## SKETCHUP-UR-SPACE

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# STORY

3D Painting ketchup Simul Chowdhury

2017

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## A letter direct from the editor desk highlighting on August'17 edition

This August Edition of SketchUp Ur Space 2017 brings to you interesting and innovative topics that will sharpen your knowledge and expand your creativity in the 3D designing. Each write-up reveals the insight of SketchUp so that you can experience a complete navigation on the application like a pro. Behind this ingeniously presented magazine is the work of our expert team that chooses topics in keeping your interest and learning in mind. They gradually unfold the world of SketchUp where you can experience some welcoming features along with the expansion of the existing one. Sketching a new definition for the application, the magazine presents what you love to read and explore.

We would like to give a special thank to Mauritz Snyman, a renowned designer in 3D architectural modeling, 3D renderings, 3D visualization and 3D animations. He shared his deepest knowledge of 3D designing with us in the interview section. He talked about his experience, problems, and achievements in his journey. His thought will definitely inspire you to push your boundary to gain what you dreamt. He is now a precious member of Jireh3D firm. Read the complete interview to learn more about him and SketchUp.

In this August Edition of SketchUp Ur Space, we are happy to introduce to you a very special guest writer who is also an eminent designer and a brilliant modeler – Michal Konicek. He has written a great piece of art about 3D model and design. His '3D Model of London for SketchUp' lets you imagine in a new way of using SketchUp. His designs and models bring London alive virtually.

Our COVER STORY touches a different chord from the regular one. It names 11 Best Free 3D Designing Software including SketchUp that make your knowledge grow step by step from beginners to the professional level. It mentions tutorials and required details that indeed help you design your thoughts proficiently and flawlessly.

NEWS section speaks the recent happenings of SketchUp in a comprehensive way. They discuss the updates you need and features you shouldn't miss. This year, Vive Studios released MakeVR Pro for the users who want to feel their designs. The complete report is written well by our experts to keep you engaged in SketchUp and its updates. Plantfactory 2016 is another new plugin introduced by E-on software application with a promise to add a real essence to your design. This section gives you a glimpse of what development SketchUp welcomes for this month. We are offering you seven new topics that successfully hold your interest.

Intriguing and ingenious, our 'Tips & Tricks' offers you a bunch of hidden rules that make your journey with SketchUp smoother and happier. Four new topics are covered by this section that present information about SketchUp dialog box, Vizard workflow, and more. These tips help you understand the need for learning short-cuts and tools. Since SketchUp is more about your imagination than about the technicalities, these tips enhance your performance to design a model better than ever.

Our Blogs are always trying to flip the existing rules of designing, allowing you to explore what you haven't till date. It mentions some known features and tools you are very much familiar with. But the contents twist the regular attitude and offer new sides of the features like orbit tool, edges, faces and more. my.SketchUp is a new update that opens up a new approach in designing. It is a small SketchUp tool that allows you to perform more or less the same way you used to in the application itself. With this new updates, our Blog section takes your interest to a new level.

In our ARTICLE section, you will truly meet your deepest designing desire with the topics like Best SketchUp Practices, SketchUp rendering and SketchUp for Fine Woodwork. They contain ample information to bring out the insight of the application attractively.

This edition SketchUp Ur Space is what you desire. With new tools and updates, it clearly stresses more on the objectives of your learning. Turning over each page of the magazine brings you closer to the application. Our two special guests, Mauritz Snyman and Michal Konicek, teach you to some unknown developments and make your designing instinct more vibrant.

If you have any queries concerning publication, subscription, troubles navigating the site, please mail us at <u>simul@sketchup-ur-space.com</u>



Best wishes Simul Chowdhury Editor



## Interview with Mauritz Snyman who is a specialist in 3D architectural modeling, 3D renderings, 3D visualization and 3D animations

## Interviewer: Simul Chowdhury (Editor)

#### Introduce yourself to our readers.

Hi all. Thank you for the opportunity Simul. I'm Mauritz Snyman & the owner of Jireh3D, a company I started in 2008 focusing on 3D Architectural Modeling & Rendering. I'm based in South-Africa.

I love what I do. Only a couple of things get me away from my computer - one being fishing.

#### How did you start your career as a 3D modeler?

I studied Interior Design but never pursued that. Not long after, I moved to the UK and started out as a CAD technician in London. But did not find it creative enough, so I started online 3D modeling training after hours. My boss at the time created a position for me but unfortunately during the 2008 recession more than half the company were made redundant. And so my own company, Jireh3D was born.



#### What kind of hardware do you use?

At the moment - Apple Mac 8 core, 2.1 Ghz, 64 GIG ram & 2 x 24" Screens to make life easier.

Then some other machines which are a lot smaller, but just a backup for rendering

#### Can you tell us about the software you use in the studio?

Sure. I use Sketch-up for all the basic modeling, then Cinema4D to add detail & rendering in VRay or Corona. Adobe Photoshop for the finishing touches.





Can you define the balance between Pure Render and Post Production in your work?

Post production is great, but i like getting renders in such a state that there is little Photoshop work involved in the end. It depends on the artist really.

I always use Photoshop to do final touches, but never to create the full image itself because clients change their minds very quickly & not many people wants to re-do everything again.

#### Can you tell us something about your firm?

My firm is running for about 9 years now. Jireh3D specializes in 3D architectural modelling, 3D renderings, 3D visualisation and 3D animations. We bring 2D plans to life in beautiful photo-realistic, 3D images. We create 3D models from CAD plans, sketches or simply ideas, supplied by the client. We are able to produce interior and exterior views of the proposed development. We can also create fly-through animations.



#### Tell us about your work with 3D architectural modeling.

For us, the modeling part is very important. If the modeling is bad, the renders will be bad. So adding detail is of great importance, as that is what helps create realism.

After modeling, texturing is just as important.



Sketch-up is great for modeling things very fast, and if the client changes his design, it can be changed very quickly unlike most programs.

#### Did you face any problems or technical issues along the project, and how did you solve them?

50% of the time we run into problems during projects. Most of the time it's a machine that can crash because the scene is so poly heavy...Solving that was to upgrade memory & to use a render farm as our backup.

Another problem is getting paid. What i have learned over the years, is to work with a contract & 50% upfront payment. I lost a lot of money because clients ran away, so very important to get a contract & proper payment terms in place.

#### What was the most challenging project you've worked for, so far?

The one I'm working on currently. Very big & difficult to work with because the model is so poly-heavy. It's for a few exterior renders, but the surroundings has tons of foliage which makes the process very slow and quite frustrating.



#### What's the hardest thing about being a professional 3D designer?

Not getting paid enough for hard work and long hours. It's our bread and butter & lots of people take artists for granted.

#### Where is architectural visualization heading next?

Not sure, but because of the incredible technology, we are going forward really fast and it is difficult to keep up to date to the latest programs & plugins in the industry.

#### What suggestions do you want to provide for newbie 3D modelers?

If you want to do this full time, make sure you do it in excellence. Always give your best and be teachable so there will always be room for improvement.

#### How do you evaluate our magazine?

Very good. Lots of 3D Artists can learn from this & tons of info are available for anyone with many tips & tricks.





www.behance.net/Jireh3D



## 11 Best Free 3D Designing Software You Shouldn't Miss

## Simul Chowdhury: Editor

Everything gets digitalized in these days, and so does the engineering and architectural drawing. Designing with pencil and paper has been replaced with the 3D designs where the outcome is more accurate and detailed. 3D designing software applications are growing their number with time and they are designed to cater different designing needs. There are as much as 22 new 3D designing software applications available and the content brings out the most popular names for you. It categorizes as per the learning level of users. Thus, four basic segments are named – beginners, intermediate users, advanced users and professional users.

#### 3D designing software for beginners

3D Slash: 3D slash is a great application for the beginners who want to enjoy their learning process while adopting the must-learned skills of designing. Individual cubes possibly the main thing that can be worked, subtracted and combined with your known tools. Working in the 3D slash is as enjoying as developing a game. The tools like hammer, trowel, chisel, and drill will be there to help you carve out the needed shape.

Visit <u>www.3dslash.net</u> for more details.

Doodle 3D Transform: This is another beginner level application that maintains the joy of learning through their feature. Doodle 3D Transforms is an online 3D designing tool that comes up with a split screen defined as 2D and 3D. This application allows you to transform your 2D design into 3D easily. It does not require professional knowledge to start, so anyone with zeal of learning can try their hands in this designing tool. The features are simple allows even children to draw their imagination.

#### Learn more on <u>www.doodle3d.com</u>

FractalLab: FractalLab is designed for creating fractal 3D modeling. The application is a WebGL program – written in JavaScript and shader code in OpenGLShading Language (GLSL). You can use different constraints such as scale, level of detail and smoothness. This software lets you take control over the complete designing process.

Visit their official website http://sub.blue/fractal-lab for more.

#### 3D designing software for intermediate users

Clara.io: This application does more than you expect. From V-Ray rendering to tools for every use, this application comes up with the most advanced functions you need. You can extraordinarily design shapes in some of the most difficult situations such as extrusions, beveling, slicing, cutting and looping. The design you prepared using the application can be included in your website also. Even users can manipulate some predefined properties of your design.

<u>clara.io</u> the site will give you the insight of the application in more detailed way.

MagicaVoxel: The application is much like assembling tiny cubes for designing 3D pixilated 3D models. The tools of the application are advanced and they offer an array of functions that you are looking for. Though it sounds like 3D slash, it incorporates new things that make your designing more advanced. Colors, 3D brushes and patterns also come in a wide range.

Visit the official website <u>ephtracy.github.io</u> to get more details.

MakeHuman: As the name presents, MakeHuman is a 3D designing tool for developing human figure using different sliders. At the beginning, it was introduced as a plug-in for blender. You can add details like age, weight, gender and more to give your model a specific look. It lets you customize your character the way you want.

Follow their official page <u>www.makehuman.org</u>

#### 3D designing software for advanced users

DesignSpark Mechanical: DesignSpark Mechanical follows the steps of AutoCAD, but in a simplified way. The application works as a gesture based program that makes even the complex designing easier. If you have a plan to learn AutoCAD, you can start with the program and learn the basic things first. It is particularly used in designing electronic devices.



#### Visit the link <u>www.rs-online.com</u> to know more.

FreeCAD: FreeCAD is an advanced designing tool that has some features popular among others. Customizable, extensible and parametric are few characteristics that define the application very well. This means that you can add constraints to the component of your model. It is basically designed for developing real-life objects of varied sizes.

https://www.freecadweb.org/ - the link provides you with the complete detail for your understanding.

SketchUp: SketchUp is the most known software that offers you simple ways for designing complex models. You can learn about designs by using different tools developed for giving you a complete control over the application. SketchUp plugins are very popular since they tap the upgraded designing concept and help you design sharply with maintaining a subtle accuracy.

Visit the official site: www.sketchup.com

#### 3D designing software for professional users

Blender: Comprehensive and open-source software, Blender has come up with the modules for performing specialized tasks. This tool creates the best visual effect for your 3D models. At the core of the application stay the well-designed feature that makes the application a perfect tool for the professional users.

Step into the world of blender with www.blender.org

Fusion 360: This application was brought to us by Autodesk, and it solved barriers lied in 3D designing very easily. It includes different steps of a product development process allowing you to create a design in an accurate way. The advanced options offered by this application are modeling, sculpting, solid modeling and parametric modeling.

#### Learn more on <u>www.autodesk.com</u>

Houdini: The application is designed on the node based workflow. The application allows you to alter the complete model by changing individual parameters called nodes. This helps you reuse the objects of a model for your future assignment.

There are many things associated with the application and the detail information is given on www.autodesk.com

3D designing software applications offer the simplest way to sketch your thought. All the above-mentioned applications are as easy as you want them to be.





## **Best SketchUp Practices for Exceptional Designs**

## Simul Chowdhury: Editor

SketchUp application has become a household name in the 3D designing. Everyone with an imaginative spree loves this application for its simple approach and easy-to-use functions. There are a few practices that SketchUp users must follow to get the best out of many. These practices involve simple things that you need to maintain while designing. Nothing stringent in rules, these practices are based on the designing habit of an expert designer. The content discusses further the practices and rules that tell you how to create flawless designs simply.

• Make your own template and adjust the program setting: Making your own template and adjusting program settings as per your use help you design in a comfort environment – a home like feeling where everything is in order. So keeps you satisfied as well as relax you while solving a complex puzzle of designing.

• Save often and early: This is another best practice that ensures you design stays unharmed. You can save the file even before you start designing. This allows SketchUp to activate the autosave functions that save your file and make necessary backups.

• Group faces after they become a logical object: In SketchUp, separating objects from each other is not possible. If the object face touches another, then they will remain sticky and hard to move them separately. This is why group faces are there that allows you to make a group component after completing the design.

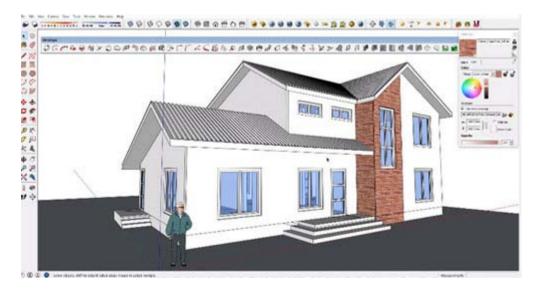
• Use component for repeating objects: If you need an object that has various uses in your designing, use component program rather than groups. It allows you to work smoothly on SketchUp.

• Precise Models designing: The SketchUp precision modeling tool ensures that a model is designed accurately and flawlessly. This tool eliminates the 'crooked geometry' or gaps in your design. Texturing and other modeling tasks become harder if models are not developed in a proper way. Use this application for a pleasurable workflow without any hurdles.

• Polygon count should be low: Since SketchUp is a Polygon based modeler, every curve (triangles and rectangles) you design contains a certain amount of polygon shapes. The faster work of the graphic card relies on the low polygon shape. Display card works extensively if you use many polygon shapes in your design. The best way to avoid this problem is that use the modeling circle or arcs with minimum edges. You can also use component for displaying curve objects to reduce the problem.

• Application of proxy component: If your design needs a high-polygon object like a tree, then you must use component to keep the polygon count low. Make sure that the components you are choosing are at the same location and it must coordinate with the axes.

SketchUp applications brought a big change in the designing. The practices mentioned above tells you the basic rules to use SketchUp to get a proper designing spree.





## How Easy Is SketchUp for 3D Designs?

### Simul Chowdhury: Editor

SketchUp is a commonly used software application for 3D modeling nowadays. Due to its easy and effective application, it has been successful in making a strong place among designers and architectures. Though people confirm that it is an easier choice than others, the complexity is inevitable as 3D designing is itself a tricky subject to understand. SketchUp is such an application that allows you to design within an hour after installing it. The strong and intelligent tools back the application reliably and help beginners understand the insight of the application.

3D designing is always associated with tough geometric concepts that are explained in a thick rule book. So, designers find difficulties sketching the proper model as per their plan. To make the condition worse, the hard-to-understand software tools limit the use of designing only for the skilled engineers and architectures. SketchUp brings out 3D from its confined territory and allows other to design as accurately as an ace designer does.

How easy is SketchUp for 3D designs? It completely depends on your prior knowledge of designing and on how quickly you grab the use of different features. SketchUp tutorials are available online that introduce you to the core of the application and gives you the insight of the designing.

It can undoubtedly be said that you easily start 3D designing on SketchUp without knowing much of it. Both SketchUp Make and Pro versions are available for users of different needs. How simple SketchUp is for 3D designing lays in the difference between paper and clay. The content below discusses further.

The benefits of using SketchUp: To understand the benefits of using SketchUp, you must have enough knowledge to separate the design with paper and clay. Generally, 3D software applications are categorized under two main flavors – solids and surfaces. SketchUp is a surface based application that keeps the designing easy-to-draw for you.

SketchUp – a surface modeler: Whatever you draw on the SketchUp, it takes thin surface with hollow shells. This process keeps you away from an intricate understanding of the 3D designs. The experts even say that designing on SketchUp is more like making objects out of paper rather than clay. This surface modeler focuses on the core of designing and eliminates other issues involved in geometrical measurement of objects. It is less complex and more effective in designing 3D models.

Solid modeler is based on the working with clay: The solid models get solid surfaces when they cut in pieces. The applications like SolidWorks and Autodesk Inventor boost the solid model designing in 3D models. The skilled personnel in the fields like mechanical engineer and industrial designer use these tools to create design precisely and accurately. They design after measuring and calculating each edge and faces. It definitely sounds much complex than what SketchUp offers.

Though SketchUp is a surface modeler, it contains Solid Tool to design objects as per your need.

#### What SketchUp does for your 3D design?

SketchUp proves to be very effective when you design 3D models in a simpler way. It covers a broad area beyond the extensions and tools. A deeper understanding of the application will allow you to use the feature more effectively. On SketchUp, you can start designing in many ways. Below are a few examples.

• From Scratch – you can design models on a blank slate.

• From a Photograph – A photo can serve the core component if you want to make 3D models out of it.

• With other files – importing files from other computer applications from AutoCAD, 3DS, and DEM is easier in this application.

- From a Geo-location snapshot you can make 3D models from geo-location snapshots.
- Share models after completing the design, you can print or create an image file of your model to share it with others.

Don't expect from SketchUp to Do: There are a few things that SketchUp cannot do. Expecting a tool for all your designing need makes you disappointed. The list, though, does not share the basic details of 3D designing, and it only focuses some additional components.

• Photo-realistic rendering – 3D applications have photo-rendering tools in-built, but generating views as real as photographs is a rare feature.

• Animation – you cannot add the real animation to your design in SketchUp. The application contains a few regular features for animating, but they have limited applications and are very less in number.



SketchUp is indeed an easier application if you are the beginner of 3D designing. This application is for those outside of the technical fields like engineering and designing. With this, anyone can sketch 3D models efficiently and instantly.





## Maxwell Rendering 4.1 for Smoother 3D Rendering

## Simul Chowdhury: Editor

Now, 3D rendering is faster, easier and simpler with the Maxwell Rendering 4.1 version. With so many user-friendly options, it allows you to freely input your creativity and make your rendering the best one. The features offered by this new version are way ahead of the time. Whatever problems you have faced with the earlier version are completely eliminated on this platform. This high-end rendering tool does more than magic for the visualization software, and it definitely takes the artists and designer to a ride eight times smoother than they generally expect. Till now, the primary issue associated with the rendering tool is excessive rendering time. The new version promises to offer you an application where you can really enjoy your freedom having a complete control on designs. Let's discuss in brief how the application helps designers.

Denoiser: Denoiser is a great tool that fades the noises of your designs and makes them crystal clear. The process reduces the time taken for erasing the noises. Denoiser is a powerful feature that understands your design and keeps the length and geometry details the same. Previously, you needed to render the image to a high sampling level. Now, it spins completely. Denoiser gives you the high-resolution images by keeping them low in size. This amazing feature is truly a revolutionary one.

GPU – Optimized handling memory: GPU helps in memory handling faster with a modern technique. If rendering process is cancelled because of having no sufficient memory, then Maxwell tiles the render and initiates the rendering process. This new version will allow you to render bigger images and scenes on the same GPU memory.

#### Maxwell Multilight 2 App:

A single render seems enough to your innumerable lighting variations and images added to the designs. It counts benefits more than you expect. The benefits are given below:

- Add light variations from your MXI files.
- Tone mapping and camera response features are also available.
- Setup lighting scenes as per your wish.
- A smart editing option is available that allows you to edit light before and after render.
- Prepare a lighting catalogue for your reference and clients' needs

New Materials - Materials are available in huge quantity to guide you in designing process. These are selected attentively to help designers give the best result. The features are given below:

• Merl database material: 100 lab measured materials containing reflectance functions are collected in the segment. They are stored as the BRDF (Bidirectional Reflectance Distribution Functions).

• X-RiteAxF Materials: Appearance Exchange Format (AxF) files enhance the work on the visualization software. These materials have been used to store, transfer and digital materials of TAC Ecosystem.

Light panels: As the name says, it adds a dramatic touch to the design with offering an intense play of lights. You can modify and add lights as per your style.

Maxwell 4.1 version comes up with different features and functions that are way ahead of its other contemporaries. It offers an ultimate rendering option where difficult tasks become easier.

Source: www.maxwellrender.com





## SketchUp for Fine Woodwork Designs

## Simul Chowdhury: Editor

The versatility of SketchUp allows users to draw and design anything they want. The application has been used in many practices for its user-friendly interface and flawless performance. In a woodwork project, SketchUp provides designers with a great support to plan and maintain the blue print of the design efficiently. The eminent designers use different tools and extension to prepare a fine woodwork easily and instantly. Two ways people have been using to complete their wood work project – one is making separate SketchUp file for each part and then assembling them into one; another is preparing a complete project on SketchUp using tools and extensions.

There are many videos available for the designers to project their plan properly and prominently. These tutorials are designed to give you a thorough understanding of the project you are working on. You can get a glimpse of these important notes of designing on <u>sketchupforwoodworkers.com</u>. Starting from a small wooden table to a credenza, you can prepare a drawing as efficiently as experts do. Designing wooden objects on SketchUp is as much interesting as preparing wooden things at shops. The only difference is it involves less toil than the real wooden work.

SketchUp does not require your methodological concept of sizes and parts to complete your project. This is why you no need to have an idea about aprons, rails, stretches and legs while drawing a small table on your SketchUp. 'Trim and Keep' plugin seems to be very useful while cutting the mortises that are an essential work for a wood project.

The more you handle projects, the better you become to complete intensified design that inescapably needs an expert touch. Drawing different shapes has become easier with the features offered by the application. It has inbuilt functions that project your interest in designing things in the finest way.

Making models for cabinetry and rectangular object no longer requires an in-depth study to do a job proficiently. You can also enhance your ability to realize a practical drawing and able to decide what your design needs.

Few Facts to know for woodworking:

Finally, designers across the world, who use SketchUp for woodworking, are able to sum up their experience into few key points. These facts are indeed helpful to understand the technology better and to prepare a project more efficiently. The key facts are given below:

• Learn designs slowly, one at a time: Learning complex, critical skills slow helps you develop the result better. Start with simple things and then approach to the relatively complex designs.

• Gain knowledge about visual clues for your understanding of 3D axis to follow: As per the experiences shared by other designers, it is a frustrating job to move an object in 3D space with two-dimensional cursor and monitor. Getting visual clues on SketchUp eliminates the problem with offering a visual clue to the designers.

• Make a 'Component' as soon as you complete a drawing of an object: Creating component of an object allows you to treat that object independently in your design. You can also add this component to your cut-list for the reference.

• Use others' work to complete the work in a short-span of time:

The Model warehouse is filled with a huge collection of drawings of other SketchUp users. You can use those models as a reference for your project. It gives you an easy understanding of how your object would be after finishing all necessary steps.

SketchUp has been a proven platform to give a depth of intensity in the 3D designing. SketchUp for woodwork has been gaining momentum gradually in the interested group. The application will definitely showcase your talent as a fine designer.

Source: www.finewoodworking.com





## 3D Model of London for SketchUp

## Michal Konicek: 3D Model of London | 3D City Models

### https://youtu.be/tS2QdVLcgXQ

AccuCities is a London tech start-up, focusing on capturing accurate and detailed 3D city models. Starting in London, we are capturing 3D Models of this beautiful city in 4 basic levels of detail. As many of our customers from areas such as architecture and urban planning use SketchUp, customers can chose to buy the dataset as a sketchup files.

Depending on their needs, customers can buy a subscription to the entire dataset or chose small sections of the model and purchase those only. Prices for quarter square kilometer tiles of this High Detail 3D Model start at £500 per tile and the subscription to the entire 25 km sq dataset starts from £1,000 per month. The sketchup models of London are easy to use to inform Architectural design, create CGI renders and animations but could also be 3D printed.

#### https://youtu.be/XBr0h8BgLJg

AccuCities 3D City models are manually captured, using photogrammetry, from the latest high-res aerial survey data. In High Detail 3D Models we capture all visible features of the roofs, including chimneys, parapet walls and dormer windows. The 3D Model is accurate to an incredible 15 centimetres in each axis. For customers who require lighter and more affordable models can opt for Level 2 models - Level 2 models omit some features but this makes the models lighter and easier to use. Not to mention they are half the price of Level 3 models.

Link to 500 x 500 meters Free Sample files of 3D Model of London [Please link "3D Model of London" to <u>www.accucities.com</u>] The Terrain in AccuCites 3D model of London is not flat - it is captured using the same photogrammetric technique as the buildings.

The terrain model is separated into major land use categories such as water, road, greenspace or man-made surface. Trees in this dataset are also captured from the aerial survey with the accurate heights and widths of their canopy. AccuCities can capture 3D Models like these anywhere in London, in the UK or in the world. Visit www.accucities.com for more information about all levels of detail we can provide. On the website you can also directly buy this 3D model and get a quote for 3D Models that are not yet in our library.





## Complex 3D shapes Become Easier with SketchUp Solid Tool

## Simul Chowdhury: Editor

Balazs Torma develops Ropefall for sketchup. The plugin supports SketchUp 2015 and SketchUp 2016. This sketchup plugin is used to develop and design the model of realistic ropes, cables, wires with physics simulation instantly.

The algorithm simulates a rope that drops downward to bottom through a custom spring based physics model. The two ends of the rope won't go down as they are fixed. The falling rope is obstructed by hurdles in the way.

- 1. Turn on the line tool and sketch a polyline characterizing the preliminary shape of the rope.
- 2. Turn on the select tool and choose the polyline.
- 3. Click menu Draw  $\rightarrow$  Ropefall  $\rightarrow$  Fall.
- 4. Identify rope parameters and click the 'ok' button to begin simulation.
- 5. Wait unless the simulation is finished or discontinue it with the Esc key.

**TIP**: The simulation process can be more speedy if hiding parts of the model that (presumably) does not block the rope from falling.

One cab use a free version for three days as well as purchase a licence for USD 15. See<u>www.sketchrope.com</u> for further details.

## https://youtu.be/jsuev-g-Xg0

Designing 3D shapes with a perfect size as you want is not an easy task. But on SketchUp, even a beginner can design complex shapes using solid SketchUp tools. It is the most innovative and widely used tool for SketchUp users, which corrects the shortcomings of the existing 3D applications in designing solid shapes.

SketchUp always provides an understandable way to artists so that they can design without any obstacles. The solid tool is particularly designed for the SketchUp solid and it does not work on other designing platforms. The definition of solid tools says that they have finitely closed volumes without any leaks. To know whether the tool you have chosen is solid or not, you can get information from Entity Info that will appear after checking the context click.

Know better about the solid tools:

- Outer Shell It helps in denoting the outer surfaces of overlapping solid. It is available for both Make and Pro.
- Union As the name hints, it combines solids into a single form. It is for the SketchUp Pro only
- Subtract It is used to remove parts of one solid. The subtracted parts are deleted.
- Trim One solid cuts parts of another but, unlike Subtract, the cutting solid stays in the model.
- Intersect it is used for cutting the intersecting parts from an overlapping object.
- Split It splits solid parts from an intersecting object.

Take a detailed ride in SketchUp Solid Tools:

Outer Shell: Outer Shell is developed to simplify a complex model by removing the overlapping parts of an object. It leaves the outer surface of the model for your better understanding of the object. This solid tool removes a model's geometry, resulting in a faster performance in SketchUp. The tool must be used as per your needs and in such designs.

The steps to follow:

- 1. Select the intersecting groups and components to be included in outer shell
- 2. Context-click the selection and select the outer shell option.

Union: The union works like an outer shell with a little difference. The object after applied union tool can contain complex geometry. To activate this tool, choose Union from Context-click.

Subtract: It is typically based on the process of cutting down parts from one solid entity by another solid one. Here, both solids need overlap to complete the process of subtraction.

Trim: Its working pattern is similar to the subtract tool, but the only difference between these tools is that the subtracting parts stay in the design rather than removing it from the rest. To identify which solid to be chosen first, remember the simple methodology – "Use this to Cut That". The first solid will then be called a cutting tool, and the second thing is which you cut.



Intersect: The design of an intersecting geometry is got by this tool. Two or more overlapping solid entities have been used for the intersection.

Splitting: To get the intersecting edges from overlapped solid entities, this splitting tool has been used by the designer. It splits the geometry with interesting edges.

Steps to follow:

- 1. Choose the Split tool
- 2. Click a solid entity
- 3. Click another solid entity to get the intersecting edges.

It splits the geometry with interesting edges.

These tools are very much essential to sketch a right shape in 3D. To prepare a model as accurate as a real object, these solid tools would be handy for you.

Source: <u>help.sketchup.com</u>











Subtract

Trim

Split

Intersect L

Union







Outer Shell



## How to Use Orbit, Zoom and Pan Tools to Get the Best View

## **Simul Chowdhury: Editor**

To design flawlessly and creatively, SketchUp offers you some simple, understandable view tools concentrated completely on the object you draw on. The orbit, pan and zooms tools allow you to navigate your drawing smoothly observing each part of your model. Working on SketchUp is an interesting task as it stresses more on your design than on different applications of features. These tools are designed to keep the process simple while you are drawing an intricate 3D part. These options come in handy to view your model from any corner. Let's know how they work on your favorite 3D application.

Orbit tool: Orbit tool is used for rotating your model to view it from different angles. This tool proved to be handy for the beginners as they can easily check the view of the model. Quite popular among others, this tool leads you the right design that you are looking for. You can activate the orbit tool from camera menu, getting started tool bar, or a large tool set tool bar.

## https://youtu.be/pDIQIxGRxx4

Zoom tool: Zoom, as used traditionally, takes you closer to the model you are drawing. If you are working on small models, zoom helps you make it larger to fit your style. The best way to activate the zoom menu is rolling the scroll wheel that lets you zoom in and out instantly without clicking any menu bar and toolbar.

Zoom Extent is another option that is different from the usual working of zoom itself. Zoom Extent is used for making the model perfectly fit as the size of the window.

To use this tool, choose Zoom Extent from Camera.

The Pan Tool: The pan tool is another known view tool to observe your model from different angles – left, right, up and down. This tool brings to you different sides of your model and allows you to check the corner.

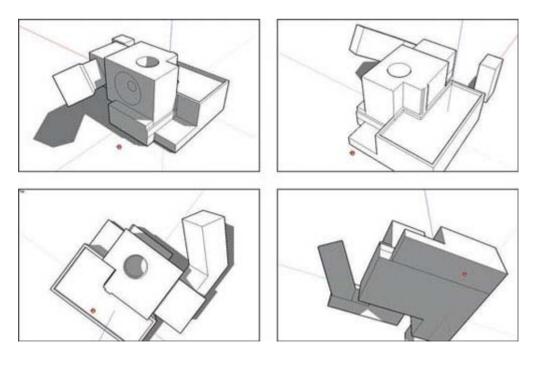
Things you should know about the pan tool:

• Pan stays in the camera menu

• Pan is in the tool bar

• Pan can also be activated through clicking on mouse's scroll wheel button and press shift

These three tools are commonly used by the designers to set different viewpoints of the model. They are simple yet effective to understand the model the better.





## Know about Edges and Faces of 3D model in SketchUp

## Simul Chowdhury: Editor

Though SketchUp provides you with the simplest way of designing, it needs a proper knowledge of models to sketch an object correctly. Like other software application, it also follows a few steps you should know about them completely before starting your 3D design in the application. In designing, edges and faces play a very important role that makes your model the same as you want. Though all edges are not visible in a model, they exist in the design like other components. You also have a complete idea about the faces of a design. Otherwise, you will end up messing surfaces. The content discusses the importance of faces and edges for designing a model on SketchUp properly.

What are edges in your design?

Edges are basically lines of your model. SketchUp provides you with different tools to draw them as per your design. Different tools perform different tasks to give the edges the perfect shape, and you have options like erase, move, hide and stretch the lines. Here are a few facts about the edges of 3D models.

• Edges are straight

- They do not have thickness edges are lines and they come up with no thickness.
- 3D models have many edges but you do not probably see every line of the objects.

What are the faces of your design?

Faces are mainly the surfaces of the model you are designing. There are a few facts that you need to learn to have a complete idea about the faces. Knowing deep about this segment will help you draw a design accurately without making any mistakes.

• Faces always come up with the edges – faces would not be formed if there were no edges. It is said that you need to have three coplanar edges to design a loop.

• Faces are flat – faces are flat, but you may think about the curved faces. Generally, curved faces are made of multiple flat faces.

• Faces do not have thickness

The relationship between Faces and Edges:

Since edges and faces are the core objects of a 3D model, you have to have a comprehensive knowledge about them. The content discusses further the inevitable relationship shared by these two important parts of your design:

• SketchUp generates faces as soon as you complete the design – there is no face tool available in the SketchUp. It generates automatically with your design. A face is formed by the three coplanar edges.

• You can erase face, but cannot stop the application from generating faces.

• A face will be eliminated if you delete the edges that define the face.

• You can recreate the missing face by retracing the edges – if your design misses a face, retrace it by using line tool that detects the edges and draws the face for the design again.

Edges and faces prove to be the main things for designing 3D objects in SketchUp. Having complete information about these two will assist you in designing models and objects creatively.

Source: books.google.co.in/books





## my.SketchUp – Take along Your 3D Models Wherever You Go

## Simul Chowdhury: Editor

SketchUp grows with time to offer more advanced and simplified option to the designers and artists. Today, the application is considered to be the widely used one because of its easier approach to the 3D designing. It outruns its contemporaries with its clean and simplified user interface that allows even the beginners to design like an expert. With my.SketchUp, the application takes a step further and makes its features available on the cloud – a computing system that allows users to access data and information stored in remote computers and systems.

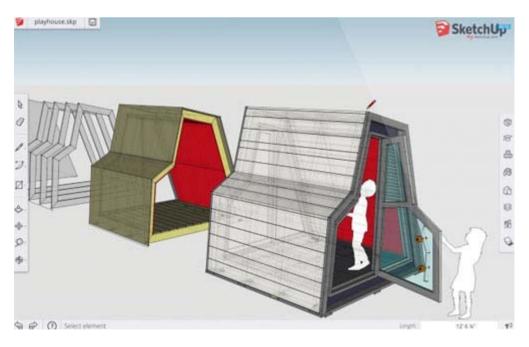
my.SketchUp is designed in collaboration with the Timber Connect to offer a wider use than its stipulated applications. As said, it is the most connected SketchUp modeler for people. From the very beginning, SketchUp has been renowned for its accessibility. The tools and extensions let designers sketch their plans in 3D as accurately as an expert paints thoughts. This quick access of the application increases its popularity and brings it to the world of budding designers and 3D modelers.

SketchUp generally works on the desktop computers with an operating system from Microsoft or Apple. This kind of confined attitude keeps this application away from the eagerly waiting network pool bending to the ubiquity of the browser. To solve the issue and reach a greater designer network, my.SketchUp has been introduced with a great promise. This new version will run satisfyingly in a web browser allowing you to perform your task better and faster.

The use of the internet is speeding tremendously. Losing this fastest pace means you are behind the time. SketchUp captures the recent needs for being more flexible. The extension of SketchUp to the could computing opens up an array of new possibilities for the SketchUp users. The shortcoming of SketchUp running on a desktop computer only gets completely solved with this latest announcement.

My.SketchUp performs just like the original SketchUp does with the same features and functions. With this, your models are available in the cloud which you can access anytime, anywhere. These models can be shared with others and modified as per your design.

The users' experience says that my.SketchUp is a true companion for your travelling. It gives you an access to data from your clients' offices and the computers connected to networks. The clean and easy-to-access functions always keep the SketchUp first among others. This new feature will definitely enlarge the perspectives for the designers and artists.



#### Source: blog.sketchup.com



## SketchUp Dialog Box – A Complete Tutorial

## Simul Chowdhury: Editor

SketchUp dialogue boxes carry some useful commands and functions that let you navigate your design easily. It has controls with which you can modify the SketchUp setting and customize them as per your use. SketchUp is a simpler 3D designing tool that made the complexity of 3D model simpler. Like other applications, it has come up with essential dial boxes that keep the drawing smooth and straightforward. The content brings inside-out of the dial boxes used commonly by the users.

Preferences: The preference dial box contains everything about the working of SketchUp. You can change the setting to make a comfortable workplace for you. The commands carried by the dial box control the behavior of the application itself rather than the model you are working on. The preference dial box will appear on the Mac version only, and it is not available for the windows version of SketchUp.

SketchUp preferences contain the commands like application, drawing, extensions, general, shortcut and temples. Each one comes up with an array of options to make your designing experience uncomplicated.

For the preference dial box: SketchUp menu > preferences

Check the video for more information: https://youtu.be/x6yi8pxxQAg

Model Info: Model info tool holds all important details of the model you are working on. It shows you everything starting from the animation time to the geo-location. Every command comes up with a set of features that define your model in the best possible way. In the 'window' menu, you will get the model info dialog box.

You can set the information the way you like before designing a model. The other options that you would get in this dialog box are – animation, components, credits, dimension, files, texts and more.

Check the video for more information: https://youtu.be/2LbWbAgucP8

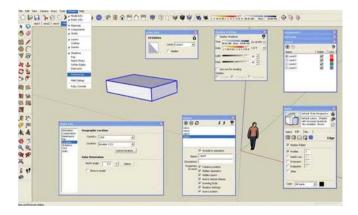
Entity Info: Entity info in SketchUp tells you about the entity of your model as per the selection area. You can get a comprehensive detail about the layers, materials, dimensions and component names of every single entity of your model. Changing material is also easy with this tool. It notifies you about different parts of the model because each part has different structural details. Entity Info dialog box is in the window option.

Check the video for more information: https://youtu.be/l2OcfvSanu0

Instructor: Instructor dialog box happens to the best guide for the beginners. It clearly shows you the instruction of using a tool you are using presently. It presents every detail about the tool to make you understand how to draw a certain thing. In window menu, you will get the instructor option.

To know more, visit https://youtu.be/LYKGtAvxBuk

With the dialog box options, you can easily draw the model as well as enhance the knowledge of different commands used in SketchUp.





## **SketchUp Inferences Position the 3D Model Accurately**

## Simul Chowdhury: Editor

SketchUp Inferences in SketchUp make you understand where you design your model. The color lines will appear as soon as you create a new file in SketchUp. These lines are the best to keep your model at the right place you want. It is always advisable to use the color lines while working on the SketchUp as they eliminate the need for typing commands for adjusting the position of the model. You need to work in the intended color direction, and you must align your object with the drawing axes of SketchUp.

Inferences: When you design 3D models in SketchUp, many features appear in the form of color squares, dotted lines, yellow tags, and other objects of this kind. These features are called together as SketchUp inference engine. To design a model accurately and quickly, you have to understand each feature elaborately and its usage.

Point Inferences: Point inferences tell you about different things of your design, they guide you how to add or change details of the models. If you move the cursor on the working window of the SketchUp, you will definitely be introduced with different colored shapes. If you stay on those shapes for a second, a yellow tag will appear explaining the definition of the color spot you put the cursor on. Here is the list of various point inferences and their meaning.

- Green endpoint
- Cyan or light blue midpoint
- Black intersection
- Red on edge
- A circle, green centre
- Dark Blue on face

In SketchUp, two basic elements that everyone should know about are – edges (lines) and faces (surfaces). To design efficiently on the SketchUp, you have a comprehensive idea about these two features first.

Linear Inference: Colors definitely play a very important role in your designing in the SketchUp. Linear inferences also help a designer draw a 3D model precisely and perfectly. These linear inferences are also called 'help lines' as they play a big role defining your object. Below are the descriptions of the work of linear inferences.

• On Axis – If the edge you draw is parallel to one of the three drawing axes of SketchUp, the edge takes the color of that particular drawing axe.

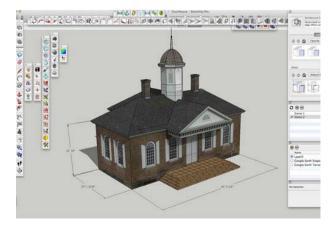
• From Point – When you are moving a cursor in the SketchUp, a colored, dotted line appear that tells you are lined up with the end point of the dotted line. The color of the From Point will automatically change as per the color of the axes it corresponds with.

• Perpendicular – the edge you are drawing must be perpendicular to another edge of the design. Your drawn edge will be colored in magenta.

• Parallel – If the edge you are sketching becomes parallel to another edge of your model, the drawn edge turns into magenta.

• Tangent at Vertex – this idea comes into the application when you are drawing an arc that starts at the end point of another arc. When your drawn arc is the tangent of another arc, it turns into cyan.

SketchUp inferences engine defines the basics of the 3D designing, without which your object does not take the expected form. The use of these applications is more than the usual.





## SketchUp to Vizard workflow

## **Simul Chowdhury: Editor**

SketchUp is convincingly the most well-known platform for designing 3D models flawlessly and quickly. Nearly everyone can hone their designing spree at this platform as it comes up with a user-friendly interface, and the features are equally easy and satisfied. The world of designing grows like fire with the interest today's industry is showing at. Exporting SketchUp models to the Vizard allows you to feel your design as real as the other objects of the world are.

Vizard platform has a huge library of VR commands that help them add your favorite detail to the designs that transform your 3D model into an immersive simulation where you can walk through the ambience you create. Vizard workflow erases the line between the virtual world and the reality, and you get an experience like you are strolling on a real landscape instead of your design.

The tutorials and videos are available on the internet, from which you can earn valuable information of how to render and export your SketchUp model into Vizard workflow. It also includes about the small details that are essential to give your 3D model a real-time feel. The features like lighting, shadows, and texture manipulating ensure that you get the best of SketchUp on Vizard.

The things you need to learn for using SketchUp on Vizard workflow are:

- · SU export setting
- Introduction to Inspector
- Performance concerns
- Model Hierarchy
- Checking Model origin and scale
- Lighting and Shadows
- Adding Sky and Changing Background color
- Manipulating model sub-parts
- Swapping textures

These features work great to make your design vibrant and colorful. With the use of commands, you can simply add detailing of your liking. Vizard also gives you the needed flexibility by proving VR command libraries where you can easily manipulate your 3D model.

You can also check a glimpse of SketchUp on Wizard at. https://youtu.be/TmaLVoNXeRA

Through this video, you will learn about how to import Google SketchUp design on Vizard and how to use commands to add drama to your model. This tutorial will teach you different types of features of SketchUp and mainly Vizard. The final result is interesting to see that gives you an in-depth knowledge about 3D models.

#### Article Source: www.worldviz.com





## 4 Reasons why You Need SketchUp for 3D Modeling

## **Simul Chowdhury: Editor**

SketchUp has become a known name in the world of 3D designing and drawing. The thing that drives designers and artist to the program is its user-friendly functions that allow users to freely sketch their imagination. Though there are many 3D designing programs, SketchUp has been successful in making a unique position among the budding designers.

Generally, two different platforms are designed for the users – Make and Pro. SketchUp Make is for those ones who design 3D objects for the first time. Pro, as the name defines, is designed for the ones who are already expert. It contains the advanced tools and extensions that are helpful to add even complex details.

Using SketchUp is no tough job as it comes up with easy solutions to your all problems related to designing. On this program, you draw designs rather than sculpt the model. It allows you to add or subtract solids to design your model. 4 reasons that keep SketchUp lovers stick to the designing program are given below:

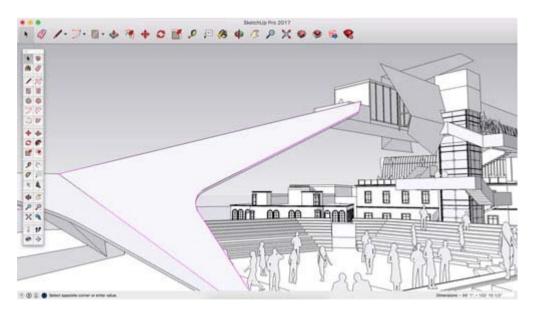
**1.** Accessibility: SketchUp has a simple and easy user interface with which anyone can access the program without taking much time. Unlike other programs, it has been made of uncompleted tools to design 3D models the way you want. Everything in SketchUp is designed to give you a quick understanding of what it is and what it contains for you.

**2. Versatility**: The versatility of SketchUp makes it one of the preferred choices for the designers. You can conceptualize almost anything and everything in SketchUp. The concept of designing has become simpler and easier for you since you can earn comprehensive knowledge about designs that stay behind the architecture, woodworking, film production and thousands other practices.

**3. Practicality**: Practicality is a character that helps you concentrate on your design rather than unnecessary things. Converting your imagination into 3D objects is not only easier but also flawless on the 3D designing platform. You design as per your requirement. Convincing clients comes under your comfort zone. Drawing on SketchUp takes less time to generate your imagination than other 3D programs.

**4. Cost**: Cost efficient, this software application does more than you can imagine. As compared to the other applications available in the market, it is budget-friendly as well as time-saver. It also has a lower cost entry that ensures your thorough learning without making big holes in your pocket.

These features definitely come under your consideration when using SketchUp for drawing your imagination. The platform is indeed helpful for both beginners and experts.





## MakeVR Pro 3D Released by Vive Studios

#### Simul Chowdhury: Editor

MakeVR Pro 3D comes up with a real promise to transform your world of 3D into the virtual reality where you can flawlessly design models while strolling inside the work. Virtual reality is no new thing for the 3D designers and artists, though. But, the challenge is tapping the finest and greatest part of the modeling that keeps a few key players ahead of others.

Associated with Sixpens, Vive Studios released the MakeVR Pro 3D that is based on the CAD designing. This new application does more than they contemporaries offer to the designers. A subtle 3D model can be drowned efficiently with this new application. Not only you design the model, but also you experience every process of designing in real time. You can use your two hands and body to create and art the model. Experiencing the design opens up a vast world of designing for you. The functions like scale, cut, merge solids, and more keep you engaged with the reality of the 3D modeling. With this application, it will no longer be a serious job. Rather, it is a fun loving task that enhances your creativity more than you could ever think.

MakeVR Pro 3D comes up with some easiest features that allow you to design with holding a simple process. The complex issues are getting resolved in no time. 3D printing is another area that involves lots of attention earlier. With this new release, it has become as simple as designing.

The features offered by MakeVr Pro 3D:

• Snap Grids and rulers: The feature will help you manage the size of the model exactly the way you want. It measures in inch or centimeter scale. You can also customize the default as per your need.

• Mirroring of parts: To get a perfect symmetrical design, the feature makes you confident while maintaining the precision.

• Pivoting of parts: This feature is for getting an accurate angle for radial snap grids. The porcupine grids by default set in 45-degree increments. You can change the angle as you prefer, though.

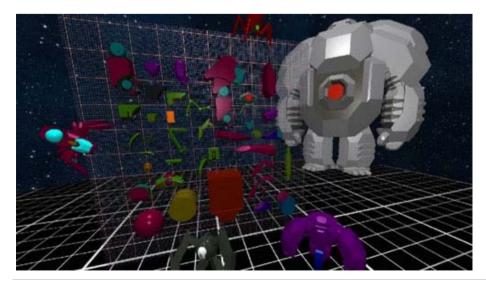
• A virtual Yardstick: This tool is designed to add real-life scaling to the design. It has a great impact on correcting modeling environment.

• STL Viewer: This application allows you to import STL viewer for view only purpose. You can perform limited functions like scaling the object, but it is not for performing other CAD based works.

MakeVR Pro 3D modeling application has also released two tutorials that guide designers to snap the grids and track your object to the grid as you go for the resizing. Unlike other applications available in the market, this is completely based on CAD engine that enhances the accuracy and subtlety of the 3D modeling.

The application comes up with an array of new features which remained untouched till now. These tools are designed to offer a clean view of your 3D modeling and allow you to witness the process of designing virtually.

Source: techcrunch.com





## Release 3 of VUE 2016 and PlantFactory 2016 Introduced by E-on Software

#### Simul Chowdhury: Editor

Being a leading name of software development for animation, creation, rendering and Integration, E-on software always keeps a game changer attitude with the new application for the users. The new releases continue to cast a spell over the 3D designing world with advanced functions and tools. Their effort makes the virtual world as much real as the real one with all equally viable substances. The new Release 3 of VUE and PlantFactory 2016 retain the legacy. These applications are smart enough to add nuanced details to your design, adding a real feel to the virtual world.

The free version of the software application is available for the users. These applications come up with as many features as you may want to have to create a magical 3D work the same as you expected. The new versions always bring forth the company's objective towards creating an amiable space for designers and artists. It always goes a step further to reflect a sense of innovation and creativity of the designing. The main objectives remain unchanged in their designing and the releases – offering a user-friendly approach, enhancing the base of the current technologies, improving the performance of the application gradually.

The key features of these two new releases are discussed here. The information given below is stated according to the press release of the company itself. You can visit their official site http://www.e-onsoftware.com/products/vue/vue 2016 xstream/?page=new for more details. The key features of VUE 2016 R3 –

UX/UI improvements:

- Major performance/responsiveness/stability improvements
- · Higher quality display in Render Scene preview for soft shadows
- · Better handling of editor window manipulations
- Support for HiDPI screens on MacOS

Optimized scene saving process:

- Up to 4x faster scene saving
- Up to 2x smaller file size
- 3 New scene saving modes: Default, Consolidated Archive, Network Rendering

HDR Rendering:

- · Major improvements in dynamic range depth when using Spectral Atmospheres
- New optional Sun Visibility parameter for Spectral Atmospheres
- Automatic de-activation of Tone-Mapping when saving HDR pictures (.hdr or .exr formats)

Path Tracer renderer improvements:

- Adds support for Spectral Cloud layers
- Support for 'Don't cast shadows' and 'Disable Indirect Lighting' material properties
- New Translucent material type
- Now supports Soft Shadows and Blurry Reflections/Refractions

Cloud Modulation:

- New Cloud Opacity modulation
- Access local coordinates for color settings

Faster computing of Spline operations for HeightField Terrains

xStream Integration:

- Adds support for 3ds Max 2018
- Optimized native spline handling
- Network Rendering: New command line options to set color/alpha/depth passes for both stills and animations rendering
- New Python callbacks for setting and getting Color, Alpha and Depth channels saving locations



The important features of PlanetFactory 2016 R3:

UX/UI improvements:

- Major performance/responsiveness/stability improvements
- Better wireframe display, and improved gizmo manipulator interactions
- Improved geometry loading and previewing
- Improved vegetation painting
- Advanced vegetation pruning algorithms with new Cut probability, Cut length and Radius Reduction parameters
- New Current Primitive node allows advanced control over branch growth and natural pruning effects
- Improved geometry transition algorithms:
- Better handling of branch offset
- Improved geometry continuity with highly distorted models
- Displacement mapping now available on transition zones
- Improved exports:
- · New optional wind application to exported geometry
- Improved export dialog interface
- Improved PTex format export for plant materials

The features are concentrated completely on enhancing the users' experience in designing. The details make your work livelier and better than ever. E-on software application does its best job in presenting tools and application that add real sense to designing. Enhancing the core offering of the previous releases of these two applications, the company has been successful to live up to its expectation like before. Personal learning edition and the trial version is available for the users. You can download from the company's official website.

Source: www.e-onsoftware.com





## SketchUp for Ruby Code Editor

## Simul Chowdhury: Editor

Ruby Code Editor has been a popular extension that helps SketchUp users add fine and in-depth detailing to their 3D design. Generally, the extension simplifies the application of Ruby codes in SketchUp platform and allows designers to write down the scripts as easily as they design. The extension seems to be very interesting for those who are obsessed with the Ruby codes and want to apply them on the SketchUp platform to make their design exceptional and eloquent.

This feature allows users to run and modify codes in the SketchUp environment. An External editor is also available, though. The application has been successful to give you the real environment of the code editor. Ruby Editor provides designers with a useful way to design their 3D model beyond the application area of the SketchUp.

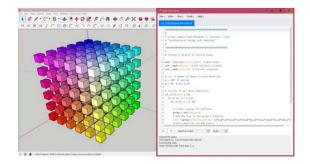
Ruby Code editor comes up with other benefits that make your experience on SketchUp smoother and happier. If you love to have documentation of your work, then there is no better tool than Ruby Editor. At the browse window, you can add your reference web pages from where you are taking designing detail and coding support. These websites will you help in your next project. It also comes up with some common code snippets that can be inserted in your coding area. Other than this, you can call a code-completion feature at any point in your coding.

The benefits of using Ruby code in SketchUp are numerous. Some of them are mentioned below.

- The menu-based user interface with a clean code editor environment
- Light/dark themed editor
- Works smooth with files of any size
- Fast opening with code highlighting for large files
- Files list of most recently use data
- Keyboard shortcut navigation
- Line numbering in coding
- Matching Indenting/dedenting of code blocks
- Matching brackets, current line highlighting
- Undo/redo in editor
- Find/replace in editor (text or RegEx)
- Code folding
- Insert code snippets at cursor
- · Code-completion for SketchUp classes and methods
- Automatic backup file creation
- · Various options: font size, tab/space indenting
- Undo of code execution
- Single undo option for entire code
- Results window keeps track of run history
- Reference web browser for common websites
- Explore selection object properties and attributes
- Option for direct access to the Ruby console
- Option to edit default code snippet
- Clean printing of code

You can open Ruby Code Editor from the 'Windows' tab or from the Toolbar. You need to know that in the editor, codes are highlighted for your help. If code highlighting gets failed, you must check the coding and ensure that you put spaces in between the operation you have used.

#### Article Source alexschreyer.net





## Printable for 3D warehouse

## **Simul Chowdhury: Editor**

3D modeling has become easier with the introduction of many new software applications. The complex things seem easier with the tools and extensions. But making 3D designs in printable format remains a hectic job that involves many tough steps. With the SketchUp application, designers and artists find a simpler way to draw their models without being an expert in the fields. The subtle look of the model seems as accurate as it is done by an expert.

The need for 3D printable designs is felt intensely as the 3D designing industry flourishes with time. The conventional process is not enough to fit the growing need. This is why SketchUp in collaboration with 3D Warehouse and Materialise comes up with a comprehensive solution. It allows users to translate their 3D model into the printable format without going through any hectic steps. 3D Warehouse with their internal expert support makes the design printable-ready STL file – a required process to transform your design into 3D printable format.

3D print is a completely different chapter of study for designing where you are learned to add sizes and lengths to the model for the printable. Different factors are inevitably involved in this process. SketchUp eliminates those tough ones and gives you a way to make the model print-ready for you.

What do they do?

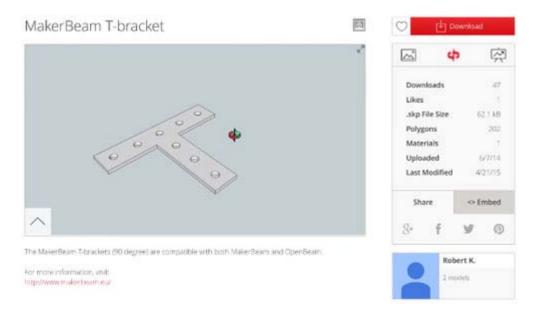
Experts in Materialise do their best job to offer you the desired result. The STL file format of 3D Warehouse is considered to be the solver of such problem. With the help of Meterialise and 3D Warehouse, SketchPlan offers a better functioning tool to you for this purpose.

The Printables of 3D Warehouse: To make your design 3D printable, you need to choose the check box – 'I want this model to be printable.' You need to upload the model to the 3D Warehouse. This model is then passed to the Materialise where it is transformed into an STL file. This new STL file goes through an array of gauntlet tests that fix general issues smoothly and provide you with a watertight STL file. Materialise sends this file to the 3D warehouse from where you can easily download your printable format.

How to find out your Printable file: To get the printable format of your 3D design, sign in your 3D Warehouse account and browse the model details page. Type the name followed by 'is.printable' in the search bar of the site. If you are searching for all printable objects, type 'is:printable.'

This is the easiest method so far for making 3D design printable. The application does not require you to perform complex functions like correcting sizes, alignment for getting the better result. Prepare your model first and send to the 3D Warehouse – is just the process you need to maintain.

#### Source: blog.sketchup.com





## SketchUp Makes 3D for All

## **Simul Chowdhury: Editor**

Nowadays 3D designing has become a widespread topic, and everyone wants to learn designing with three dimensions. SketchUp is the software application that is accepted hugely by the designers and architectures because of its user-friendly tools and extensions. The application unmistakably makes the designing for all with tools and plugins. Both experts and beginners share their pleasurable space in the application with an equally beneficial way. There are complex applications designed specifically for the advanced users. The simple tools are developed simplify your experience when you step into the world of 3D as a beginner.

Let's talk about the simple tools that make various gigantic rules easier for you. These days, even children are using SketchUp to bring their imagination into reality. For the beginners, there is a basic modeling technique that tells you how to make models on this application.

If you need more sources for enhancing your knowledge, you can choose the 'help' option where you get official documentation of the SketchUp. There is also an instructor that guides you to become pro in SketchUp. The instructor menu will help you understand the tool you are using. A general window will be open after clicking on the instructor menu that tells you the proper application of the tool. For example, if you are using a circle tool, then the instruct menu will show you the tool operation and the instruction keys.

Interface and Program Set Up:

After installing SketchUp on your operating system, you can access to the SketchUp application rightly. At the beginning, it was a rather clean appearance with ground plane (green), sky (blue gradient), three axes and a modeled person.

Tools and features are available in the screen menu option of the SketchUp, or you can follow the steps - view > Toolbars

Working with SketchUp Tools:

Extensions – this shows you the installed extensions also called 'plugins'. As default extensions, you will find sandbox tools with a few other names. You can install new extensions with clicking 'install extension button'. The unnecessary extension can be disabled by unchecking the box located just beside the plugin names.

Files – you can choose the location of your hard disk for storing models, components and materials. The location is set up by the SketchUp installation directory generally. It also allows you to make a separate location where you can store your custom components.

General – it contains different important setting that will help you maintain a smooth workflow in the SketchUp. 'Create backup' is such a tool that must be checked for backup of your data in case of sudden crash.

OpenGI – these setting gives you the idea about how the application graphics work. It also denotes how much your SketchUp is responsive when you work on it. If you have a quality graphic card, then you must not worry about any run programs error.

#### Source: books.google.co.in





## SketchUp Menu Bar – Know How to Use

## **Simul Chowdhury: Editor**

SketchUp offers a straightforward approach in every feature so that anyone can design anything without having any prior knowledge. The menu bar contains easy-to-use functions that are as simple as you expect. It has, more or less, the same features that are common in the 3D designing applications. The only thing that distinguishes SketchUp from others is its instant-learning appeal proved to be helpful for both beginners and experts in equal measure.

The content makes you well-aware of different tools and the features. They are designed to give you a complete control when you are designing 3D models. Take a look at the commonly used menu bar functions.

• File – the file menu is used for creating, opening and saving SketchUp files. It also contains the options like export, import and print for carrying out the necessary tasks.

• Edit – edit menu contains the commands that help you modify or create a needed shape to make your design as per your wish.

• View – it has commands that control the appearance of the model you are drawing. The feature decides how the model visible on the screen.

• Camera – this menu makes you understand about the view points of the model. You can analyze the look of the model skillfully selecting the right view point.

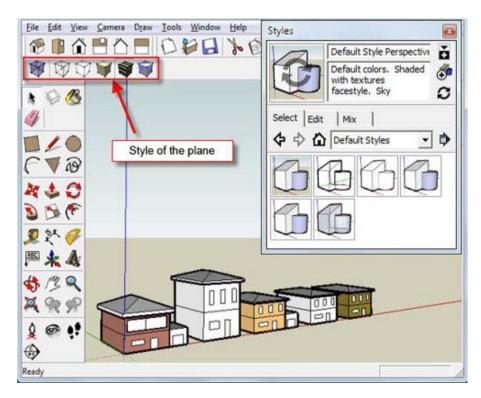
• Draw - it allows you to draw edges and faces of your choice.

• Window – window menu is for opening a dialog box of your use. It has all the necessary functions that give you a quick access to the functions that you apply frequently.

• Plugins – this menu offers you some additional plugins designed to give your model a more realistic look. You can check or uncheck some features as per the necessary.

• Help – help menu is for your help if you need to move ahead on the SketchUp. It has some important resources that take you out if you stuck in somewhere in your design.

These functions are common and they make the basics of SketchUp for the designers. The simplistic appeal includes everyone who wants to present their designing a 3D look without adopting grave knowledge measurement and tools. These perform simply and flawlessly to make the designing interesting.



Article Source: <u>www.dummies.com</u>



## SketchUp Web Exporter

## Simul Chowdhury: Editor

SketchUp has numerous extensions and tools to make 3D designing a fun-loving task. Behind each release is an expectation of offering a simpler way that helps artists and designers get their imagined model without investing much time. SketchUp Web Exporter is such an amazing tool that adds interactive views to your design on the browser.

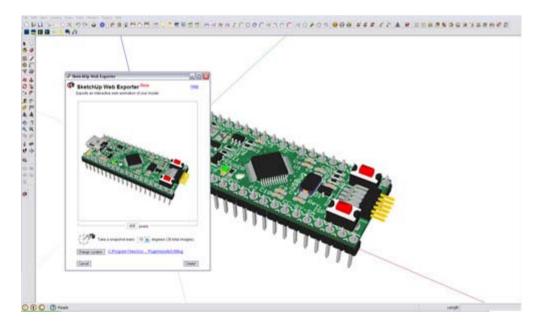
The best thing about this extension is that it does not have an additional plugin to run. It runs with the HTML and Javascript. To make your model interactive, the extension saves various images of your model and they are loaded on a web page also. You can smoothly navigate the model in the 3D space with this application.

This is the simplest way to add an interactive touch to the designs. The extension has been running successfully since its introduction. Popular among the web developers and designers, this tool seems sufficient to meet the demand of the generation. The different view of your 3D object on the web page provides you with a lot of benefits and interacts to the viewer better than ever.

Tutorials and guidelines are there to make you understand what SketchUp Web Exporter is. You can follow these tutorials and videos for comprehensive knowledge. In a general sense, this tool exports your model to 3D views interactive views which create a visual illusion for the viewer. The navigation of the tool is as smooth as required.

This application has been in the SketchUp for quite a long time and increases its popularity due to its diverse needs and user-friendly approach. The extension is also available on the 3D warehouse also. This makes the process even easier. Upload your model in the 3D Warehouse and click the share button. An HTML snippet will generate automatically with the 'Get Embedded Code' option which helps you embed a model to any web page. The process is as easy as you think.

SketchUp Web Exporter has many benefits in the modern age. It is a great application that views a product from different angles and sites, creating a 3D visual illusion. To run this application, you no need to have plugins, unlike other extensions. It runs quite satisfyingly with the HTML and Java script.





## Magazine Details – The Creative team of Sketchup-ur-Space

Started in September 2010, Sketchup ur Space (SuS) was the first online magazine devoted to SketchUp, that unique, innovative 3D design tool from Google. It holistically covers features, events, news, updates, reviews and many tips and tricks.



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Simul, the editor of SketchUp ur Space magazine is the main writer. He is responsible to write the cover story, blog and many other columns. Along with it, He is creating a liaison between the writers and the readers.



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Manoj is enthusiastic helps to put the content of the SketchUp up Space magazine in the html version. Manoj is the html developer who beautifully creates each and every edition with care along with the PDF version.



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