landscape Architecture firm based in Boise, Idaho and they are creative idealists who can see every kind of possibilities. They usually set foundation of project with skillful and right questions that help their clients to clarify their personal and business goals, needs, wants and desires etc. Usually the group guides general contractors, construction managers, homeowners, landscape and building contractors, building architects, real estate developers, corporations, institutions, municipalities, wineries and vineyards through their individual attention and detail excursion for every project. Their collaborative, thoughtful process helps clients to grow their businesses, project sustainability and grows many more positive impacts on their environment.

Stock Rock Group is also called a “SketchUp Firm” as all the landscape architects know that it is very necessary to express their designs to clients in a decent and culinary way for which they use SketchUp in all their 3D projects for strong visualization. Modeling in 3D also helps their clients to understand fully about the site which gives them the feeling about the final project and also allow the architects to make any further change in the project. SketchUp helps them to import the linework of every concept and model them quickly that helps them to meet the deadlines and client meetings.

Reason to become total SketchUp techie: Trevor calls himself ‘total SketchUp nerd’ as he has been working with it since ten years, everyday and he loves SketchUp’s native commands as it gives him the ability to customize toolbars, help to find numerous groundbreaking extensions. According to him, SketchUp has any kind of extension for users for any field and the SketchUp Community forums have some of SketchUp Sages that will answer any asked questions by the users in a record time plus there is also other helpful users and SketchUp team members.

The team at Stock Rock Group: Though Trevor and his helpers is a part of a small team which is an 11 member’s team currently at Stack Rock Group and based in Boise, Idaho but has a growing office in Salt Lake City where they design projects all over the country like from California to Florida and everything in between. All the members know that they have the chance to make this firm exactly the place they want it to be, for which they are very serious and focused on their works. Moreover that, they don’t believe in finding the area of improvement rather they like to improve in every bit of their work. This little team is so dedicated and talented that it can handle a lot of projects around Boise like from small backyard planting, parks to medical and college campus, luxury residential properties, corporate campuses etc. and many more.

Some projects handled by the team: One of their main commercial projects was the HP campus located in Boise which is the first Sustainable SITES Initiative certified corporate campus in the world. SITES are the United States’ Green Building Council sustainable rating system for landscapes. This campus is above 200 acres where are 46 acres of moistened turf grass; 36 acres of active farmland etc. This project is like an investment in the local ecosystem services and as a sustainable model for site users and the community that become a huge success.

They are continuously focused on taking care their current clients and working on new projects; also unfinished with VR and alternatives routes for rendering.

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.

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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.



Source: [blog.sketchup.com/article/stack-rock-group-team-landscape-designers](http://blog.sketchup.com/article/stack-rock-group-team-landscape-designers)

## TIPS & TRICKS



### “THE MOST UNDERUSED SKETCHUP TIP: OUTLINER TOOL”

SketchUp’s most underused tool is Outliner tool that will save the time and also stay arranged while working in SketchUp and has some hidden features.

In this article we are going to discuss about benefits of using the Outliner Tool in SketchUp that can save both time and stay organized.

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

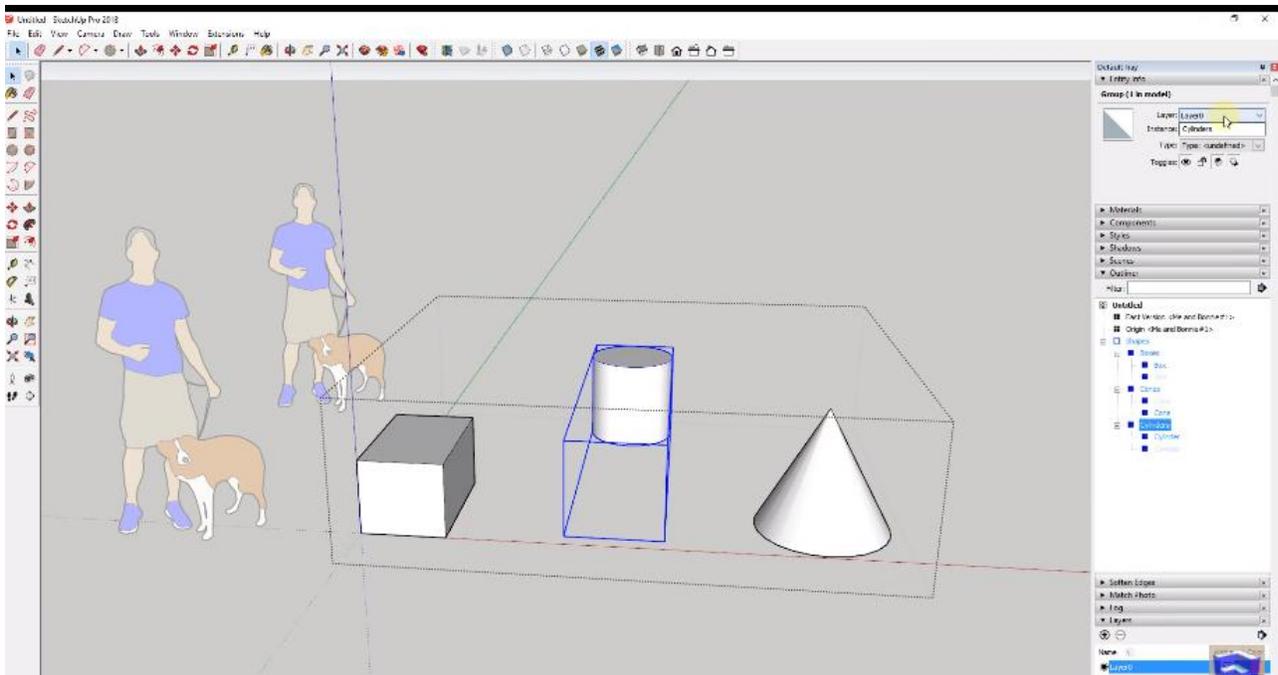
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#### *Outliner Tool:*

This tool works in very simple way, whenever a group or component is created within the SketchUp Model it automatically will be visible in the Outliner and also user can see the name of the component in the outliner. This tool also works with a created box like if a user creates a box, selects it and makes it a group; then it will automatically shows up in the outliner. The noticeable thing is that a group will arrive with a single box next to the Outliner without any brackets and if a component is created constraining a set of brackets then may an associated name will be created with it. An object can be renamed in the outliner through two easy steps- 1) by right clicking on it and selecting the option “rename” or 2) users can go to the entity info for the object and can rename it there.

The outliner also helps to show individual objects, nested objects, meaning groups inside groups etc.; that means creating a copy of the box and group it one can get a new group within the outliner that can be extended and minimized. This will make easier to get to nested objects and allows to keep a really pact view; if users create different shapes and want to give name the individual shapes, then at first the shapes need to group by shape type, next group all of them in to a group called “Shapes”. All groups can be named in the same way to keep remainder of contains and can get them easily in the time they needed. But components will show in a little different way like they will have brackets around the component definition and this the name of all copies of this components will share, more than that each one of these individual components can have its own unique “Instance name” which is the name of the individual object.

These are the features that can get in the previous versions of SketchUp but in the new version of SketchUp 2018 one of the features which is that the section cuts now can show up in the outliner so the users can use the outliner to arrange the section cuts which is very important as it is the only way users can have multiple section cuts active instantly and can have them inside different groups. Besides that, users can also adjust and view different visibilities inside the outliner which can hide the geometry but still be grayed out in the outliner. To unhide the hidden geometry, users just simply need to right click on it and select the option “unhide”; it is important to know that geometry on a layer that is turn off will not show up in the outliner until it is turned on again. Users can also move and change groupings for objects within the outliner with just clicking and dragging; users can also explode already created groups by right clicking and selecting the “explode” option.



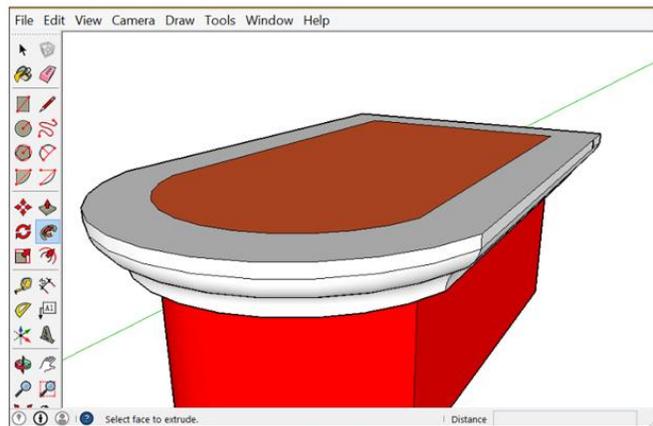
Source: [www.thesketchupessentials.com/outliner](http://www.thesketchupessentials.com/outliner)



## “PROJECTING WITH SKETCHUP FOLLOW ME TOOL”

SketchUp users have worked with various tools in 3D models and among them SketchUp Follow Me tool is one that is used to control a face collaboratively along with a path.

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.



This tool can be found in the places of SketchUp like: Tools menu, Edit Toolbar, Large Tool Set Toolbar and Tool Palette in macOS. Here are some examples of applying Follow Me tool in different modeling:

### 1) Automatically projecting a profile with Follow Me:

It is the easiest method of all and usually preferable way using the Follow Me tool, the method follows the steps to extrude the face automatically. At first users need to draw a profile of the face that needs to follow the path and this profile has to be nearly perpendicular to the path; then using the Select Tool the continuous set of edges have to be selected that depict the path. Next select the Follow Me tool and click on the created profile where the surface is projected automatically along users' preselected path.

## 2) Manually projecting a profile with Follow Me:

Extruding or projecting a profile along a path manually is a matter of a bit more work but users can easily control the direction the extrusion goes through some steps. Users at first have to identify the path for the extrusion, they need to draw a face or profile that wants to follow the path and this profile has to be perpendicular to the path. Then select the Follow Me tool, click and drag the created face along the path; while dragging the mouse pointer will touch the created path and SketchUp will automatically highlight the path in red color. If the starting edge does not start the profile, then Follow Me will start extruding at the edge; at last click to finish the Follow Me operation after reaching the end of the path.

## 3) Modeling a lathed shape with Follow Me:

Follow me tool can also be used to replicate a lathe through the following steps: at first draw a circle using the Circle tool; next the Line, Arc and Freehand tools are used to draw a cutaway of half of the final shape. Now the cutaway will create a face which is perpendicular to the circle and the bottom of the cutaway aligns with the center point of the circle. Now use the Select tool to select the circle, next click on the Follow Me tool on the face of the cutaway; this particular step needs some time to complete.

Source: [help.sketchup.com/en/sketchup/extruding-follow-me](http://help.sketchup.com/en/sketchup/extruding-follow-me)



### “NEW PROFILE BUILDER 3 FOR SKETCHUP”

SketchUp's Profile Builder 3 is a brand new extension that has recently updated and has various new tools and features especially designed for the users to create smart profiles.

In this article we are going to discuss about Profile Builder 3 extension in SketchUp through Geis's tutorials and here are some information about this tool.

## 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.

## Profile Builder for SketchUp:

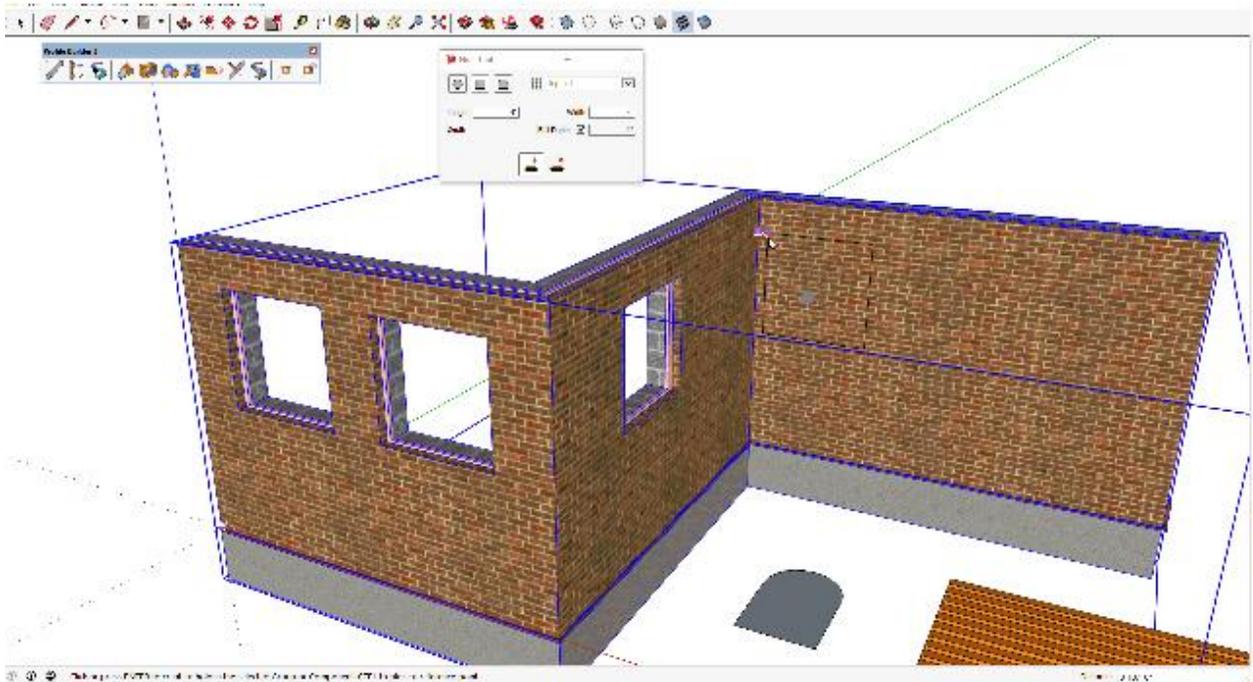
This is a fast and responsive set of parametric modeling tools for SketchUp and it is an essential SketchUp extension for thousands of SketchUp users all over the world. Profile Builder helps users to model faster than ever before and also make the models smarter and adaptable to design changes. The base of Profile Builder has the capability to create smart emissions or Profile Members using parametric profiles; and a profile can be of any shape or maybe even a polyline. Not this, Profile Builder can also help to create smart mouldings like framing, piping, railings, roofing, walls and foundations so there are lots of possibilities. Recently it is updated from the older one and lots of new features are added in it; it contains lots of new tools and features that are simply designed to help users in creating smart profiles within SketchUp.

## Features in Profile Builder 3:

Here are some new features discussed that are included in the updated version-

1. **Building along multiple paths:** This new version of Profile Builder allows users to extrude profiles along multiple different paths at one time. It also can handle any path in its way and will always maintain the expected orientation of the Profile.
2. **Build Discontinuous:** This feature allow users to fix joints where objects turn as single objects, rather than just one continuous object and also can adjust whether the profile follows around the curve or if it begins a new profile at the junctions.
3. **Auto Assembler:** This feature will try to create an assembly base on an example object that users have drawn. The Auto Assemble feature can simply create a multitude of different assemblies with one click of a button; it can be done with some simple steps, at first need to create the arts need to assembly then selecting them and clicking 'Auto-assemble' will do the work.
4. **Span Assemblies:** They are anchored between adjacent component parts and allow sag, curve etc. The Profile Builder Assembler helps to create and save fully customizable parametric smart assemblies.
5. **Hole Tool:** This tool allows users to cut holes in their profiles that they have made and it is a much waited feature in Profile Builder as in the previous version this feature was absent. It also can cut through nested groups and components with ease; objects can be modified and the holes will be re-generated in the proper location.

6. **Set height of Assemblies:** Now the height of various assemblies can be set simply by entering a new value in the height box in the Assembly dialog that allows quick height adjustments.
7. **Live Profile editing:** This option helps to select a profile, and then adjust it so that all instances adjust automatically without having to go back and adjust individually.
8. **Split/Edit Complex Members:** This tool allows splitting different parts of extruded profiles into their own objects.
9. **Post-editing tools:** Any smart profile member or Assembly created with Profile Builder can be edited after creating it only needs to adjust intelligent parameters.
10. **Smart-Path Selection:** The Smart-Path Select tool can quickly select a specific path of edges among other complex geometry.
11. **Revolve a Profile:** One can also revolve a Profile in a click and create a parametric 3D revolved Profile member and can be done quickly.



Source: [profilebuilder4sketchup.com/features](http://profilebuilder4sketchup.com/features)



### “SUBD EXTENSION IN SKETCHUP”

Thom Thom’s new extension SubD has various tools for 3D modeling though the work on this extension is still under process; it is a new member in SketchUp Extension 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 model maker 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.

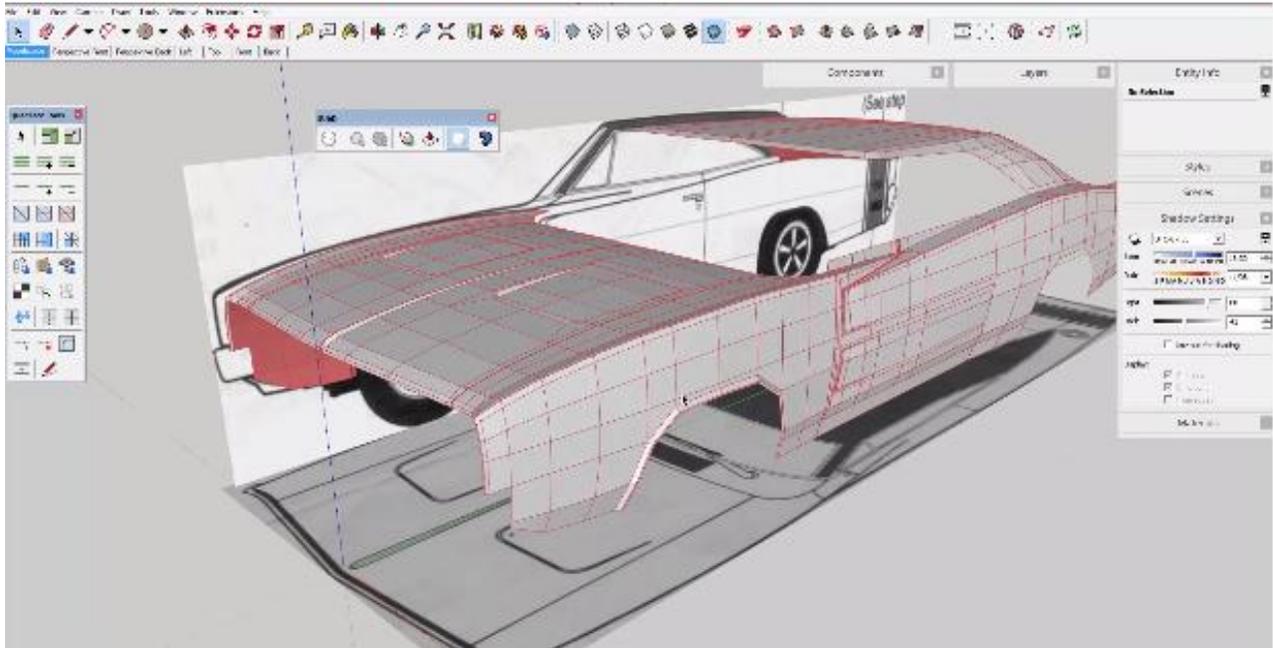
### About SubD:

SubD is another extension by Thom Thom and there are various examples and about it's working on models. It is a parametric subdivision extension for SketchUp which is optimized for quad-based workflows. It is used to create different models within SketchUp; using free tools like QuadFace Tools will help to create meshes with quad-topology and subdivide and crease with SubD.

### Here are few examples the tools under SubD and their use in various models:

- **Subdivide to Smooth the Mesh:** At first, users have to select a group or component that have only faces and then turn Subdivision on or off. Next adjust the smoothness through increasing or decreasing the number of smoothing iterations and here turning the subdivision off for returning to the control-mesh whenever it is needed to edit the geometry.
- **Refine the Mesh with Creasing:** This option helps to create creases in the subdivided mesh for refining the shape without having to add extra control loops in the control mesh.
- **Optimized for Quads:** SubD uses a Cat mull-Clark founded algorithm for the subdivision and this kind of subdivision is improved for quadrilaterals. Here for each subdivision each quad produce four new quads and each triangle produce three new quads; whether other polygons are triangulated prior to subdivision.
- While working with quad based meshes users faster find the need for quads where the vertices are not coplanar and in SketchUp this is a challenge as SketchUp's Auto-Fold feature will crack a quad into two triangles once it's vertices isn't coplanar any more.

The extensions to work with quads that are not coplanar needed to be able determining which pair of triangles represent a quad and there is no official standard for this though the de-facto standard is the QuadFace tools type of quads. The definition of a QuadFace Tools quad is that two triangles share an edge which is soft and smooth with Cast Shadows turned off; this is very much recommended for installing QuadFace Tools for assisting to create quad based meshes for subdividing with SubD.



Video source: [extensions.sketchup.com/en/content/subd](https://extensions.sketchup.com/en/content/subd)

## BLOGS



### “ABOUT THE SKETCHUP ESSENTIALS”

SketchUp’s two specialist Aidan Chopra and co-author Rebecca Huehls has written the book the SketchUp for Dummies where the way of Animating sections is discussed.

SketchUp software is an essential 3D modeling software for all the 3D modeling lovers and the SketchUp Essentials course is just a path to guide the users to use the tools in it.

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.

The SketchUp Essentials is a platform which will help the SketchUp beginners by providing them right information that will help them to work faster; this is basically a course where people can learn through example, step by step information and will get many more links of useful SketchUp tools. This course is fully established and started by Justin Geis who took the initiative for giving information to the users for making them SketchUp Pro.

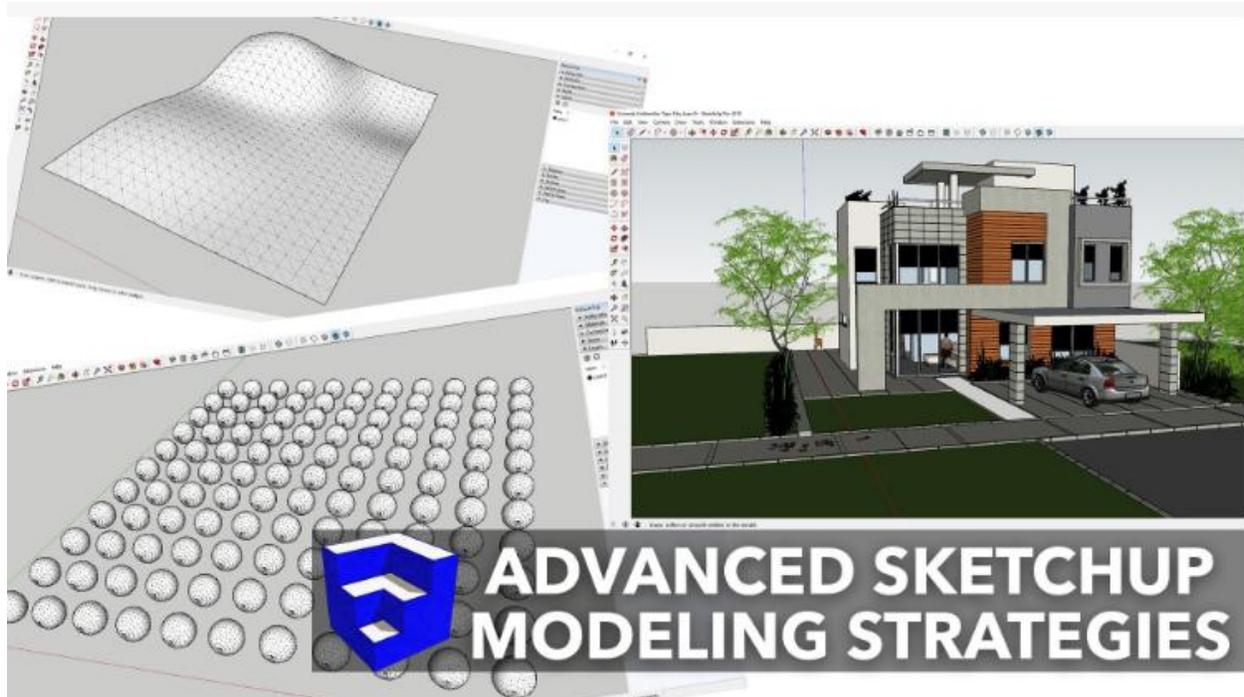
According to Justin there are some important reasons which inspired him to start this course cum platform of all kind of SketchUp answers, here are the reasons discussed below:

- **Comprehensive SketchUp Instruction:**
- People don't know the actual information about every tool in SketchUp or don't know the exact usefulness of those tools, in this course people will get the exact knowledge how every tool works and their right application.
- **Detailed Examples:**
- This course also provides some example models as a help in modeling for the beginners for each section with step by step tutorials.
- **Tips and Tricks from the experienced professionals:**
- Professionals also guide the users by some useful tricks and tips to avoid common modeling mistakes.
- Moreover than that, the users can get answers from Justin directly every time.

Information about the Course: This course is every kind of SketchUp users from every type of industry like Architects, Interior Designers, Hobbyists, Construction professionals, Landscape Architects etc. whoever loves 3D modeling. But this course is not for those people who want to use the free online version of SketchUp as it will particularly focus on the desktop version of SketchUp like towards SketchUp Pro users, but most of the topics will be helpful for the students who are using SketchUp Make 2017 or earlier versions. The course or training in SketchUp Essentials will help the users to begin with the right fundamentals of 3D modeling and many other advanced features.

The training will continue for lifelong and it is a total self-rated online course where users will decide their duration of learning. Lifetime access is a little weird to hear, the reason of calling it

lifetime is that after enrolling users have unlimited entry to this course and if any user is unsatisfied with the purchase he can contact the SketchUp essentials team in the first 30 days to get the refund.



Source: [thesketchupessentials.teachable.com](https://thesketchupessentials.teachable.com)



### “TRUEBEND: EXTENSION INSPECTION”

SketchUp is simple yet powerful software full of special and useful extensions and TrueBend from Thom is another one that allows users to bend geometry within a single click.

#### About TrueBend:

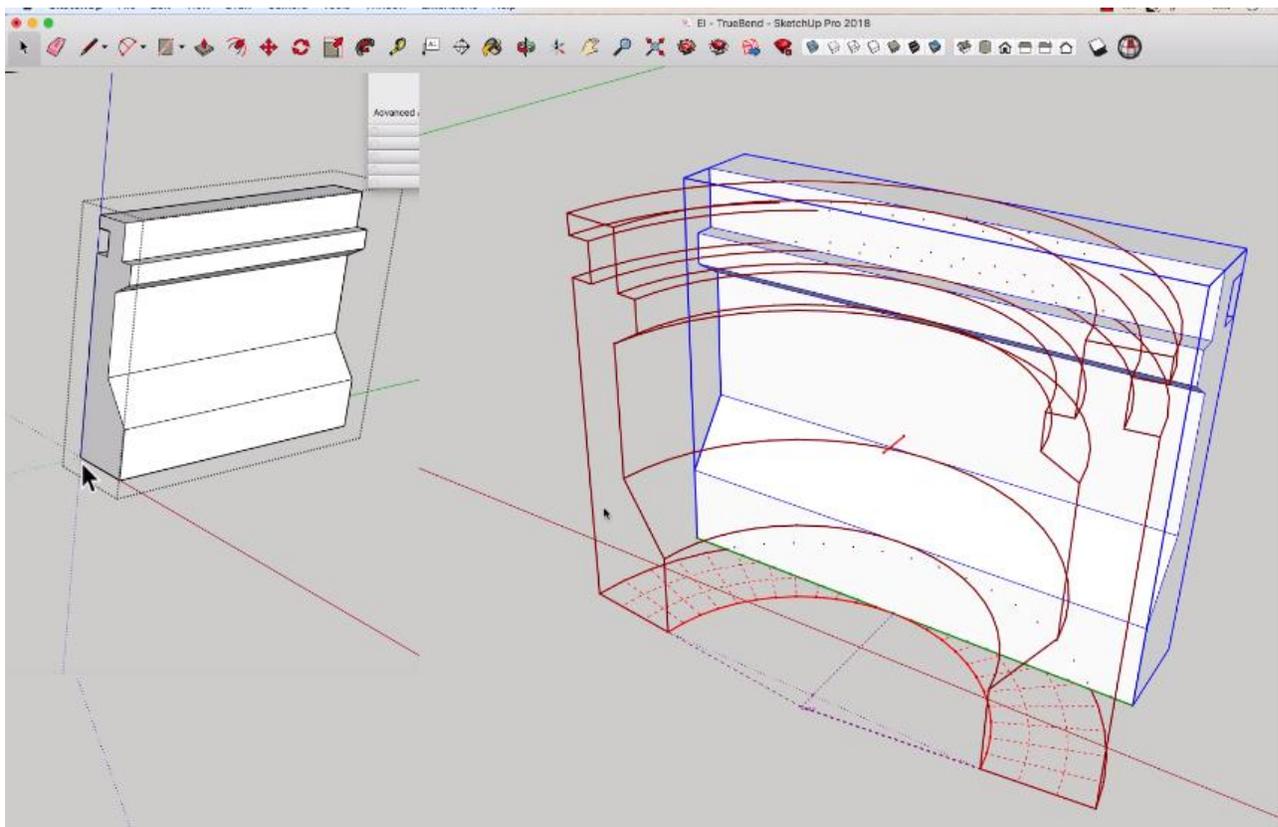
This extension can be found in SketchUp’s Extension Warehouse and it bends instances for a given degree, saving the original length of the reference segment and in recent this reference segment is the bottom front of the bounding box. As this works at the bottom front bounding box edge so it is recommended that the instance axis line up with the bend.

#### Tool Functions:

This tool or extension is totally designed to help users for bending objects within SketchUp for a given degree or radius and it also allows users to bend an object while keeping the length of the object intact. An example will definitely make this matter clear: suppose a user wants to bend a shape which is 60 inches long along a 180° bend then he/she will click and drag the red bar on the SketchUp design page for bending the object. Or the person can just click and drag to enter a value in the VCB to manually set the number of degrees in the bend; here the magic happens, this particular cool extension allows bending object sup to 360° where other extensions such as

radial bend in FredoScale, only really allow users to go up to 180°. Moreover that, users can also adjust the number of segments created by typing an “s” behind any entered value and it is useful for things like spiral staircases or many other things where users need to bend as per on a set number of segments. Besides that, users can also adjust their created segments which has become softened or smoothed or may an unhidden geometry is created.

The above is the little explanations about the functions of this tool and here is the explanation of that tool applying on geometry by Aaron. According to his work TrueBend selects and groups certain geometry, there is only one icon of TrueBend and clicking on it appears some broken elements on the lower part of the geometry and a handle in the middle. By clicking and moving it the whole shape will get bended to the specified angle; right click on the object will give some options to fix the angle. His extension is just so perfect to use that while bending and working with; it holds on the length and bends exactly the same degree or edge as the users want in their model. Some geometry can be bended along the front and some are along back; all this can be happened just with one tool and one handle, it’s so much easier to do.



To see the detail tutorial follow: [www.youtube.com/watch?v=k-e0wjINFr4](https://www.youtube.com/watch?v=k-e0wjINFr4)



### “CUSTOM MATERIAL LIBRARIES USING SKETCHUP”

SketchUp has some nice array of materials built into it, but it probably doesn’t have everything as the users want so they can turn their favorite SketchUp images into materials.



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.

Creating Custom Material Libraries in SketchUp is depended on understanding the nature of materials within SketchUp; so the first thing the users need to know is about the original images themselves which may be in the JPEG format or so on are not really SketchUp materials. Originally they are the images that can load in order for creating these materials; the original material file is a file that can be created within SketchUp that specifies about the material. For creating this material file, users need to start off by making a custom material that can be downloaded from many places like SketchUp Texture Club, CG Textures, and Textures.com etc. The process will be started form clicking the plus button which is in the upper right hand corner that will create a new material, if anyone wants to base it on a repeating texture image then users can click on go down option and check the box for “use texture image,”; next users have to find the related image to create a texture. Next the image has to resized and repositioned in the model, after completing it the material will be created and need to rename it and save it in the database.

Similar method can be used to create various materials, now the next step after creating various materials is to save them in some folders and these materials can add into SketchUp for further easy access. Using materials in further models need to keep all the materials in a place where users can find easily for accessing them; next open this folder in the materials section in the tray by clicking on the little arrow and controlling to the location, now select the folder which will open the whole folder in the material section. Adding this whole folder as a favorite will allow accessing any of the materials in this folder at any time so it will make the process-loading and unloading extensions in SketchUp easier. This option also allows the users to add other subfolders that will help to arrange the materials as per their use or name or work.

Source: [www.thesketchupessentials.com/creating-custom-material-libraries-in-sketchup](http://www.thesketchupessentials.com/creating-custom-material-libraries-in-sketchup)



**“MODELING TABLE AND STOOL LEGS WITH RAKE AND SPLAY IN SKETCHUP”**

David Richards has been designing different wooden furniture since a very long time and from the beginning he loves SketchUp, this time he used RakeSlay tool to design legs.

### **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.

This article is about a recent work of David Richards which he has shared a tutorial video describing the making of a table with the Rake and Splay tool in SketchUp.

### **About David Richards:**

He is a Biomedical Equipment Technician and provides anesthesia and Respiratory equipment for the largest medical facility in southeast Minnesota. Beside that he works in his garage woodworking shop where he has made various wooden items, he is a regular SketchUp user who uses it for designing projects, working out joinery details and solving the order of operations in time. He has made a various range of SketchUp models like tiny parts for medical equipment, large architectural and other construction projects. Most of his models are furniture and other woodworking related things, besides being a SketchUp users and woodworker; he helps other woodworkers around the world to use the program through his blogs in 'Fine Woodworking' which has become very popular among the woodworkers.

Legs of a table are set at an angle other than vertical is very common thing of stools, chairs and some tables; it can be easily understood through an example like Christian Becksvoort's Sturdy Stool which is also a kind of typical Windsor Chair. Garrett Hack also has done some nice small tables with legs that have fully narrow raked and splayed legs like his Fir and Cherry Side Table. So generally making the right modeling legs in SketchUp needs the right technique of drawing though there are various easy ways to do the work and one of them is using the extension called 'Rake and Splay'. This extension is used by Richards while drawing the plans for Becksvoort's stool and Hack's small side tables and recently he used it to create the SketchUp model for the table based on made in Poland during the early 1950's.



### Rake and Splay tool vo.3:

This tool calculates angles and draws helper geometry for complex angles like chair legs and mixture miter joints and the path is Tools > rake and Splay. After clicking on a model location where the helper geometry will be created, a dialog box will come where users can enter the rake angle, splay

angle, size of the planes and segments for the follow-me circle. Then a dialog box will appear where the users have to click Ok option and after clicking on this many layers with names starting "R & S" will be added to the model. The tool also creates Group to place new geometry; it will draw Construction Lines with key axes of the leg or joint, will draw Faces in the rake plane, splay plane, miter plane, follow-me circle plane and sighting plane. These axes and faces will help the users to visualize the geometry of the model's leg/joint and to draw the parts; when a Group is drawn, clicking it with the Tool active will display a dialog with calculated angle values for axis tilt, sighting axis, rake miter angle, splay miter angle and bevel angle.

He has uploaded a tutorial video that shows the way of using this hand tool for drawing the legs of the tools in a correct way, after drawing the legs in the right place he also showed the way of cutting

Follow: [www.youtube.com/watch?v=bJnra100HwE](http://www.youtube.com/watch?v=bJnra100HwE)

**Source:** [www.finewoodworking.com/2018/07/18/sketchup-modeling-table-stool-legs-rake-splay](http://www.finewoodworking.com/2018/07/18/sketchup-modeling-table-stool-legs-rake-splay)