# SKETCHUP-UR-SPACE

Issue - Apr 2014

www.sketchup-ur-space.com

## ARTICLE

Designing video surveillance systems using 3D visualization

Steps to make sketchup run smoother

# TIPS & TUTORIALS

How to create this field for football with sketchup

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# TIPS & TUTORIALS

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### A letter direct from the editor desk highlighting on February edition

We are going to publish another fabulous issue of sketchup-ur-space. I think our magazine is quite different from others online magazine as we want to be helping hand to the newbie sketchup professionals to showcase their work through our magazine at free of cost.

We always strive to show our gratitude and thankfulness to these young people who always support us by providing some exclusive tutorials/articles.

In this issue, we receive some great tutorials and articles. In article section, author Göran Sandberg from Axis Communications presents an article highlighting how to make effective design of video surveillance systems with 3D visualization. Security is a vital part in large building especially in airport terminals, or office complexes. In order to get optimal utilization of the entire security system, 3D visualization can help to make plan & layout of complete video surveillance systems efficiently.

In a second article, author Tony Gushanas shows some effective tips to speed up the workflow sketchup for creating more models in quickest possible time.

In tutorial section there are four exclusive tutorials. In first tutorial, author Mark Lester Ocampo, the promising Designer & 3D Visualizer, focuses on step by step guidance to process finished render combining vray render output elements in Photoshop.

In second tutorial, Simone Piccioni, shows step-by-step processes for creating the model of a rectangular football field through sketchup and its plugins. In third tutorial, Simone applies sketchup to create the designing and modeling part of a fiat car 500.

In last and final tutorial, Mario Goles, the renowned interior designer and 3d architectural visualizer, briefly explains the complete workflow for creating interior design of living room. He apply sketchup and v-ray for texturing, lighting and rendering processes.

In interview section we provide an exclusive interview with Thomas Thomassen, the most recognized model maker, 3D visual artist, software programmer, and web designer. This interview was published earlier with Chaos group and with their permission we republished in our magazine. In this exclusive article Thom exposes his experience in the 3D industry, why he applies V-Ray, and what he does while not being engaged with designing, rendering, and programming.

The team of sketchup ur space also presents an exclusive cover story analyzing all the crucial features of sketchupfab how it provides great benefits to the 3d modelers and 3d artists to upload their 3D models either through any web browser or directly from any 3D editor devoid of any plugin and distribute these models with others via leading social media platforms like Facebook, Behance, LinkedIn, Kickstarter, DeviantArt, WordPress, and other forums.

In blog section, Zulma Whiteford briefly describes how to apply various useful tools in sketchup for efficient 3D drawings. The team of sketchup ur space explains the useful features of Visualizer for SketchUp, an extension for SketchUp that comes with on the spot and incessant natural-outdoor-lighting view from inside SketchUp, involving bounce color and even optional lens-focus blur to express scale.

In news section the readers can get familiar with the latest updates on 3d modeling and sketchup world.

Hope our readers will enjoy this issue to a great extent.

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



Best wishes **Rajib Dey**Editor



# Q&A With Model Maker, 3D Visual Artist, Software Programmer & Web Designer Thomas Thomassen

Thomas Thomassen, better known to Forum members as ThomThom, is a model maker, 3D visual artist, software programmer, and web designer. He currently makes 3D models and visualizations for an architecture firm in Trondheim, Norway, and in his spare time, has released over 40 SketchUp plug-ins.

A long distance friend of the Chaos Group USA (formerly ASGVIS) team, Thom contributes countless hours to support V-Ray for SketchUp forum members with his tips, solutions, and critiques. He also played an important part in the development of the latest build of V-Ray for SketchUp (version 1.49.01). According to Chaos Group USA Programmer Devin Kendig, "ThomThom not only reports bugs, he goes so far as writing code to fix bugs! He helps by answering questions about our product on the forums too. He's practically a member of our staff and an asset to our team."

In this Q&A Thom reveals his experience in the 3D industry, why he uses V-Ray, and what he does when he's not designing, rendering, and programming.



Let's start from the beginning. Where are you from? Where did you study? Who do you work for? And what do you do?

I'm from Trondheim, Norway and I studied BA (Hons) Modelmaking for Design and Media at the Arts Institute at Bournemouth, England. I'm currently employed by ARC Arkitekter, and architectural office in Trondheim. I make models and visualizations for their projects.

#### How and why did you get started with SketchUp? Did you use any other modeling programs first?

I started using SketchUp when I began my job at the office where I work at now. SketchUp was the modeler of choice there. I had previously seen a quick demonstration of SketchUp, and used the trial briefly, but was otherwise a completely newbie. At the institute where I studied we used 3d Studio Max and Rhino, though the course I took was mainly physical models.





#### When were you introduced to V-Ray, and why did you decide to give V-Ray a try?

After getting comfortable with SketchUp I began looking around for rendering solutions. I tried various engines, trying them out to see which one I felt comfortable with. Unbiased renders was ruled out quickly as I didn't have the patience for them. I couldn't have a large render bake for a whole day. Some other engines had very easy setup, but I felt they were a bit too simple and didn't provide the features I wanted. V-Ray for SketchUp caught my attention. I'd heard a lot of good things about the V-Ray engine in general and it was the render engine that eventually stood out.

#### What did you like, and what didn't you like when you first started using V-Ray?

I liked the speed. It was faster than the most which allowed me to get the work done in time. But there was a mind-boggling array of properties to control. I still don't have full control over it all. The good thing was that V-Ray had many tutorials out there so there was plenty of learning material, though the abundance was overwhelming at times. For a long time I didn't adjust many of the settings and just used mostly defaults. I found that making small test scenes to experiment with a very small set of settings helped in learning what the various properties did. I still make lots of these test scenes to explore solutions for producing final renders.





#### Which plug-ins have you developed, and what do they do?

I have currently released 44 plug-ins. They have been developed based on my needs when modeling with SketchUp. Many solve repetitive tasks which saves me lots of time. They are all listed and distributed from the SketchUcation.com forum. Nearly all of them are free, as in beer. But I have one commercial plug-in, Vertex Tools, which adds vertex editing capabilities to SketchUp.

Along with updates to Vertex Tools I am planning a new commercial plug-in, <u>Bezier Surface</u>. It is currently under experimental development.

Plug-ins are the single reason why I haven't pushed for a different modeler at the office. They allow me to custom fit SketchUp exactly to my need. And with my background in doing web design, on a hobby and freelance basis, I already had the knowledge of scripting which made SketchUp a very good tool for my needs. It allows me to model and make graphics while also satisfying my programming interest.



#### What or who inspires you?

People who are passionate about their work. Within any discipline, those who enjoy what they do and always strive to improve are the ones that do the best job.

#### What is your favorite V-Ray render, by you or someone else, and why is it your favorite?

There are so many extremely good V-Ray renders, but SilverShadow's V-Ray for SketchUp renders are some of my favorite. The level of detail is very impressive.

#### What do you do when you're not designing, rendering, or programming?

I do traditional archery with the local archery club. I try to go at least once a week. It's one of the few interests of mine that doesn't involve computers, so it's good to get away from the monitor.

Discover more about Thomas Thomassen at thomthom.net and sirethomas.deviantart.com.

Cross posted from www.chaosgroup.com



# Brief introduction of sketchfab, a web based platform to share 3d models easier

3D modeling plays an important role in the technological advancement of the current era. France based Sketchfab make it easy for internet users to access 3D models from anywhere of the globe. Sketchupfab is a useful platform where the users will be able to upload their 3D models either through any web browser or directly from any 3D editor devoid of any plugin and distribute these models with others via leading social media platforms like Facebook, Behance, LinkedIn, Kickstarter, DeviantArt, WordPress, and other forums. The users can view as well as edit these models in web supported 3D editor and utilize the models which were uploaded earlier.

Sketchupfab is compatible with 3D Studio Max, AutoCad, Blender, Cinema4D, GrassHopper, Inventor, Maya, Minecraft, Modo, Sketchup, Solidworks, Unity and ZBrush.

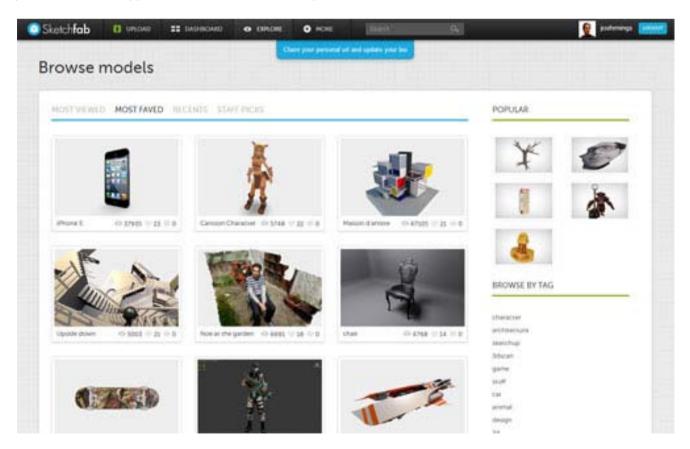
Sketchfab had started its service in March 2012 and at present over 100K users consider it as a universal go-to platform for circulating 3D models through web.

Sketchupfab is providing support for a wide array of 28 formats of models. In January, it has tied up with Adobe that facilitates the users to make 3D models in Photoshop and adequately distribute their design through Sketchfab.

The users also get the ability to explore through a catalog of numerous models produced by others. Any interactive 3d model can also be implanted.

The users can access Sketchfab at free of cost but the free plan is valid for uploading 50mb at a time or applying basic tools. For unlimited usages, the users have to pay \$10 per month (for individuals) or \$29 per month (for businesses).

Some leading investors like Partech Ventures, Balderton Capital, Borealis Ventures, and a mass of individuals provide financial support of \$2.5 million to Sketchupfab.





By applying Exporters plugins of sketchupfab, the users can directly upload their 3d models from inside their 3D modeling software.

The material editor can be applied to polish up the rendering of each material of any scene in real-time through Sketchfab viewer. The users can access it from the edit panel, situated at the right side of the viewer. It catalogs all your materials with the names assigned to them. Picking a material will place the camera view in center on it and choose its area on the model. All your textures are also scheduled there. The users can substitute them or upload fresh ones, and opt for a color with the color picker.

#### How it performs:-

Sketchfab is completely browser supported, and the users don't have to download or set up any supplementary 3rd party software for executing any work. The users should require a browser well-suited with WebGL to get the models in their full 3D atmosphere. The users have to open a free account and upload a 3D model in 28 supported formats. The available server in sketchfab will process the file, and demonstrate it in real-time in any browser through some recognized web technologies like WebGL and HTML5. The Sketchfab 3D viewer uses the WebGL JavaScript API to present 3D models and is built with the open-source OSG.JS JavaScript library. The users will be able to include meta information and distribute their model on the web. The users can also take out the models which are already uploaded at anytime from their dashboard. The users can implant the viewer on any web page, similar to a YouTube video.

#### Mobile compatibility

WebGL is well-suited with the following mobile operating systems/browsers:

- Android 4.0 with Firefox beta and Google Chrome
- Blackberry default browser

For mobile phones that are not compatible with WebGL, along with iOS, the Sketchfab viewer applies a 2D fallback showing a pre-rendered 3D model with 360° view.



#### The application of Exporters:-

- Download an exporter situated on the left side of the sketchup website
- Set up it on your 3D software,
- Provide your API token (given in your Password settings),
- Export your model.



#### Sketchupfab provides following benefits to the users:-

- · Provide secured way for displaying any work online
- Contain the features like easy distribution, magnificently comprehensible surface, intuitive navigation
- Superior in-browser 3D technology that allows the users to create great products and glimpse all the great designs
- An online 3D viewer to exhibit all the models for unlimited time

Some days ago, Sketchfab launched the second version of its 3D platform. On the updated website, the users will be capable giving comment on 3D models as well as following people to curate a newsfeed of 3D models and more. The total browsing interface was completely revamped. Categories, folders and tags are fully updated. One can look for users by locations and skills, browse content by folders or categories. The upload procedure becomes uncomplicated. Lastly, it's a responsive website compatible with your phone, tablet or computer.

https://www.youtube.com/watch?v=iE4SXrkgBog

https://www.youtube.com/watch?v=SVIryONC\_yc

https://www.youtube.com/watch?v=QWBObuP3j3U

https://www.youtube.com/watch?v=wwmip6QOHWo



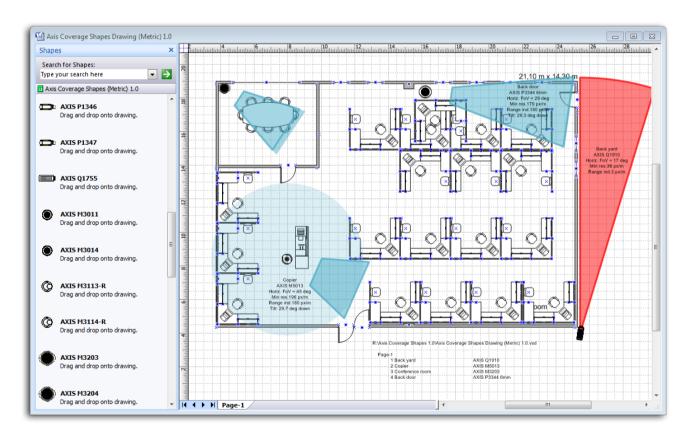
### Designing video surveillance systems using 3D visualization

Security is often an integral part of the design process of new buildings - and an important consideration especially in large buildings such as airport terminals, or office complexes. Video surveillance cameras are used to monitor key areas such as entrances or high security zones, but it is important to understand where exactly to place them and what technical specifications are required to achieve optimal coverage.

Installation of the surveillance systems also needs to meet the expectation of the end users. What can be seen and how will the different scenes look like when viewed through the eyes of a camera are some the basic questions to ask in order to help clients understand both the capabilities and limitations of different features, or systems in general. A well-functioning system that does not meet customers' expectation is not going to inspire clients' confidence in future projects.

Deciding on the number, type and position of video surveillance cameras needed has traditionally required complex and time-consuming manual calculations. 3D visualization now makes the system designers' lives much easier and helps them do their job more cost-efficiently and accurately: New tools are available that integrates with popular CAD software and assist designers with the planning and layout of complete video surveillance systems.

Axis Communications, a leader in network video, is one company that offers a range of free tools that integrate with Autodesk Revit, SketchUp and Microsoft Visio - some of the most popular design software solutions that are widely used in architectural planning, building layout and system design. Available for download from the Internet as an addition to the CAD software, and with camera models available for import into CAD drawings; tools like these help designers decide on the ideal position for each camera by simulating camera coverage based on the camera's field of view and required resolution.



Axis Coverage Shapes for Microsoft Visio helps security system designers decide on the ideal position for each camera by simulating camera coverage based on camera field of view and required resolution.

#### How it works

Designers can import existing drawings and building layouts or uses the software to draw up the layout of the area they need covered by video surveillance, and then use a simple drag-and-drop function to choose and place cameras directly into the building drawing plans. Realistic, interactive 3D camera models in Autodesk Revit and SketchUp illustrate what the camera set-up will look like in real life, how the cameras integrate with their surroundings, and which area the video surveillance system will cover once installed. Users can choose from a large range of cameras and mounts and place them

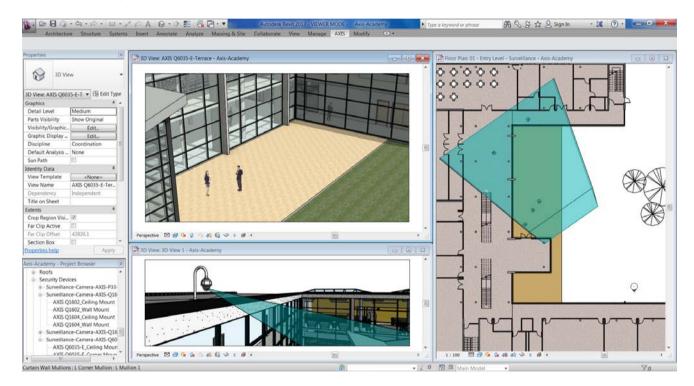


on any surface in the building plan. Once placed in the design, the software shows the camera's entire field of view as a colored area, with a resolution guide that helps determine the area where the target image solution is met.

To achieve the best coverage with the video surveillance system and optimize the system layout, the software allows designers to try out and compare different camera models, mounting positions and view angles. The software includes controls so users can specify values such as the required focal length, target resolution and mounting height. Users can interactively move the cameras by dragging them to different mounting points and pan or tilt them to determine the camera's field of view for various setups.

One feature uniquely available for Autodesk Revit and SketchUp is a camera view feature that lets users switch to 3D views as seen from the security camera's point of view, and look through the lens of the camera literally at the click of a button. In SketchUp, this view, the camera can also be rotated or its angle adjusted and the user can see how this changes the field of view from the camera. This allows designers to get a good impression of what the final video surveillance scene will look like at an early stage in the design project, and identify any objects that might obstruct the camera's field of view such as columns or walls.

Once all cameras have been placed in the building design, it is then easy to verify the coverage area for the entire video surveillance solution. These images/scenes can also be used talking to the end user in regards to the systems' functionality, and help out setting the correct expectations which can then be achieved by the system once installed.



Axis Camera Families for Autodesk Revit offers detailed metadata required for Building Information Modeling (BIM) and allows security system designers to interactively visualize camera coverage.

#### SketchUp vs Autodesk Revit

SketchUp is a popular and readily accessible 3D CAD software that is particularly easy to use, while Autodesk Revit offers some more advanced and powerful design features that are useful especially in larger design and building projects. To make full use of those, the camera models for Autodesk Revit include detailed metadata required for Building Information Modeling (BIM), a process involving the generation and management of digital representations of physical and functional characteristics of places. They are files which can be exchanged or networked to support decision-making about a place. From inside the CAD drawing, users can access information about each camera such as the model number, focal range, resolution, mounting options and mounting accessories available, as well as power consumption. Once the design is complete, a camera summary lists all cameras used in the design, including any mounting accessories required for the installation.

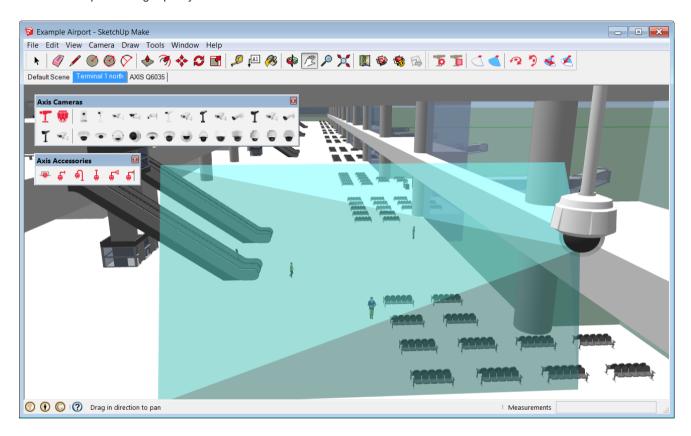
#### The advantages

There are a number of benefits in using 3D visualization tools when designing video surveillance systems.



The most obvious benefit is how 3D visualization helps with camera selection and placement. With these tools, system designers have easy access to a complete range of different cameras directly inside the software, including links to relevant technical specifications. By dragging and dropping the cameras in the CAD design and moving them around, they can see what each camera looks like in its environment from a design perspective, and view the camera's coverage for all the different camera types and possible mounting points. This allows them to decide which camera is best suited for the scene that needs to be monitored, and where it should be positioned.

3D visualization tools also help system designers to determine and meet the operational requirements for each video surveillance camera, such as ensuring that the camera has enough resolution, expressed in pixels per foot or per meter to identify a person entering a building through a particular doorway, or to be able to apply intelligent video analytics. With an image resolution guide, the tools provide clear guidance on the image quality that can be expected from each camera in the given setup, and they clearly show the area in the camera's field of view where the required target resolution will be achieved. By exploring using different cameras and mounting options for the video surveillance solution, system designers can make sure that the finished and installed system will not only cover the right areas in or outside the building, but also deliver the required image quality.



With Axis Camera Extension for SketchUp, security system designers can evaluate how cameras fit into the building layout and easily spot if the camera view coverage is obstructed by columns or walls.

Autodesk Revit and SketchUp both include advanced features that let users simulate the movement of the sun throughout the year, and Autodesk Revit can even simulate foliage growth on nearby trees and shrubs. Both are important in understanding the light conditions in which each camera will operate. For example, in winter the sun might be so low that it shines into a camera's lens through a window, or foliage might be so dense in summer that an area in the building becomes very dark or the view from a camera might become obstructed. In both cases, simulating and visualizing the setup will help the system designer decide whether a camera needs to be moved, or a different camera chosen that can cope with difficult light conditions.

Finally, 3D visualization tools are a useful aid for system designers in setting the right expectations with their clients. By demonstrating exactly what the installed system will look like, what it will cover and what camera views to expect, clients will be able to understand the capabilities and limits of the system. The installation and approval process can be streamlined and the list of issues that will need to be fixed before a project can be signed off can be significantly reduced.

#### **Summary**

To achieve the best level of security and avoid blind spots that could potentially become a security issue, security systems need to be planned at the same time as other essential services such as electrics and plumbing. With an integrated video surveillance system planning tool, designers can see exactly how the cameras fit into the building layout and can easily



detect if views are obstructed by columns or walls, or if the camera installation conflicts with any other building systems such as mechanical, electrical and plumbing installations. This helps to manage customers' expectations when potential issues can be identified and tackled as early as possible.

With interactive 3D visualization tools like these, architects, engineers and system designers can improve planning and work more efficiently. The result is more effective value engineering, device placement, conflict identification and aesthetic coordination.



### Steps to Make SketchUp Run Smoother

SketchUp simplifies the entire process of creating models, but making various models can slow down the program. There are various steps mentioned below that can speed up SketchUp:

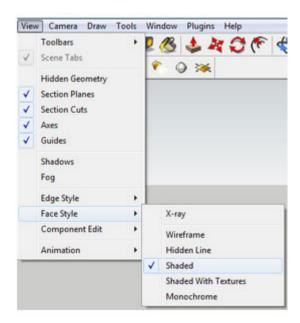
#### https://www.youtube.com/watch?v=BosjkaHvtpQ

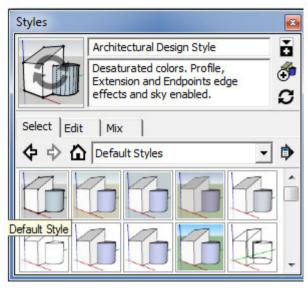
#### **Components & Groups**

Everything that is modeled must be either a component or a group. Ungrouped faces are great resource consumers and increase the file size significantly.

#### **Display Style**

Under the View option, users should set their Face Style to Shaded and uncheck Shadows if they are currently on. They should also set their Windows>Style option to one of the defaults. If they require to view their model with a particular style and with shadows, they must set up a scene with those properties. User should ensure to set up a 'working' scene so that they can shift between the two. This process enhances the workflow and speeds up SketchUp significantly.

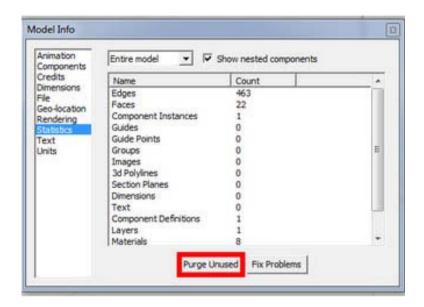




#### **Purge**

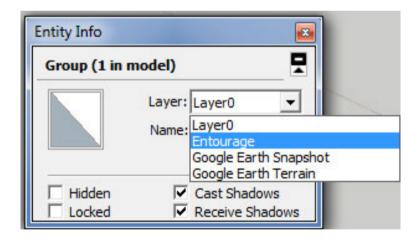


Each time a component is modeled, that component is saved by SketchUp inside file. Even if it is deleted, it is saved in a library for the user to recall whenever required. Though this is very helpful, yet it makes the file size extremely large, especially when components are imported from the online 3D warehouse. It is necessary that users visit Window>Model Info>Statistics>Purge Unused, periodically and watch their component count and file size decrease and feel SketchUp running faster.



#### Layers

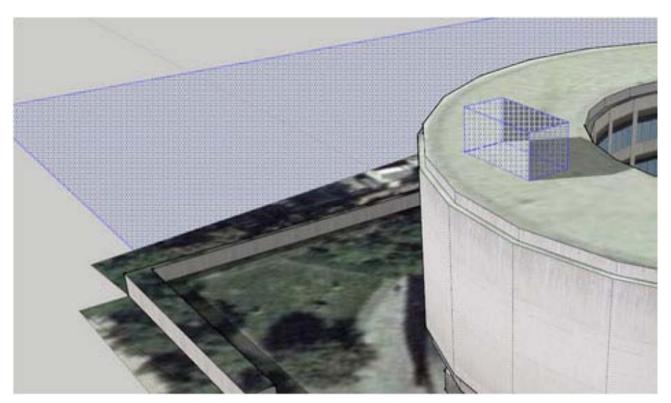
Users must put detail items that they do not require to see all the time on their own layer. This will help them to toggle these items off while they are working on their broader modeling strokes. It is important to be careful while using this one. It is recommended that users should model everything on their Layer0 and group up similar items using the outliner tool and manually change items from layer0 to their desired layer using the entity information tool bar i.e. Window>Entity Info.



#### **Hidden Geometry**

Users can toggle to View>Hidden Geometry on and check if there are any hidden geometries they need to remove. Hidden geometry will show up with a crosshatch infill and removing these hidden geometries definitely speeds up SketchUp.





#### Last Save with Minimal in View

To ensure that the files open quickly, users should make their last save count. They should make sure that shadows are disabled and any extraneous layers are toggled off.

Ref: http://designerhacks.com/speedupsketchup



### 3D Drawing with SketchUp

SketchUp Make from Trimble is your answer. SketchUp is a software program that allows you to draw and design in 3D. Your students will benefit from an opportunity to explore, create and express themselves in a visual way and effectively convey what they are thinking.

To get started, visit www.sketchup.com and download the free version of SketchUp Make. Be sure to click on the Learn tab and view the video tutorials, which provide comprehensive, step-by-step instructions on how to get started.

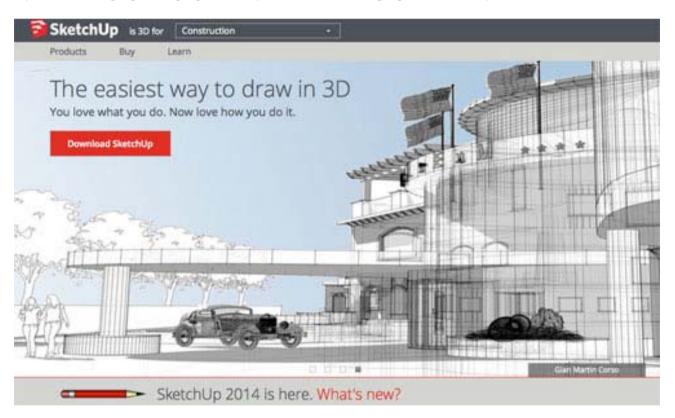
I would suggest you begin with tool familiarization. Have your students open SketchUp, select a template and move the mouse above each tool to see an explanation of what it does. Allow some class time for them to try out each tool so they can begin to experience the power of SketchUp.

To capture your student's attention, get started with a basic activity that incorporates the use of the Push-Pull tool, the Orbit tool and the Offset tool. You will quickly witness the excitement and desire to learn more as they see their designs come alive.

In addition to the video tutorials, the SketchUp website offers self-paced tutorials, Getting Started printable guides and Quick Reference cards. There are many ways to incorporate this program into the curriculum. Reading Anne Frank in Middle School Language Arts class? How about asking the students to design the space where Anne Frank hid? Studying architecture of the past? How about creating a 3D model of an ancient pyramid?

For more ideas of how to connect SketchUp in your classroom check out the link below:

http://sitescontent.google.com/google-sketchup-for-educators/Home/google-earth-lesson-plans





## New to SketchUp Pro?



# Getting Started with SketchUp Part 1









# Visualizer for SketchUp can generate photorealistic virtual image with a single click

Imagination Technologies has just launched Visualizer for SketchUp. This latest sketchup program facilitates the users to snap real time virtual photos of their 3D designs in SketchUp(R) with a single click.

The sketchup users can access Visualizer for SketchUp through getvisualizer.com. A free seven-day trial and a license version for \$19.99 are available in getvisualizer.com.

Visualizer for SketchUp can transform any sketchup model to a photographic version. Visualizer is similar to a smartphone camera inside SketchUp. With the progression of the work, the image in the Visualizer revises in real time and produces quick visual view for the design underway. After getting the satisfactory result, the users can apply shutter button to snap a quick picture and distribute with others, present to the client for demonstration, or have an idea regarding the quality of the design.

By reproducing the pathways of light in 3D space precisely, users will be able to view shadows, delicate lighting details as well as focal depth and exposure of the virtual camera itself. With the physical dimensions and geolocation information obtained from SketchUp, the resulting picture depicts how the photograph of the model will appear in real-life.

Visualizer ascertains material properties directly from the information previously existed in the SketchUp model devoid of any modification. To manage focus and exposure, just draw an exposure and focus point just about the image and the picture revises in real-time.

Visualizer for SketchUp applies Imagination's highly powerful PowerVR Ray Tracing software for generating photorealistic images in real-time.











### VUE 2014.5 brings more light to your digital nature

e-on software, just launched VUE 2014.5 xStream and Infinite for commercial application. This latest version VUE software will be useful for making natural 3D surroundings as well as performing animation & rendering.

The existing users of VUE 2014 xStream and Infinite and the users who are not under maintenance can access VUE 2014.5 version at free of cost.

Graphics professionals will be greatly benefitted with this new version as it comes with numerous advanced features. VUE Infinite functions as a separate application whereas VUE xStream compatible with 3ds Max, Maya, Softimage, LightWave and Cinema4D.

#### VUE 2014.5 xStream and Infinite contain the following improved features:-

- Better support for Plant Factory vegetation: Noteworthy enhancements are included in VUE 2014.5 to
  accelerate the rendering of TPF plants involving a render-time equal to 20 times quicker (higher pre-computing of
  illumination on plants, superior illumination quality, etc...). The normal mapping algorithms also improved severely
  to make better plant rendering quality on the whole. Access greater way to TPF plant published parameters and
  mesh resolution in the Plant Editor. Well versed with Plant Factory 2014.5 lightweight preset technology.
- High Quality Photometric Lights: Perform real time rendering with sophisticated light colors through the high
  quality Photometric Light presets in VUE 2014.5. Various new presets were included which range from Carbon Arc,
  Sodium Vapor, Metal Halide etc...).
- Light Portals: Light Portals significantly develop the accurateness and quality of interior renders and facilitate the users to comprehend how the light will come into indoor scenes.
- Sound interoperability: VUE xStream 2014.5 is well suited with Autodesk 2015 Media & Entertainment products (3ds Max 2015, Maya 2015 and Softimage 2015), and also compatible with V-Ray 3 for 3ds Max (support V-Ray 3 for Maya is under process). Some latest Python callbacks are included for Terrains and EcoSystem management...

All registered users of VUE 2014 xStream and Infinite (no maintenance plan necessary) can avail VUE 2014.5 at free of cost. VUE 2014 Infinite and xStream owners can directly shift to VUE 2014.5 by downloading the most recent software update for their product from www.e-onsoftware.com/updates.

VUE 2014.5 xStream will be priced at \$1,995 (one year maintenance included), and upgrades from VUE 11.x xStream starting at \$439. VUE 2014.5 Infinite will cost at \$1,495 (with one year maintenance), with upgrades from VUE 11.x Infinite starting at \$359. Upgrades from VUE 10.x Infinite and VUE 10.x xStream are also obtainable. The users can get full pricing details from following link: www.e-onsoftware.com/pricelist











### **Post Production Technique for Architectural Renderings**

Hello everyone! I want to show you a great tutorial about a post-production techniques. Mark Lester Ocampo will show you step by step how to process finished render combining vray render output elements in Photoshop. Thanks to Mark at this great video content.

#### https://www.youtube.com/watch?v=RdmcB9VbzH4

Hi, my name is Mark Lester Ocampo, from the Philippines, currently based in the Kingdom of Bahrain as a Designer & 3D Visualizer. in 2005, I started interests in 3d and animation when I was still working as a graphic artist and later on studied at school on weekends while working on regular days, by that time i'm also fixated with photography plus my mastery of Photoshop as used from my day-to-day work which eventually helped me a lot when I was learning 3dsMax, it soon paved the way for me to make the switch to my current job.

I believe that my passion for computer graphics fueled my continuous improvement every day such as non-stop researching and experimenting different ideas of mine to excel my current level and achieve the next, which I do believe is necessary to evolve and be on-par with client's needs and other artist's criticism.





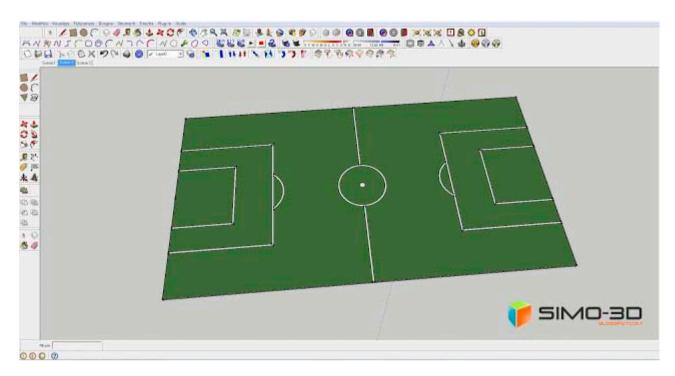




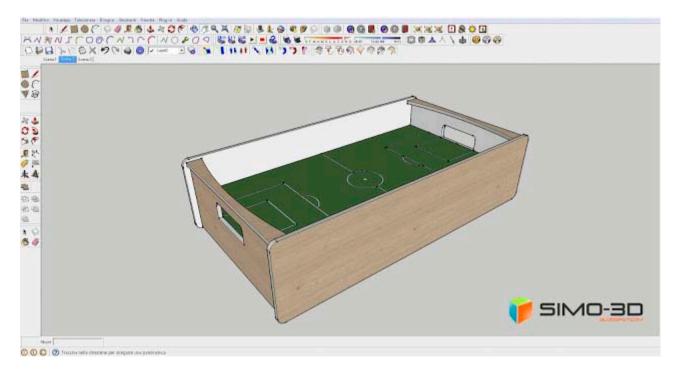


### How to create this field for football with Sketchup

First I created a regulatory field , ie, a rectangle of  $117 \times 64 \text{ mm}$  , and I drew the lines of the game inspired by some photos found on the net.

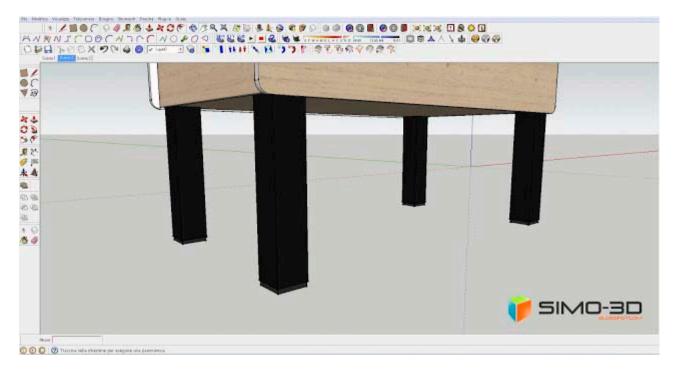


At this point, with 15 mm thick boards, I created a box around the field, each of these is a component so if we're going to work on an automatic will change all copies and this will be very useful in the later stages.

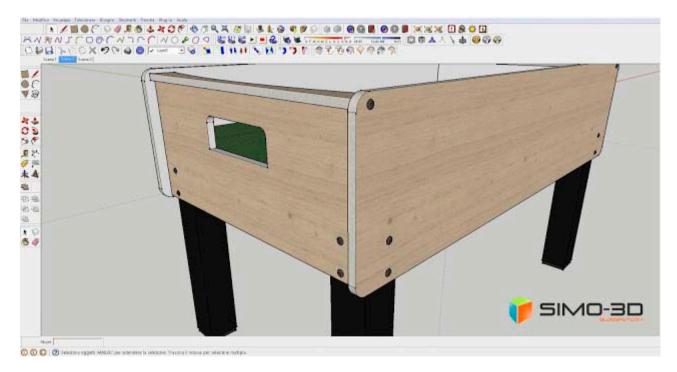


This field needs to be a little 'raised, perhaps with legs 80x80 mm square base (they are always copies of a component), in the lower part of the legs I created with squares slightly smaller.



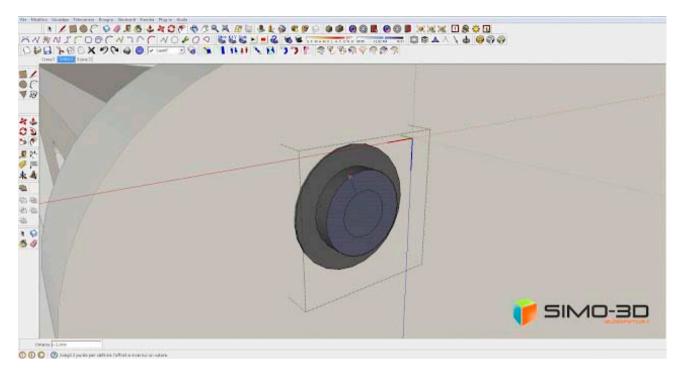


To hold the whole structure, but also to give more realism , I added the bolts. But back to the speech of the components, if we add the bolts entering the component " Paw " ( just click twice above) magically appear on the other leg ... unless you do not want to repeat several times the same operation.

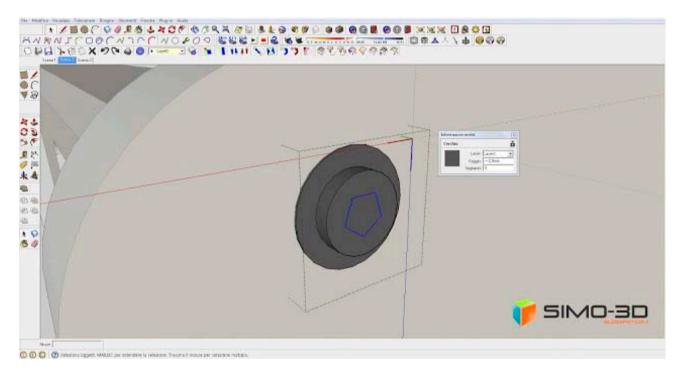


However, the realization of the bolts is very simple but effective . I created two cylinders of different sizes (see photo below). In the smaller one I created with the tool "Offset" a circle even smaller.



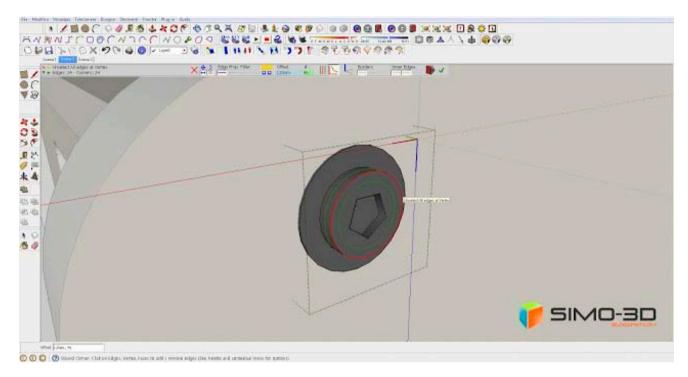


and I reduced to 5 the number of segments in the information entity and then push it slightly inward.

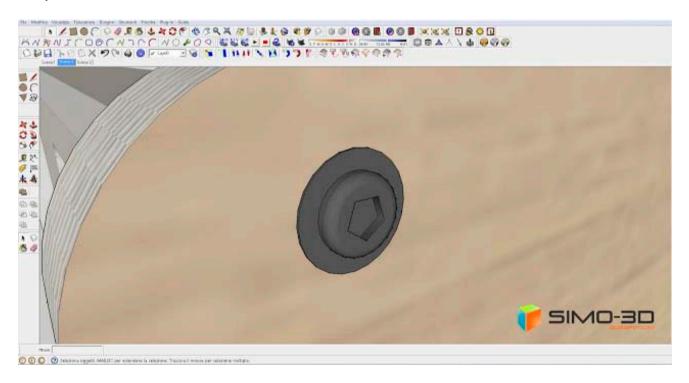


To give more realism to the bolt I rounded the edge of the smaller cylinder with the plugin "Round Corner".





Finally, this is the result.

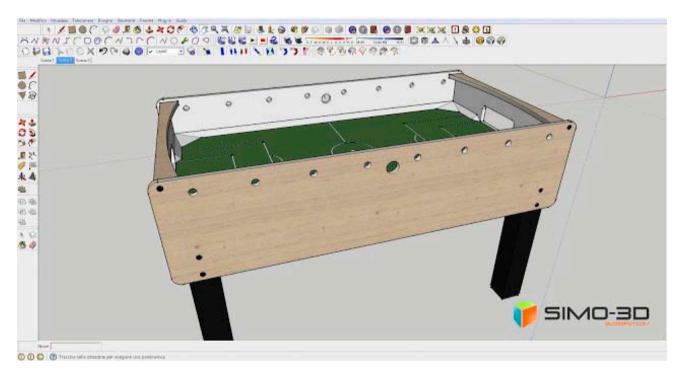


We return to the playing field  $\dots$  All football fields of the banks have in order not to stop the ball, even mine, and it is a triangle 20 x 20 mm which runs along its perimeter, obviously not at the door.



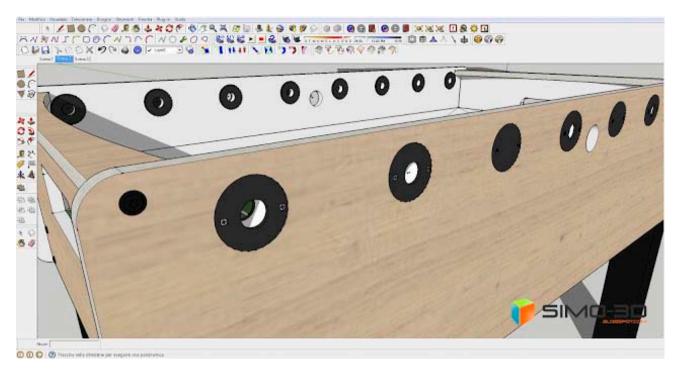


But now comes the fun part! Make 8 equally spaced holes 20x20mm larger than one in the middle. Easier said than done.

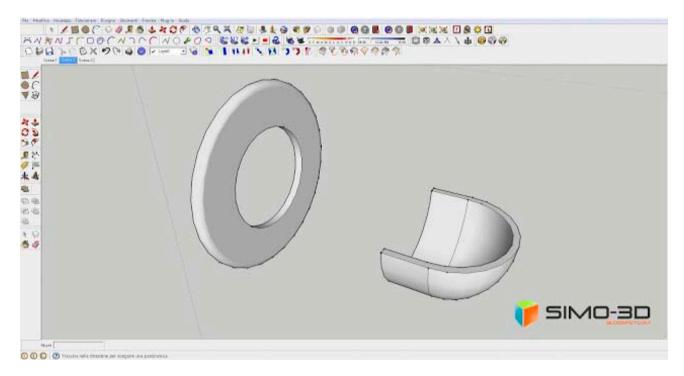


I added the rings around the holes where they will spend the iron bars of the players and a boss where you stop bars of 'opponent . Even these have rounded them with the plugin "Round Corner" and I have also added the screws.



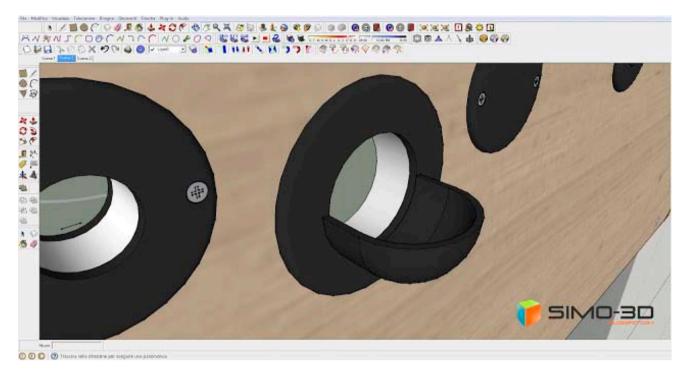


For the central hole instead I made a ring in her size then I created a quarter-sphere and I pulled one of the two sections,

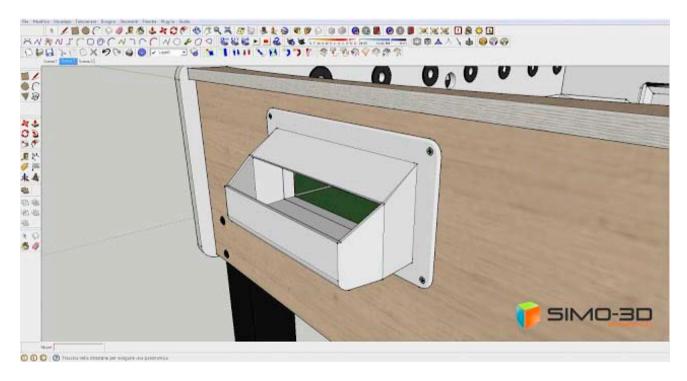


and I combined everything.



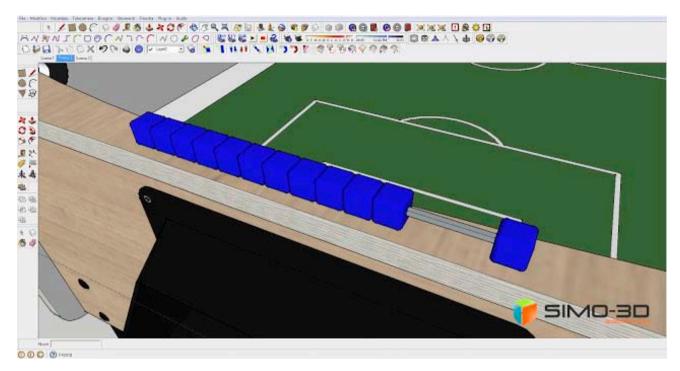


Then I mounted the door, always with screws. Make it however you like, I took a cue from the internet.

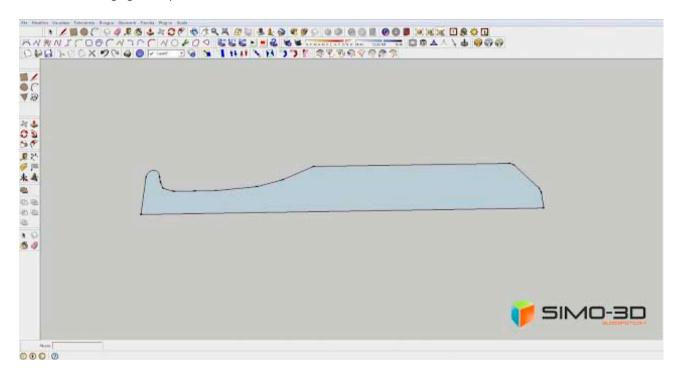


To count the points I made a cube and rounded edges always with the plugin "Round Corner" and copied 12 times.



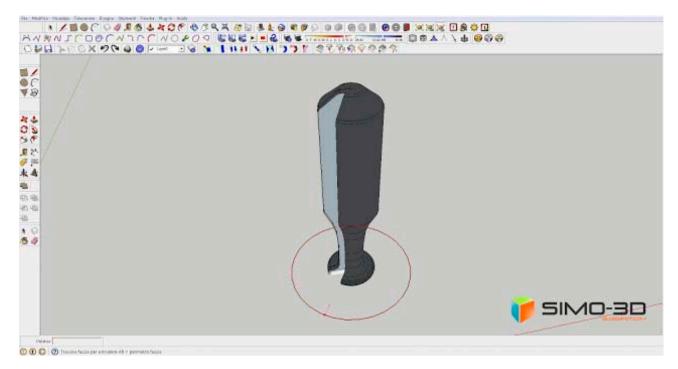


This is where things get complicated. To achieve the tiller handle I drew half of his section,

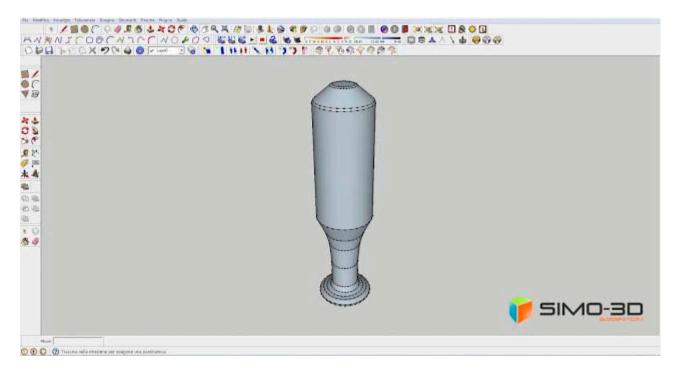


then with the instrument, "Follow me," I have followed the trajectory of a circle of 30 segments that I drew earlier.



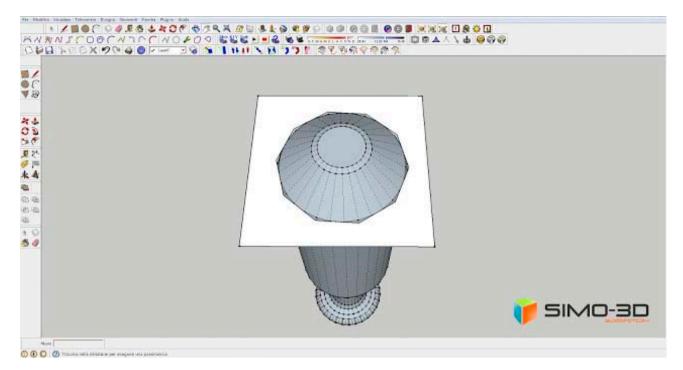


But with a handle so 'smooth swivels are wasted.

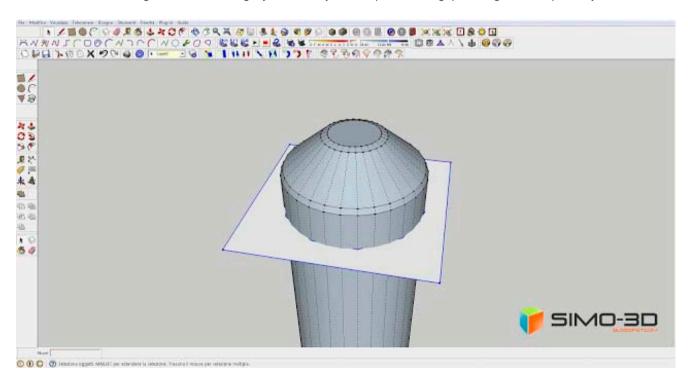


So to give it a more boxy shape I created a hole decagonal (that ugly word ... ) on a rectangle,



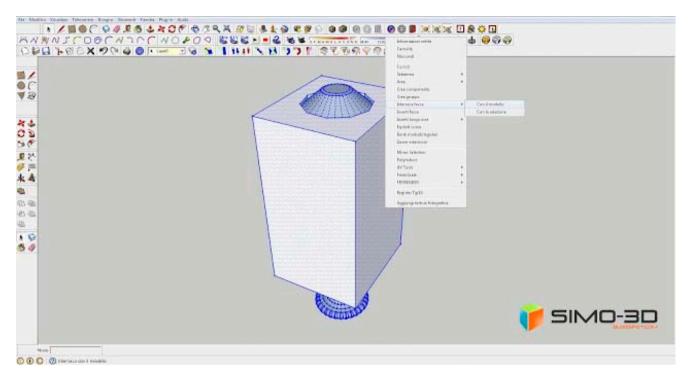


of sufficient scale to bring out its corners slightly from the cylindrical part of the 'grip making sure it is perfectly centered.

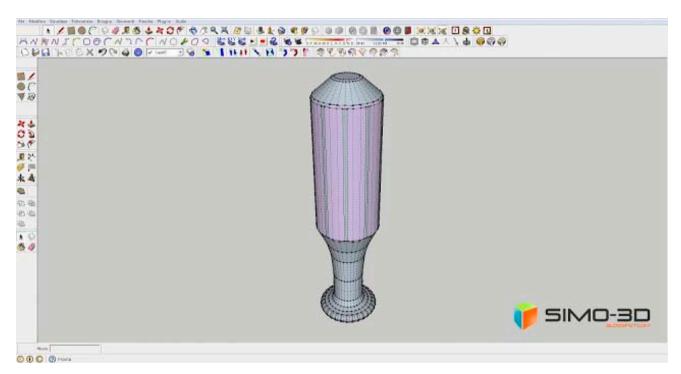


From the rectangle tool " Push / Pull " I have created a solid to almost completely cover the ' grip , I exploded and then highlighted everything, then open the drop-down menu I clicked on " Intersect with Model".



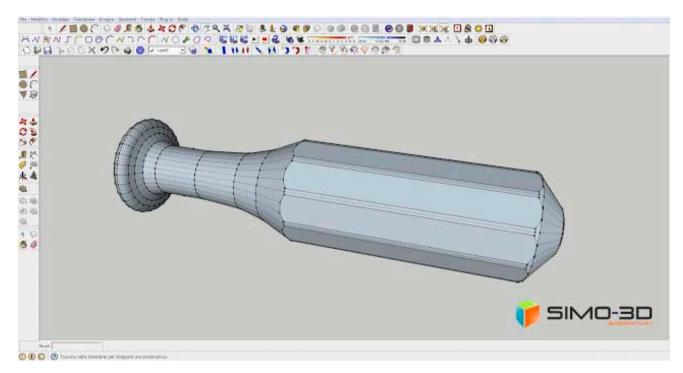


After deleting segments of the white solid I can only delete segments that are intersected with the decagon ( parts violet photo below).

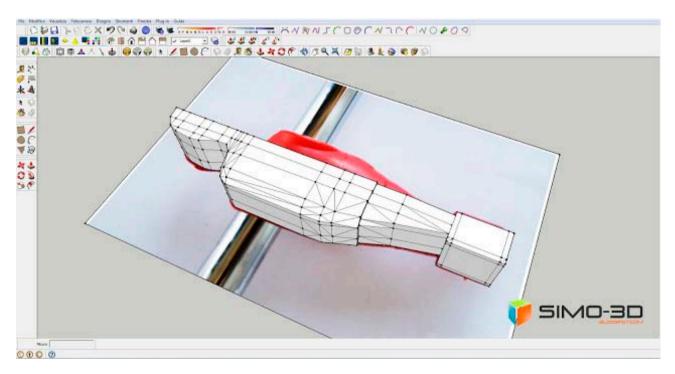


And also the handle is ready.



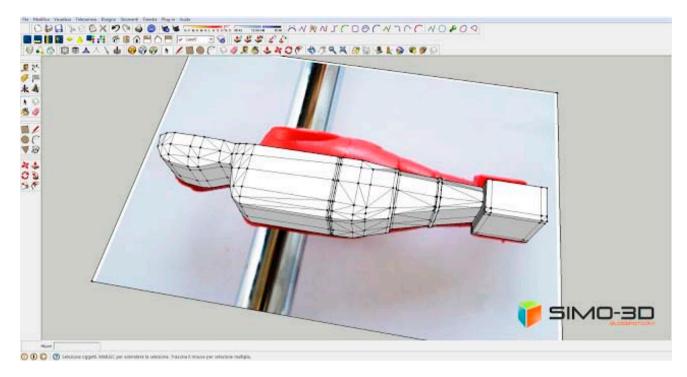


Now the tricky part. Players!

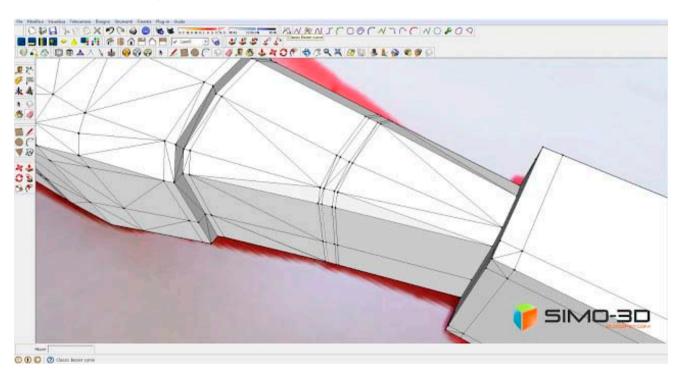


I started with an image I found on the net and began modeling on this half player. We need a little 'practice.



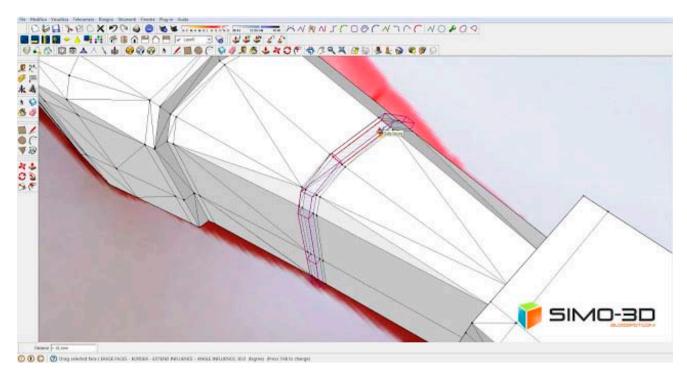


As you can see in the 'image below, I created a border that would ply Sock player.

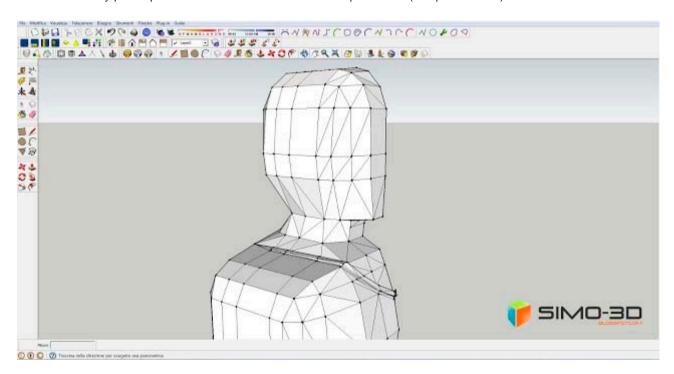


To make it I used another plugin called "Joint push pull," virtually acts as the instrument "Push/Pull"



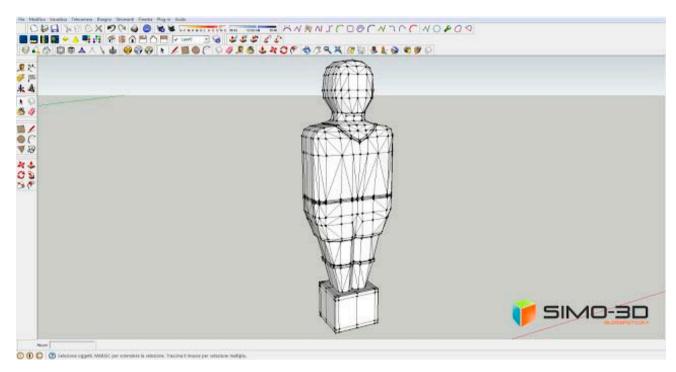


but with the ability push / pull faces at the same time more complex solids (see photo below).

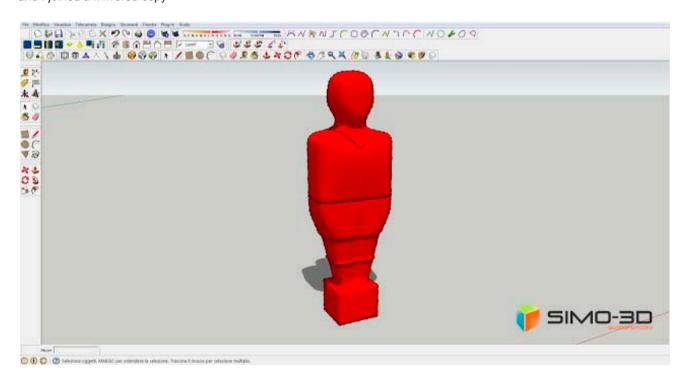


I used the same plugin for the collar of his shirt. So a few tweaks to the head and body,





and I joined a mirrored copy



To round better player, I used the plugin " Subdivide and smooth " setting the iteration to 1.

Now, just assemble and paint all the pieces. I also added the springs at the end of the race of the bars, you can see how to implement them by clicking here.

The field is ready!





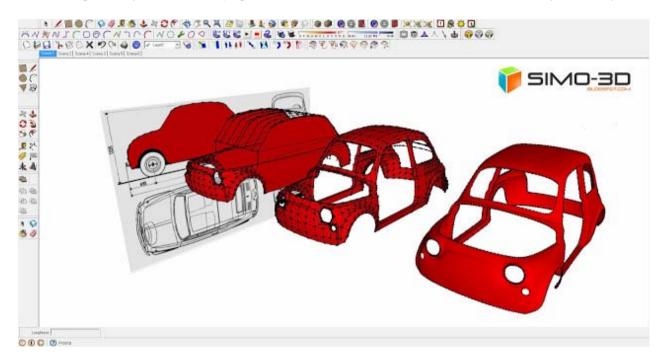


### How to model a Fiat Car 500 with Sketchup

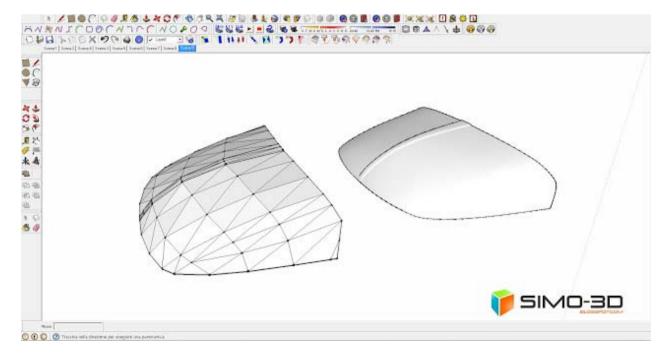
This post has little tutorial because they lack many passages difficult to explain when the model is complex to implement and especially because everyone has their own technique, but may give you some ideas.

First I tried a good image in the network blueprint, after uploading it to Sketchup and designed the contours of the body, I started to model starting from the front wheel arches. Personally I like a lot of eye shape and helped with some photos found on the net.

After finishing the bodywork I used the plugin "Subdivide and Smooth" and to round it to check for any inaccuracy.

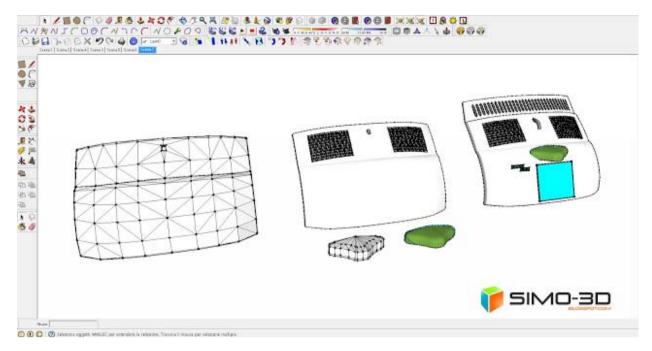


At this point I began to shape the bonnet then I created all around a rim bent inwards to give it thickness, in this way, when it is placed on the body, the effect is better.

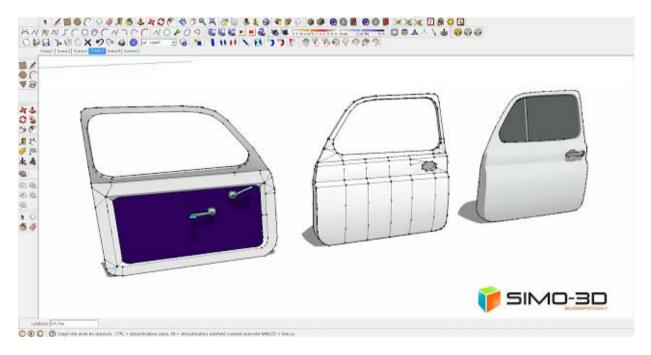


It 's time the bonnet and the parts that compose it.



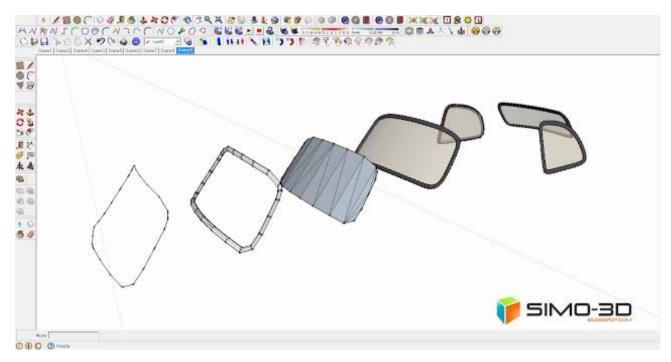


Missing doors that I modeled roughly on the inside.

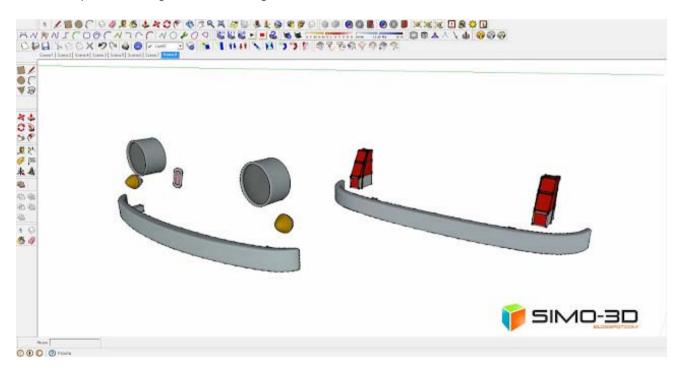


They could not miss the glass with their seals,



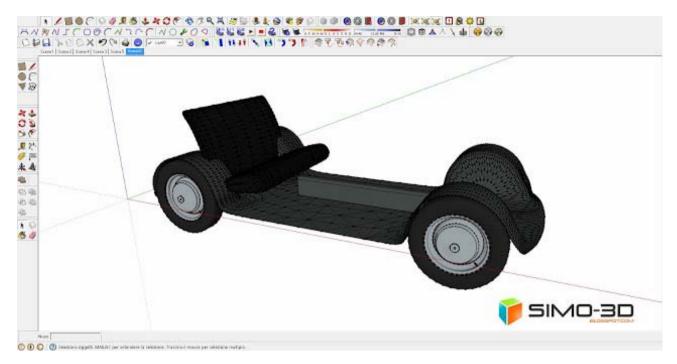


and the bumper with headlights and the Fiat logo in the center.

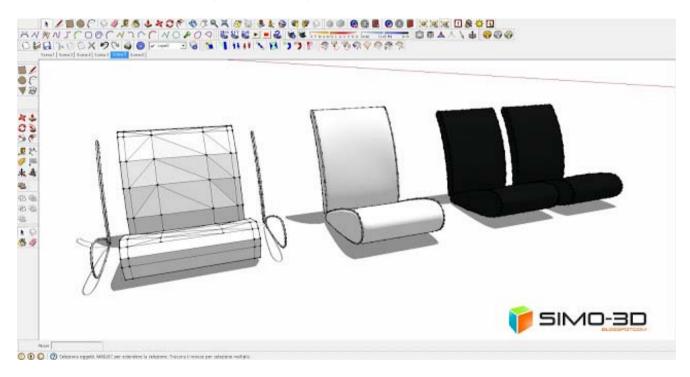


This is the floor with the wheels and the rear seat. Even in this case, the rear seat is quite approximate because that is what you should see less then it is useless to burden the model.





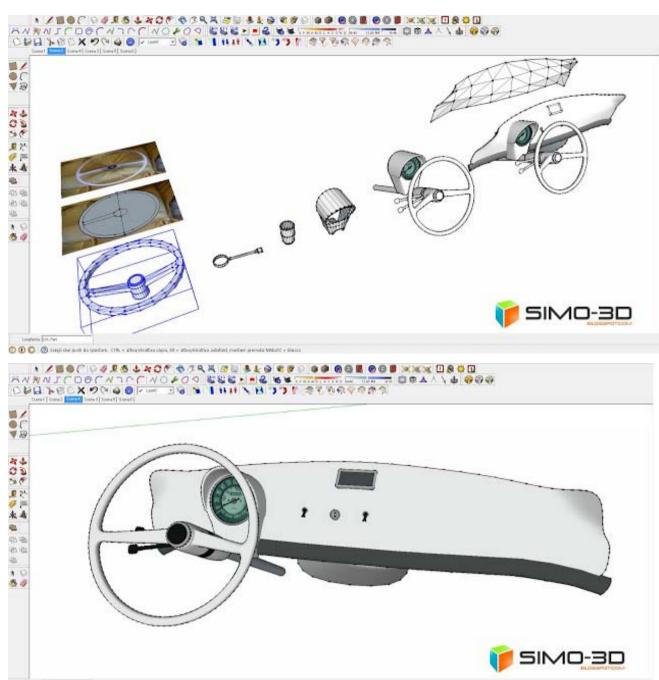
But this car without seats and steering wheel does not go anywhere!



So taking a cue from other photos found on the net I started modeling the steering wheel, odometer and instrument panel complete with ashtrays and buttons.

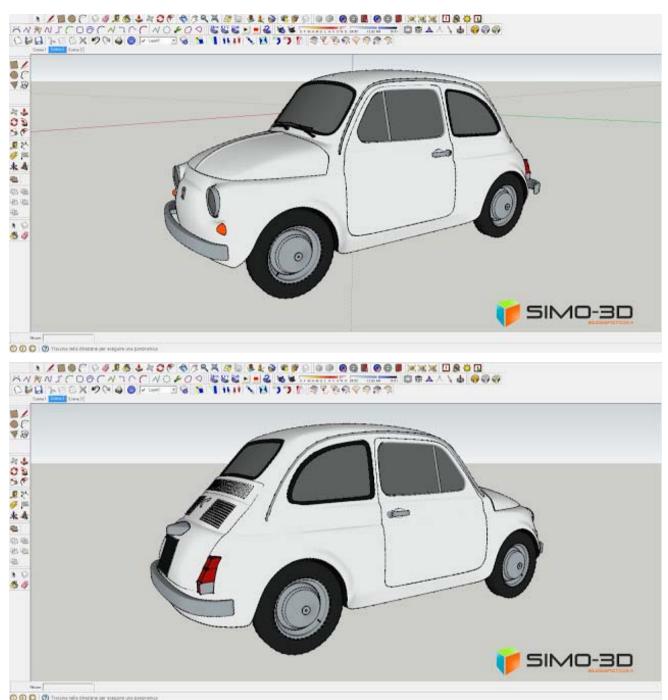
Even in this case, to round off, I used the plugin "Subdivide and smooth".





I put together all the pieces and ...





my Fiat 500 ... it's over!







### **Interior Design of a Living Room**

In this article, I will explain workflow in my project "Interior Design of a Living Room". As you, all know that making such a project requires a certain knowledge and experience in CG industry as well as in interior design, so I will cover only the once I believe people have most trouble with. This will include texturing, lighting and rendering processes.

First, I want you to notice that this project have been done in SketchUp. Rendering engine I have used for final visualization was V-Ray. I was also using predefined materials; I often use in my projects, downloaded from "Chaos Group", "Visual Dynamics" and "Flying Architecture" web sites. I am sure you could find some more web sites, from where you can download ".vismat" files, if you do not find what you are looking for in the ones I mention. I have also used several 3D models downloaded from SketchUP 3D Warehouse. The others I just modeled by myself. For lighting techniques, I used HDRI images that you can also find on the Internet. Some of them are free to download but if you look for purposes that are more professional, I suggest you to invest, as well as for texture images or even 3D models.

Before I explain a workflow process, I just want to mention several things that I believe are crucial in achieving result you are looking for in this project, and are far more important than just following workflow explanation.

- 1. Many people ask me about "V-Ray" options (.visopt file), and how I set up rendering parameters, expecting if they do the same they will get realistic image. You have to understand that any rendering engine, including "V-Ray", does nothing else but based on parameters setup, calculates how light travels through your scene and it bounces from different surfaces, in order to potentates getting an realistic image. Due to this, almost all its parameters are about setting different light calculation methods. Therefore, if you set its parameters correctly you will get nothing else but nice lighting. To achieve realism in your visualizations, you will have to take care about several other things, which are not less important than proper setting of rendering options.
- 2. Try to have your object geometry as clean as possible. Clean unnecessary edges (lines), weld those that are on the same direction, have surfaces normal properly oriented (always facing a camera), etc. Have your objects in proper scale according to each other as well as according to real world.
- 3. When using 3D models downloaded from a warehouse, try to use those once that are looking realistic and correctly modeled. You can find a trillion 3D models on almost any warehouse, especially on SketchUp 3D warehouse. Give yourself a time to look for "good" once. If you cannot find it, try to model it by yourself, instead of having "bad" one in you project. Non-realistic models (in scale, the way they are modeled, "bed" textures, etc.) will certainly not lead you to the result you are looking for.
- 4. One of the most important parts of achieving realism in your visualizations is texturing. If you apply textures properly to your objects and use realistic texture images with special care of its sizes, you will be half a way to your desired result. You can also find many web sites from which you can download nice texture images. I often use "Arroway textures" or textures downloaded from "SketchUP Texture" web site. Important is, that the size of texture images, is in proper scale to the real world. This can result in having huge image textures for some objects, but you can still compensate with the other once. For example, if you have large surface like parquet floor, where you do not want repeating tiles to be recognized, you will have to use large texture image. However, if you want ceramic tiles of a certain color on your floor, you could use much smaller texture image, which covers only one tile. Anyway, you should make sure that size of your texture image is in proper (realistic) scale to the real world.

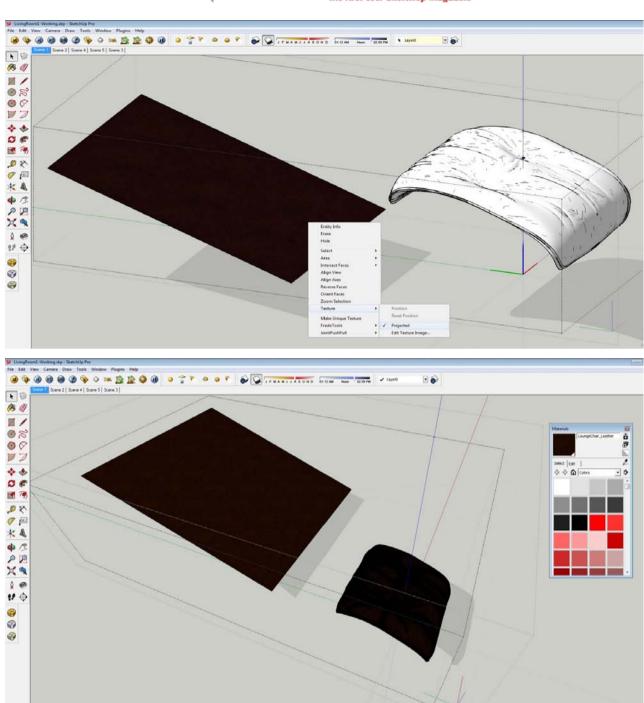
**Note**: If you apply materials that have texture images properly scaled, to your objects, very often only default rendering options will be enough to get nice image. If you will follow above mention facts, as well, as if you in addition organize your projects properly in layers, groups, components, etc. you will find your work in SketchUp easy and achieve desired results with no problems, not to mention that rendering process will be much easier and faster with realistic result.

### **WORKFLOW**

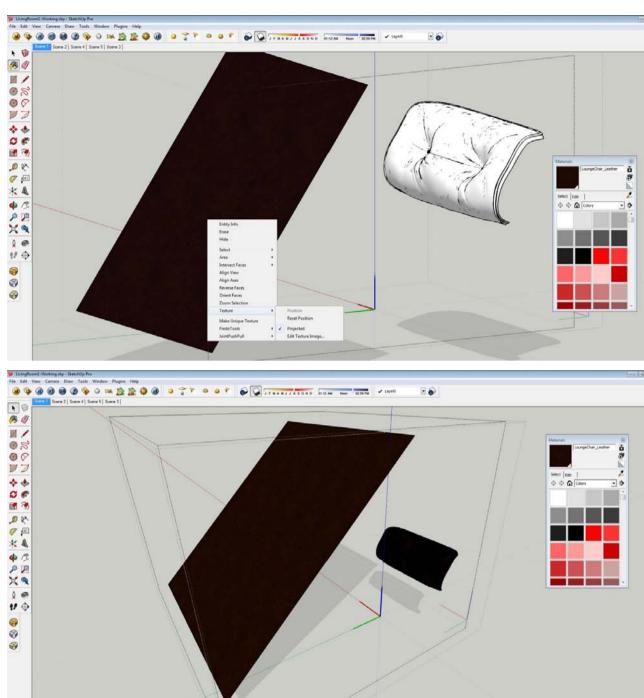
#### 1. TEXTURING

As explained before, it is necessary to use real world scale textures in order to achieve realism. It also requires that such materials are properly assigned to different surfaces of any object in your scene. Quite often happens that 3D models that we use from warehouse, have incorrect texture mapping or we just want to change its default materials. In this case, we often find ourselves in a problem of having nonrealistic material applied. To avoid this problem we will use projected textures. Following example shows how to apply projected materials to the lounge sofa.

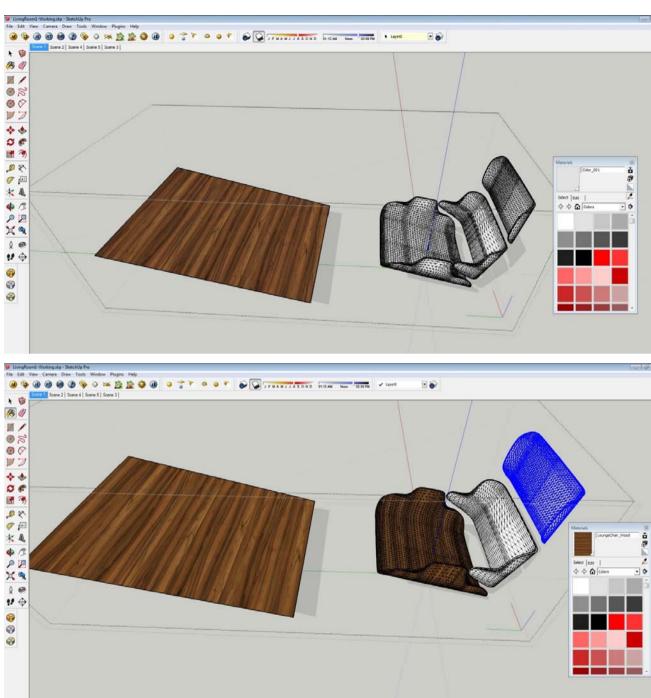




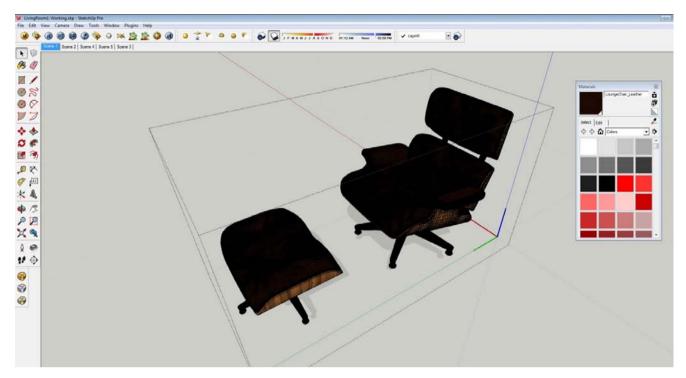






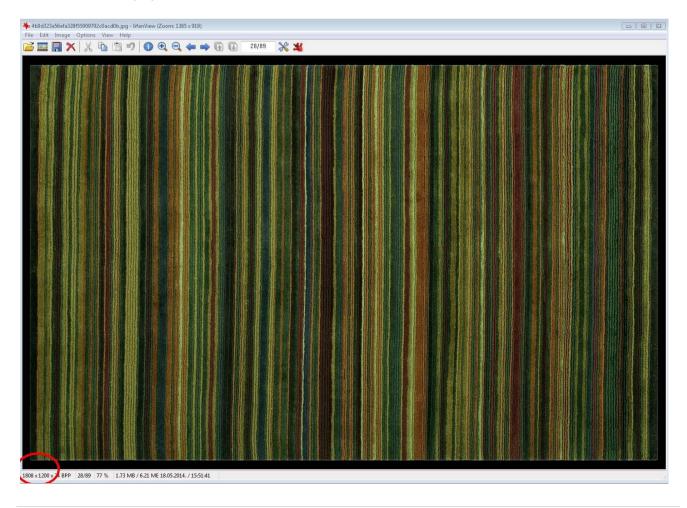




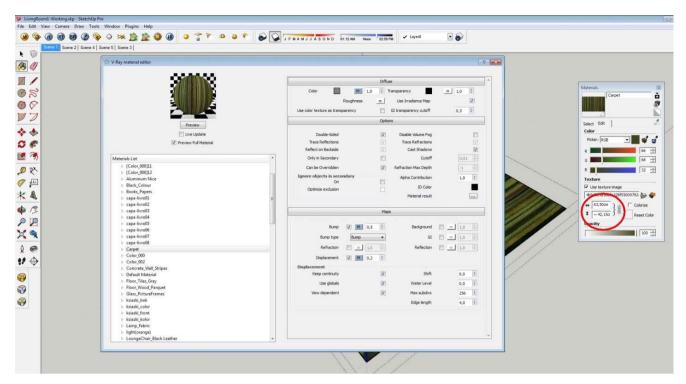


As shown on above images you will apply projected textures to all other objects in your project, which you have downloaded from 3D warehouse and has wrong texture mapping applied.

For objects with flat surfaces, you apply materials as you get used to it in SketchUp, just take good care on sizes of the textures and be sure they look realistic to the real world scale. Following example shows carpet texture settings, in order to look realistic and has proper scale.



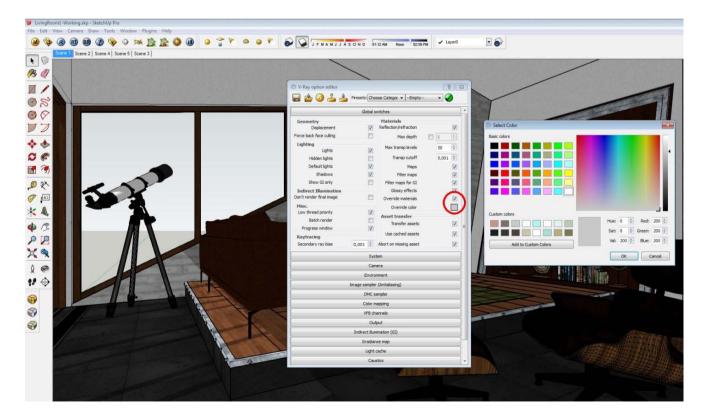




Notice that this texture image is 1808x1200 pixels, even though, settings in SketchUp material browser show its size of 63,50cm x 24,15cm. No matter the scale, you set up in material browser as long as it is in correct aspect ratio to the imported texture image. You can scale any texture to whatever size, as long as it looks realistic to you.

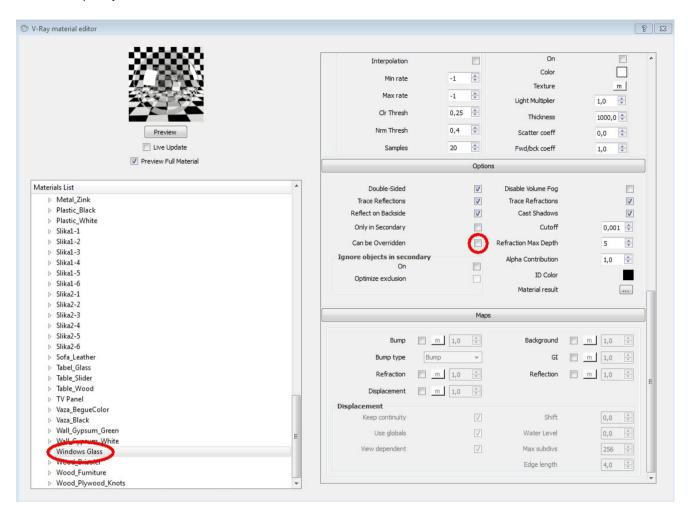
#### 2. LIGHTING

After modeling, texturing and setting the Physical Still camera type view, we want to set desired lighting of our scene. Best way of doing this, is to overwrite all materials with light gray color. White color is to strong and pure white does not exist in the real world. Closest to pure white is crystal-clear snow, but still it is not perfectly white. We will do this by setting V-Ray Global Switches "Override materials" parameter to TRUE, and select "Override color" to something like RGB value of 200.200.200.



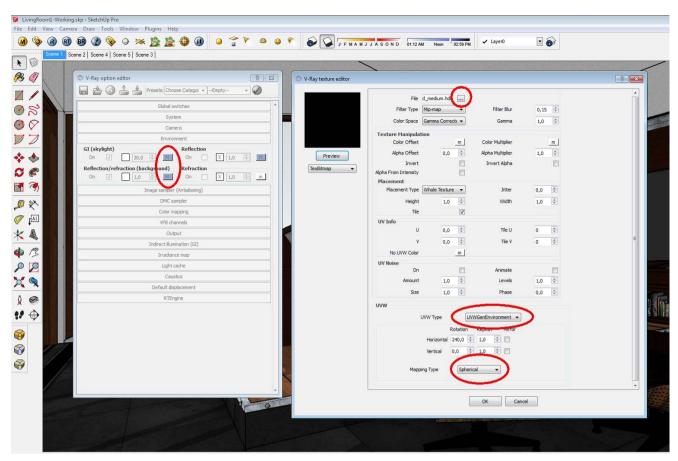


By doing this all materials on our scene will be overwritten with this color, with exception of these once that has "Can be Overridden" parameter set to FALSE. This parameter option will be set in V-Ray material browser, for each particular material. Usually we have to set this parameter to FALSE for all window glass objects, if we want to use daylight system for lighting the scene. Otherwise, the sun light will not be able to enter our scene through the windows and our scene could become completely dark.



V-Ray uses its default sun for daylight system lighting, but we can also use HDRI images instead. Using HDRI images, we could get even better results in the way of achieving realism of our renders. Notice that this will affect only our scene lighting, as we explained before. You will still have to have proper materials setup as well as apply them correctly. In this particular project, I have used following HDRI image setup for lighting my scene.



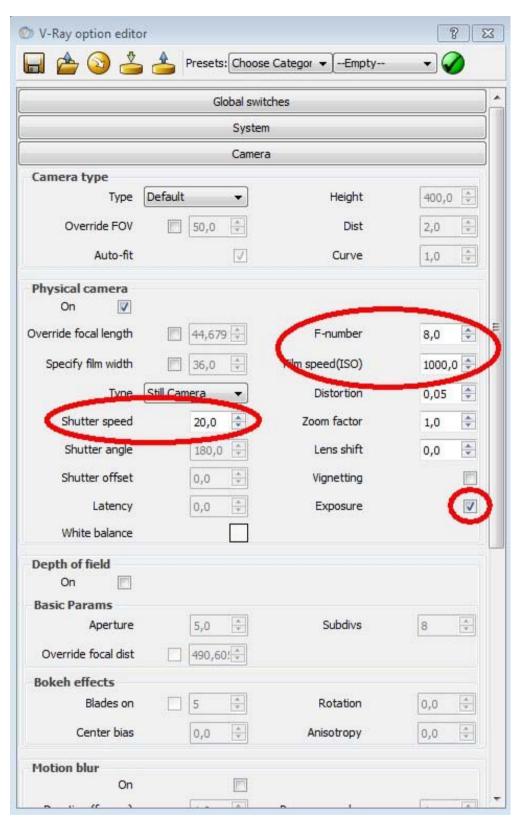


Beside all others, adjusting following V-Ray parameters will be enough to set proper lighting of most of your scenes. You will notice that these parameters are working exactly like on any digital photo camera. Therefore, if you have any experience with digital photography it will be easier for you to understand its adjusting and the way they affect lighting of your render.

- Shutter speed (Value represents a fractions of a second. Therefore, value of 50 for example, will represent 1/50 of a second. This means that your scene will be brighter than if you set this value to 100, as in this case, the shutter on your camera will stay open for a longer period and therefore more light will get into it.)
- Film Speed (ISO) (Often used as a quick dial for exposure changes in the scene. High numbers will make your scene brighter as lower numbers will make it darker. If we increase its value on digital cameras, our image will suffer from significant amount of noise. Luckily, this is not the case with V-Ray Physical camera.
- F-Number (This parameter handles/controls the size of your virtual aperture. Small numbers represents a larger aperture (larger opening) in your camera, which in turn allows more light in, that will in turn give us a brighter images.

Adjusting these three parameters, you will control brightness of your render image. Remember also that these three options will work like explained only if Physical Camera "Exposure" parameter is set to TRUE.





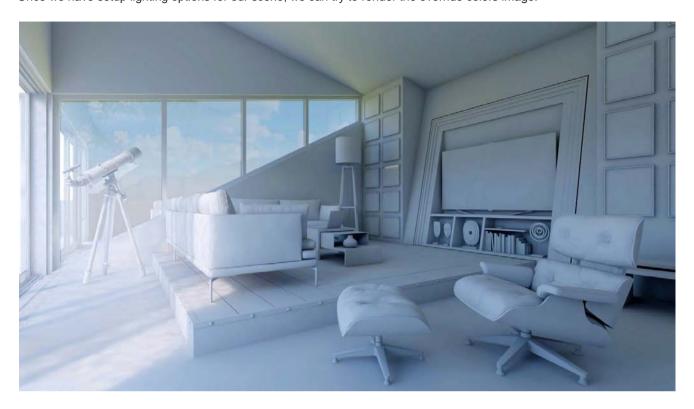
Other option that will take in a count is setting of "Color Mapping" type.

Each of types you can select will have its own calculation method behind, and each of them has its own pluses and minuses, depending on what you want to get as a result. Refer to other V-Ray tutorials in order to understand how each of offered color mapping types affects your rendering. For this particular project, I was using "Reinhard type". You will notice that by choosing Reinhard color mapping type, several other parameters become available for adjusting. Two most important once, which you might want to adjust, would be the "Multiplier" and the "Burn value". "Burn value" will allow you to adjust the value of brightest area in your scene, as well as with "Multiplier" you will control the darkest area. Adjusting this options you will control how bright or dark will be brightest and darkest parts of your image. Logically if you decrease Burn

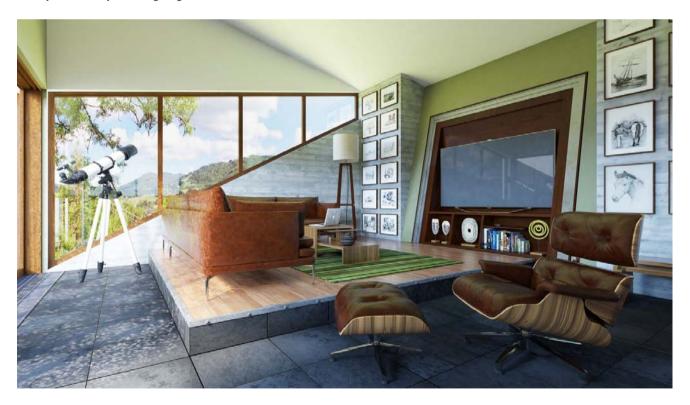


value, your render will result with less burn in brightest area as well as if you increase its value, your render will have more burn in brightest area of the image.

Once we have setup lighting options for our scene, we can try to render the override colors image.



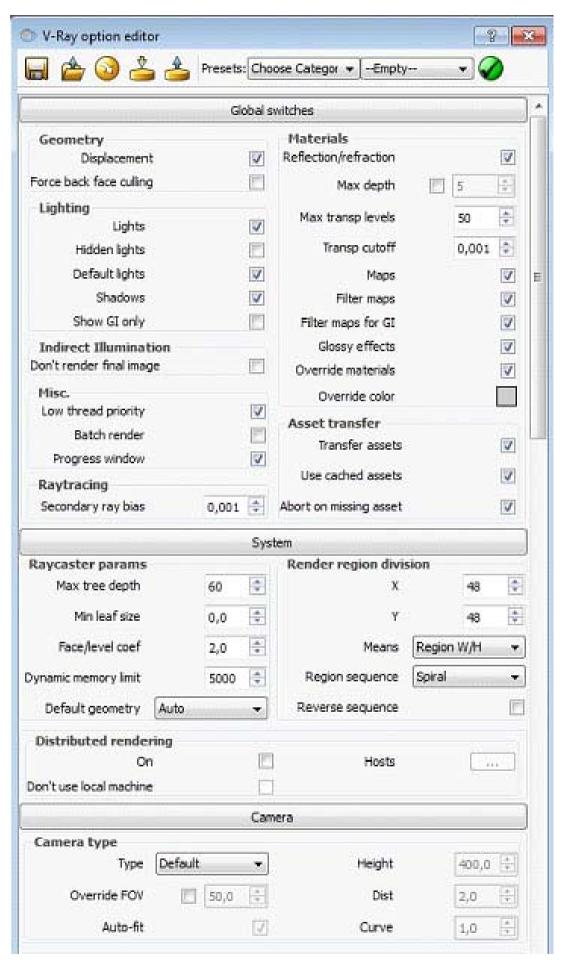
If you are satisfied with the result, now you can uncheck "Override materials" option in V-Ray "Global switches" option group and try to render your image again.



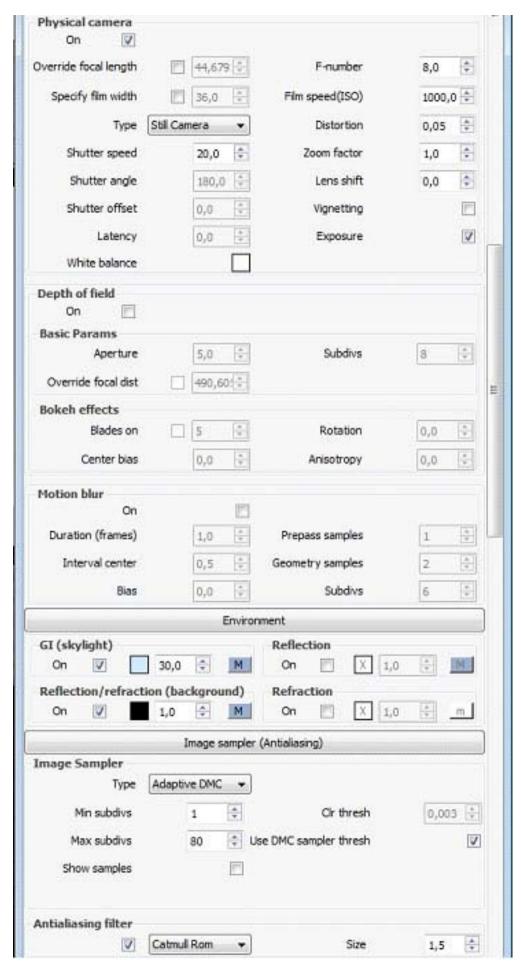
### 3. RENDER PARAMETERS SETUP

Following V-Ray options have been used in this particular project, in order to get final result.

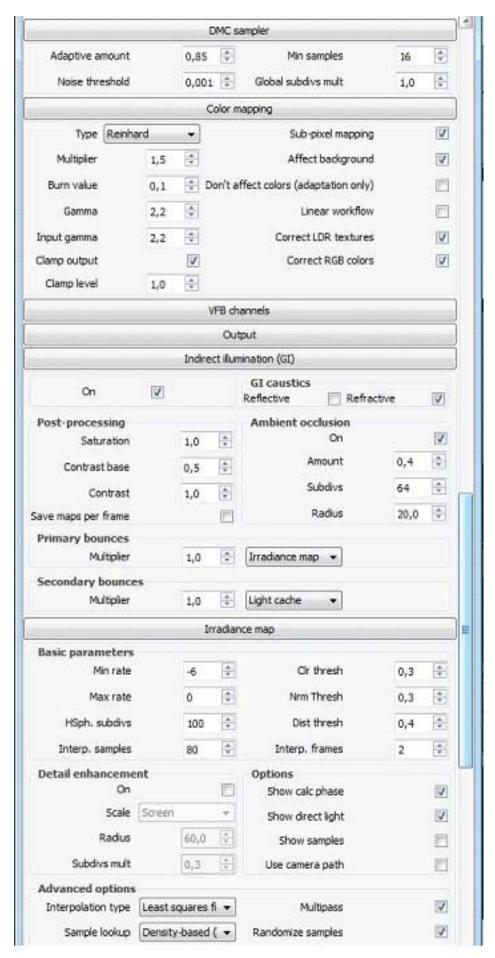














### Bluffton middle school students draw, digitize town landmarks

A year after Pam Davis' Google Apps class documented historic locations on Daufuskie Island, 150 of her students recreated historic landmarks closer to home.

Six classes at H.E. McCracken Middle School in Bluffton used Google's 3-D design program SketchUp to re-create 14 locations around Old Town this spring, drawing models of local landmarks like the Thomas Heyward House and the Bluffton Oyster Factory.

Students in the class, in its second year at H.E. McCracken, learn to use SketchUp and other Google programs, culminating in the historic-locations project. After the students learned how to draw in the program, they photographed and measured 14 of the 26 historic buildings in Bluffton during a field trip in February.

Using Google Earth and the photos and measurements the classes took, students worked to accurately digitize them in SketchUp, presenting their efforts Tuesday to the Bluffton Town Council.

Once learning how to use the program, drawing in it became relatively easy, according to Corra Armstrong, 15. In one 90-minute class, she re-created the Thomas Heyward House, she said.

"After the first sketch, we pretty much had it down pat," she said. "We just had to have patience. Once you get it done right, it's an even better feeling."

Wrapping photos to the 3-D buildings became problematic because most were taken with cellphones, many in panorama mode, which distorted some of the photos' angles, Eduardo Leyva said. Also, students were only able to measure the length of the home and had to estimate its height, Tyler Sean Lindo said.

For other structures, like the Bluffton Oyster Factory, students had to guess what inaccessible sections of the building look like, Leyva said.

To complicate matters, the pictures and measurements were taken in a rainstorm during the two days Davis' classes walked around Old Town. The class was dropped off at Oyster Factory Park and divided into groups, each taking photos of the buildings or geocaching --- a treasure-hunting game of sorts, in which a GPS device is used to find objects placed by other.

Each student created between three and four drawings in SketchUp, and developed a website through Google Sites to display the one they felt was the best drawn. Several of those were presented to the council Tuesday. Leyva and Sean Lindo, both 15, were two who presented to their peers and Bluffton residents.

Leyva said he channeled a Google competitor to speak to the crowd. "I practiced by watching Apple's Steve Jobs," he said. "He was a really good presenter. I knew it was about getting the flow of the speech right, rather than reading words from a paper."

Visualizer for SketchUp applies Imagination's highly powerful PowerVR Ray Tracing software for generating photorealistic images in real-time.

The Google Apps is the first exposure to the programs for many of the students, Sean Lindo said.

"I'd never used them before," he said. "Now that I know about them, they work fine for me."

Davis said the Google Apps program will expand to include 10 classes, after starting with just four a year ago. However, the expanding class likely won't bring SketchUp with it, as Davis discovered last week that Google Earth no longer accepts submissions from SketchUp. Instead, the class will likely emphasize Google Maps and Google Earth, she said.









### Sketchfab aims to become the global platform for sharing 3D models

3D modeling represents next frontiers in technology and French startup Sketchfab wants to make it more accessible to the average internet user.

Basically, it's a platform where users can upload their 3D models and share with others or edit and use previously uploaded models. What makes it different though is that it is free of charge and really easy to use with all the editing and stuff.

It works like this: The users bring their own models and easily upload them to the service. Once uploaded, the models can be shared or embedded in services like Facebook, Behance, LinkedIn, Kickstarter, DeviantArt, WordPress, and other forums.

The freemium model and user-friendliness seems working great for the 3D enthusiasts so far. Having attracted more than 100K users since it launched in March 2012, the company has set its sights now on becoming the universal go-to platform for publishing 3D models.

In order to use Sketchfab, users must have a 3D model to upload and 2 of the better options for creating them appear to be SketchUp Make and Adobe Photoshop.

Sketchfab claims to support 28 formats of models, so basically any content you create there can then be uploaded and shared across the web. In January, Sketchfab actually announced a partnership with Adobe that allows users creating 3D models in Photoshop to seamlessly publish their creations onto Sketchfab's site. If publishing 3D models isn't your thing, the site also offers allows users to browse a catalog of thousands of pieces created by others. SketchUp also enables users to embed models, but their solution does not seem to be as intuitive as the one offered by Sketchfab.

Sketchfab is free for anyone who doesn't mind limits of 50mb per upload or using basic tools. For more serious users, the service will cost \$10 per month for individuals or \$29 per month for businesses.

Sketchfab graduated from the third class of French accelerator Le Camping. They have since added a New York office, but CEO Alban Denoyel tells me that they have kept most of their development team in Paris. The company is backed by \$2.5 million that they obtained in a pair of rounds last year from investors such as Partech Ventures, Balderton Capital, Borealis Ventures, and a host of individuals.









# Rotary Lift expands digital offerings for facility planning assistant program

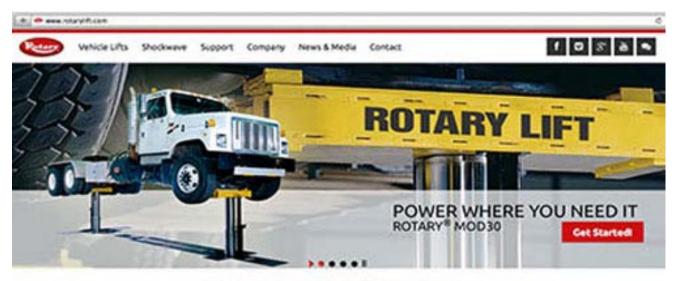
Rotary Lift is expanding the digital offerings available through its free assistPRO professional facility planning assistance service.

The program offers Rotary Lift customers assistance in designing new or remodeled shops. AssistPRO helps maximize shop efficiency and technician productivity by determining the optimal number, placement and arrangement of vehicle lifts. Rotary Lift's in-house assistPRO team works with individual customers and architects to create custom facility layouts.

The new digital offerings include 3-D SketchUp models of Rotary Lift vehicle lifts. The models will be available for download through SketchUp's 3D Warehouse at <a href="https://3dwarehouse.sketchup.com/">https://3dwarehouse.sketchup.com/</a> later in 2014. Rotary Lift currently offers CAD blocks, 3-D BIM models and written specifications for its products through ARCAT, and the SketchUp models will give architects and distributors an additional easy-to-use resource for helping customers.

"Dealers and independent shops have recovered from the recession and are starting to invest in their facilities again," said Larry Kendall, assistPRO technical information specialist – facility planner for Rotary Lift. "No matter if they are expanding, moving into new buildings or just upgrading old equipment, it pays to utilize assistPRO. When you include lifts in your shop layout upfront, there is less of a chance you will need to go through a costly redesign and delay the project."

After determining a facility's intended use, the assistPRO team draws a floor layout with lifts placed for maximum productivity. Turning radii and traffic flow are matched to the types of vehicles serviced so technicians will be able to quickly pull into and out of the bays. Rotary Lift provides assistPRO layout drawings in CAD or PDF electronic formats or as color prints, based on customer preference. Turnaround is fast (usually seven to 10 days), so users can get to work on their new spaces as soon as possible.



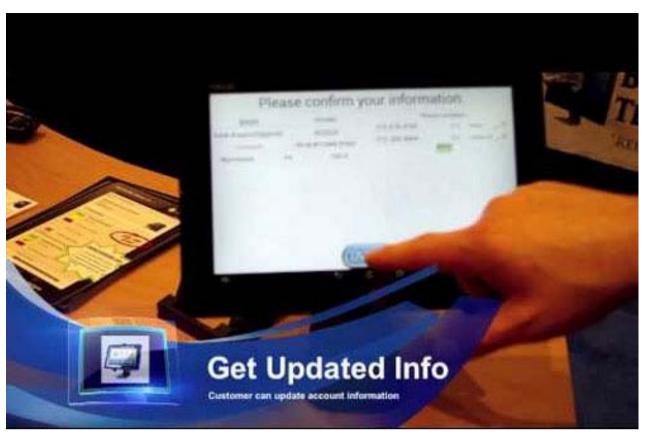
### The World's Most Trusted Lift

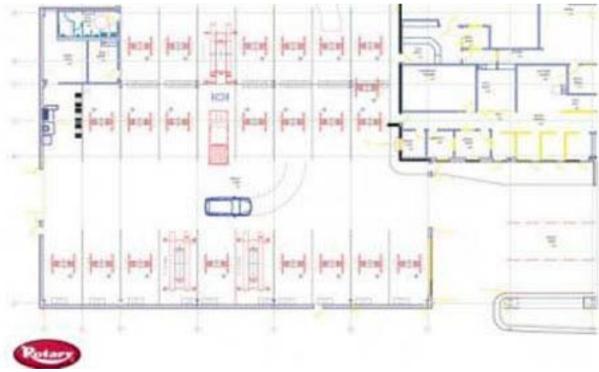














# Boulder's concept3D gets cash infusion, expands mapping, energy application

The Boulder-based developers of SketchUp set off to build a 3-D modeling software program, they sought to create an application that would make 3-D modeling more accessible and they wanted to make a living in return.

"Honestly, we could've never imagined in our wildest dreams how that played out," said Brad Schell, co-founder of SketchUp developer @Last Software, which was acquired by Google Inc. in 2006.

While SketchUp led to Google and, later, Trimble dropping anchor in Boulder in recent years, it also fueled concept3D — a burgeoning Boulder-based company that is making significant moves in arenas such as interactive mapping and energy auditing and assessment.

Concept3D, which got its start thanks to some involvement and funding from SketchUp employees, recently raised a \$1.25 million equity investment — a round funded in part by Schell.

The money will help boost concept3D's efforts in expanding its CampusBird interactive mapping program and software, and bringing its simuwatt energy assessment application to market.

"We still touch on our 3D roots through everything we do," said Oliver Davis, concept3D's co-founder and chief executive officer.

The company, which has offices in Boulder and Denver, plans to add to its 15-person staff and bring the company to 25 to 30 employees in the coming year.

That would complement some management moves made within recent months. Concept3D brought on Market Force Information Inc. co-founder Rushton McGarr as president and chief operating officer, and marketing veteran Lisa Harris as vice president of marketing.

The growth could push Concept3D out of Boulder. Company officials say they're looking for new space in Boulder, Boulder County and around Denver.

The privately held Concept3D, which does not disclose financial details, expects to have revenue in the "low-to-mid seven figures" in 2014 and to record "nominal profits" in 2014 because of the ramp-up in hiring, said Rushton McGarr, president and chief operating officer. The company essentially was break-even last year, he added.

Investor Schell said he will not be involved with concept3D in any official, boardmember role; however, he'll serve as a resource for the firm.

"They're at a point where they're stepping up to another level, and I wanted to be a part of that," Schell said.

Mapping opportunities: Concept3D started as a services shop, but eventually evolved into an outfit specializing in software development.

"We realized that we wouldn't be a valuable company without embracing software-as-a-service as a platform," said Oliver Davis, co-founder and chief executive officer of concept3D.

During the past three to four years, concept3D developed and honed its Atlas program, a database-driven map content management system. Atlas serves as the umbrella for CampusBird, software that allows universities and entities to develop maps with rich graphics, interactive capabilities and the ability to customize and update information.

More than 75 entities have used CampusBird, including Duke University, Walt Disney World Resorts and the Harvard Business School.

The CampusBird business is projected to grow four-fold this year with the added expectation the company will have a position in new markets, Davis said, adding that the software could apply in industries such as commercial real estate, resorts and economic development.

"There's a lot of fertile ground out there that we haven't really approached," Davis said.



More companies are able to incorporate 3D mapping as the technology has become easier to use and more affordable, said Joe Francica, editor in chief of Directions Magazine, which follows the location technology and geospatial industries.

"People want that realistic look, or that semi-realistic look," he said.



Read More: www.dailycamera.com



## Mini film made on Google Sketchup and a 3D printer

The small world of animation seen 3D printing with kindness. Gradually emerging projects and the web will quickly find themselves overwhelmed by the possibilities offered by these new tools of choice are 3D printers.

Amateurs and professionals of animation will be able to express themselves without having to deploy large financial resources .

Disney and Google with the animated film Blank Vynilmation Love Story, the musical clip Cut / Copy or last month, hypnotic work of this bear on stairs: Bears on Stairs are all feats that give 3D printing, its pedigree in the world of Stop Motion (motion animation).

Today is "Paradise Found created by Jon Patrick Barry and Jenny Chen is honored. All the accessories and the puppet present on the screen were modeled with Google Sketchup and are straight out of a 3D printer.

If you want to try 3D modeling and subsequently the animation , you can download Google Sketchup.

### http://vimeo.com/93868807





Read More: www.additiverse.com



### Portola High School in California Takes to Kickstarter to Fund a 3D Printer

3D printing in schools has only recently become a reality. While there are many schools around the world that have already had the opportunity to bring 3D printers into their classrooms, the majority of schools are not quite there yet. The reasons are quite simple. There are a lack of funds, a lack of knowledge, and in most cases, not enough motivation from students, teachers and faculty.

However, this isn't entirely the case for one school, located in the mountains of Northern California. Portola High, a small school with 17 teachers and 237 students, has more than enough motivation, but is lacking the required funds.

Fortunately for Portola High, they have one teacher, Bran Freschi that is bent and determined to find a way to get a 3D printer for his school. Freschi, who was hired last year as a Learning Specialist, to work with students with learning disabilities, came up with the idea to pursue 3D printing at his school this past fall.

"After attending a STEM conference in Sacramento in the Fall of 2013, myself and a few teachers got to see and touch a real 3D printer." Freschi told 3DPrint.com. "I instantly fell in love with it."

That 3D printer was a MakerBot Replicator, and the MakerBot saleman at the conference gave Freschi a 3D printed nut and bolt that had been printed right in front of him. According to Freschi, that's what sealed the deal.

"Since that day, I have showed that little toy to hundreds of people, and their reaction is always the same: Their face gets scrunched up and they say 'Wait...what?'," explained Freschi. "Then I get to explain to them how a 3D printer works; like a big hot glue gun with a weed eater line in the back of it, materializing objects in all three dimensions"

We asked Mr. Freschi, how this 3D printer would get used in his school, and he was more than prepared to answer. We could tell that he has huge plans on integrating the MakerBot Replicator into his classes, as well as the classes of other teachers. He informed us that he has one 'career tech' teacher and one math teacher on board. The career tech teacher would offer a 3D printing and Sketchup class, while the math teacher plans to create some mathematical lessons around the printer.

Freschi plans to utilize the 3D printer in his classes by designing and printing items that can be sold, in order to give his students life skills centered on work ethic, communication, and financial topics. He also sees uses for the printer in other areas of the school, including art, science, and technology. He hopes that art students can print out art work, as well as useful tools.

"I have a grand plan of implementing a recycling program at our school that would utilize a grinder and an extruder to make our own 'recycled' 3D printer filament," Freschi told us.

Finding funding for the printer has been the largest hurdle. Freschi has approached the school board indirectly, about getting funding, but was unfortunately shot down. However, one of the school's administrators really believed in the idea, and encouraged Freschi to continue to look for funding sources. Finding funding through the PTA or Boosters was not an option in Freschi's mind, as he didn't feel that they had money to spend on a device that none of them probably understood. So, he came up with the idea of funding the printer via Kickstarter.

"I thought of Kickstarter pretty early on, and lots of kids showed interest in the process," explained Freschi. "I started building the campaign way back in October. After the campaign was finished, literally ten minutes before we hit the launch button, the district office put the brakes on it, telling me that they needed to be the recipients of the funds, and not me personally. Long story short, I eventually got around this district policy by soliciting the assistance of the Booster Club. They agreed to take the money from the Kickstarter campaign, buy the printer and then donate it to the school."

The Kickstarter campaign launched just a little over 2 days ago, and it has already raised over \$1,000. Freschi informed us that it has been received very well by the entire community, and all of the schools in the district are "buzzing about it".

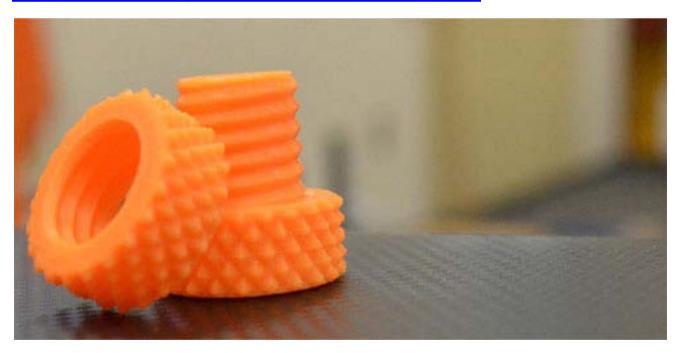
Backers of the campaign will be awarded with one of several items, including decals, t-shirts, customized 3D printed phone cases, other 3D printed items and more.

Help Mr. Freschi, and his school raise funds for this project by donating as little as \$1 to the cause, via their Kickstarter campaign page, or by sharing this story. Discuss this project, and let us know if you have donated to the cause in the 'Portola High Kickstarter Campaign' thread on 3DPB.com.





https://www.kickstarter.com/projects/819517415/custom-3d-printed-objects-made-by-high-school-stud/widget/video.html



Read More: www.3dprint.com



### Concept 3D Raises \$1.25M to Advance Its Mapping and Energy Software

After years of working with universities to develop interactive maps and the National Renewable Energy Laboratory to develop energy assessment software, Concept 3D is setting off to explore new territory.

The Boulder, CO-based software and services company has closed a \$1.25 million funding round, according to SEC documents. Concept 3D co-founder and CEO Oliver Davis said the startup will use the money to continue product development, amplify sales and marketing efforts, and roll out its software into larger markets.

Concept 3D has two products, and it has high hopes for both, Davis said. CampusBird, an interactive mapping program used by more than 75 universities, is the farthest along and the biggest revenue generator. It creates maps that feature custom media including 3D models, 2D overlays, street-view imagery, and video. The company expects to triple the number of customers that use CampusBird within the next year, Davis said.

Among Concept 3D's customers is Harvard Business School. Its map includes 3D renderings of each building on campus, 360-degree panoramic images, and links to descriptions of points of interest.

CampusBird is built on top of Concept 3D's Atlas map management software and is the first of what Davis said could be many "enterprise mapping" products. Potential new markets include residential and commercial real estate and economic development, Davis said.

"We have a lot more opportunities outside of higher ed to sell the mapping platform," Davis said.

For the past two years Concept 3D also has been working with NREL to develop an energy modeling and management system named Simuwatt. The cloud-based software can be used for energy audits that incorporate the 3D geometry of buildings to create better energy usage models.

NREL said Simuwatt, which can be accessed on mobile tablets, could cut the cost of energy audits by up to 75 percent.

Simuwatt also can be used to create 3D models of solar panel installations that are added to the roofs of commercial buildings. Davis said the software will generate a cost estimate and an estimate of the system's energy output, and the company says the program reduces the cost of building a solar system.

Concept 3D is about to bring Simuwatt to market and already has 300 sales prospects interested in the product, Davis said. Concept 3D received a \$1.3 million grant from the Department of Energy to develop Simuwatt.

The funding round is not large, but Davis said that's part of the company's strategy. Concept 3D raised \$500,000 when it launched, but since then it has remained "scrappy," as Davis said, and relied on its services side to provide revenue.

"We generate revenue and cash today, so we didn't have to do a big raise," Davis said. "We might look at raising capital potentially down the road, but we're a little old fashioned when it comes to running the business. We want to generate cash and work with customers and grow that way."

Concept 3D does plan to expand its staff from 15 to 25 by the end of the year, he said. The new hires will predominantly be added to customer support, sales, and marketing, Davis said.





Read More: www.xconomy.com



## 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.



Rajib Dey: rajib@sketchup-ur-space.com

Rajib, the editor-in-chief 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.



Manoj Kumar Singh: manoj@jobs2india.com

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.



Abhishek Mondal: abhishek@jobs2india.com

Abhishek is the designer-in-chief of this magazine with the help of his creativity Sketchup ur Space has gotten a classy as well as trendy look...