

Sketchup-ur-space

www.sketchup-ur-space.com

A knowledge hub for sketchup community

cover Story

Sketchup Attribute

Issue
August 2013

List of Contents

1. A Letter to the desk of editor

-  [A letter direct from the editor desk highlighting on August edition](#)

2. Interview

-  [Interview with Arpad Varga](#)
-  [Interview with Andrew Alexander](#)




3. Cover Storey

-  [Sketchup Attribute can help a Sketchup user to work more efficiently](#)


4. Article

-  [The Making of the bedroom with Sketchup](#)
-  [How to create import mechanisms inside of Sketchup with Ruby scripting](#)

5. Blog

-  [Generate a high quality rendering with your Sketchup model by Raylectron version 3.02](#)
-  [How to create an Attribute Report with Sketchup](#)
-  [Review of Sketchup-ur-space](#)

6. Tutorial

-  [Rending to reality with Sketchup](#)
-  [The making of Jas bedroom with Sketchup](#)

7. Plug-in Review

-  [gModeller for Sketchup](#)
-  [Rapid Easy Design - An exclusive plugin for Sketchup](#)

8. News Room

9. Magazine Details – The Creative team of Sketchup-ur-Space

A letter direct from the editor desk highlighting on August edition

Hello friends!

Sketchup Ur Space Magazine has published articles, tutorials, interviews, plugin reviews from the world's best and most recognized Sketchup professionals. Our magazine has become a trustworthy source for worldwide sketchup users.

The magazine is published once in a month and can be accessible online. The back issues can be searched our archive section.

In this issue we focus on [sketchup attribute](#). In this regard the team of sketchup ur space has presented an exclusive full length cover story.

Any sketchup model can have attributes. An attribute is characterized by a name/value pair which cannot be accessed without a UI. The Ruby Script facilitates any selectable object to control it's attribute dictionary as well as name/value pair.

The AttributeDictionary class is utilized to add random collections of attributes to a SketchUp entity. An Entity or Model object can contain any number of AttributeDictionaries. The Entity class denotes a accepted parent class in SketchUp and the users will be able to affix AttributeDictionaries to more or less anything that range from geometric items similar to edges and faces and components to more conceptual items resembling pages or materials.

In the article section Arpad Varga, a software developer from Hungary, who applies sketchup for data representation and analysis purpose, has presented an unique article focusing on [how to create import mechanisms inside of Sketchup](#), with the help of Ruby scripting.

In another article Irmin Verstappen, an independent from Belgium, shows how he applies sketchup to [create a stunning bedroom](#) without post processing in photoshop.

In the tutorial section Bharath Musunuri, the most promising architect and 3d visualize, has focused on [how sketchup is essential for an architect](#). In another tutorial Myren June E. Purificacion, the budding Architectural Designer / 3D Visualizer has shown the [creation of a JAS bedroom interior](#) by applying sketchup 2013, vray 1.6 beta and photoshop CC.

In news section the readers will get the most updated information about several newly launched sketchup plugins.

How 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 rajib@sketchup-ur-space.com



Best wishes
Rajib Dey
Editor

Interview with Arpad Varga - who uses sketchup for data representation and analysis purposes

Hello! Please introduce yourself to our readers.

Hi, I'm Arpad Varga from Hungary. I'm a software developer, mainly working for the industrial sector. My work is not directly connected to Sketchup. First I used SU for hobby projects around my home only. Now I'm using Sketchup for data representation and analysis purposes at my work, so I'm interested in extending Sketchup's possibilities through ruby scripting.

You are a software developer and your profession is not directly connected with sketchup. How do you get accustomed with sketchup?

Since my childhood, I liked to play around with 3D graphics. I tried a lot of 3D modelers over the years, and finally I chose Sketchup because of its rich functionality and quick learning curve.

You apply sketchup for data representation and analysis purpose. Please share your views in this respect.

Yes, why do I import my data into Sketchup? Well, Sketchup is very dynamic. Anything you got in Sketchup could be manipulated and viewed any way. For the first time, when I found myself with the need to represent data in 3D or 4D, I had no idea, what will I see, and therefore had no idea, what will I have to do with my data, to make it usable. This question pointed me out, that I need a universal tool, like Sketchup.

What features of sketchup do you prefer most?

Simplicity. I like that I can do anything using simple tools. Extensibility and connectivity. Ruby is a very powerful tool to implement anything you are missing right inside of Sketchup.

What is the easiest way for loading Ruby script into sketchup automatically?

You just copy your script into your Sketchup Tools folder, and you are done. I can't think of anything easier than this.

What are the advantages of ruby scripts for sketchup?

Sketchup is great for most of things right out of the box. But people have different needs. If you need something, you can't find in Sketchup, you have the ability to make it for yourself. Also scripting opens the door of interaction. You can import/export your data with scripts, you can even manage to integrate Sketchup with external systems as well.

What are some of your significant projects in which you applied sketchup successfully?

Gas consumption forecasting. In this project Sketchup was the key to understand what's behind real gas consumption data. I've been working on an algorithm to forecast future gas consumption partially based on historical data. On a certain level of complexity, I wasn't able to find how to go on with the solution, because the algorithm produced some side effects, and I did not find the reasons why. I recognized, that I have to represent my problem somehow differently than before, because usual representation contains little to few information. That was the time to call Sketchup for help.

What are some of the most general problems users face while utilizing sketchup first time in their professional life?

Simplicity again. Because one of Sketchup's primary goals is (I think) to keep things simple. Therefore you have to learn, how to combine simple things to achieve more complex goals. But there are very good tutorial videos publicly shared, so anybody stuck on a problem can find the solution online.

What functionalities should be included in sketchup in near future?

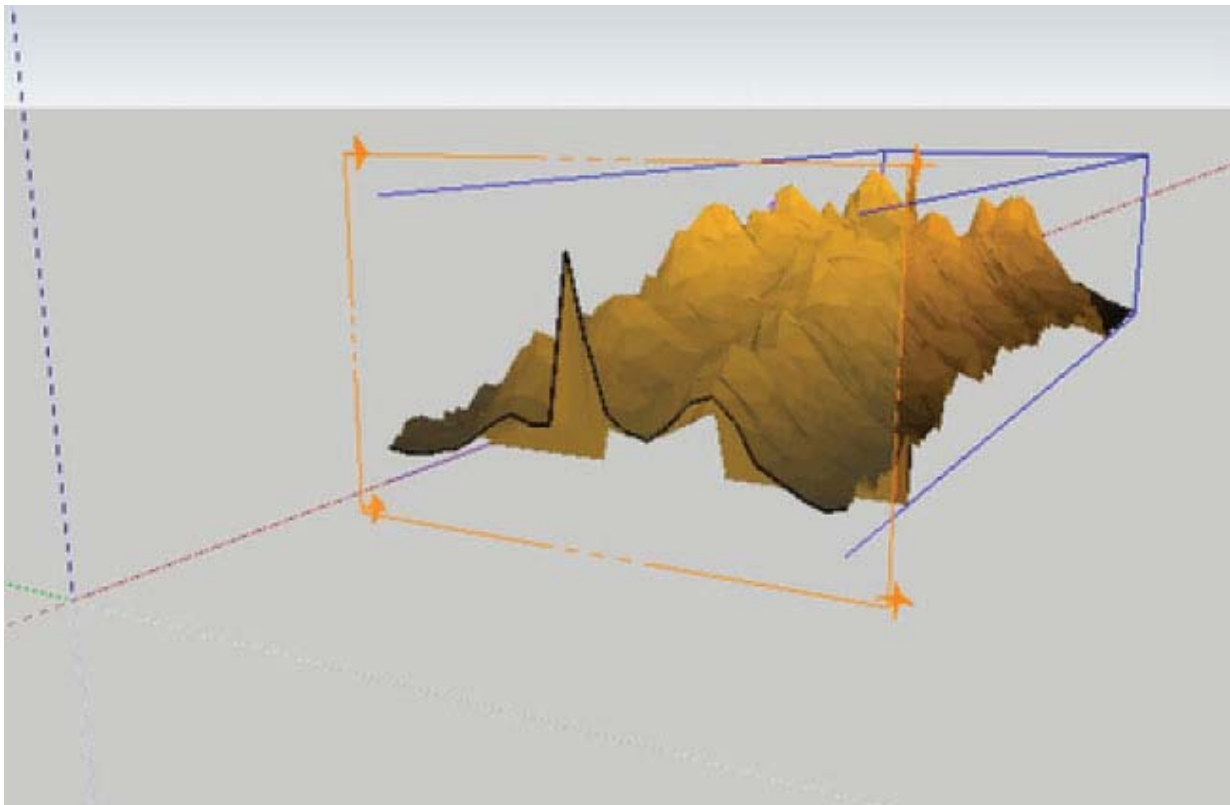
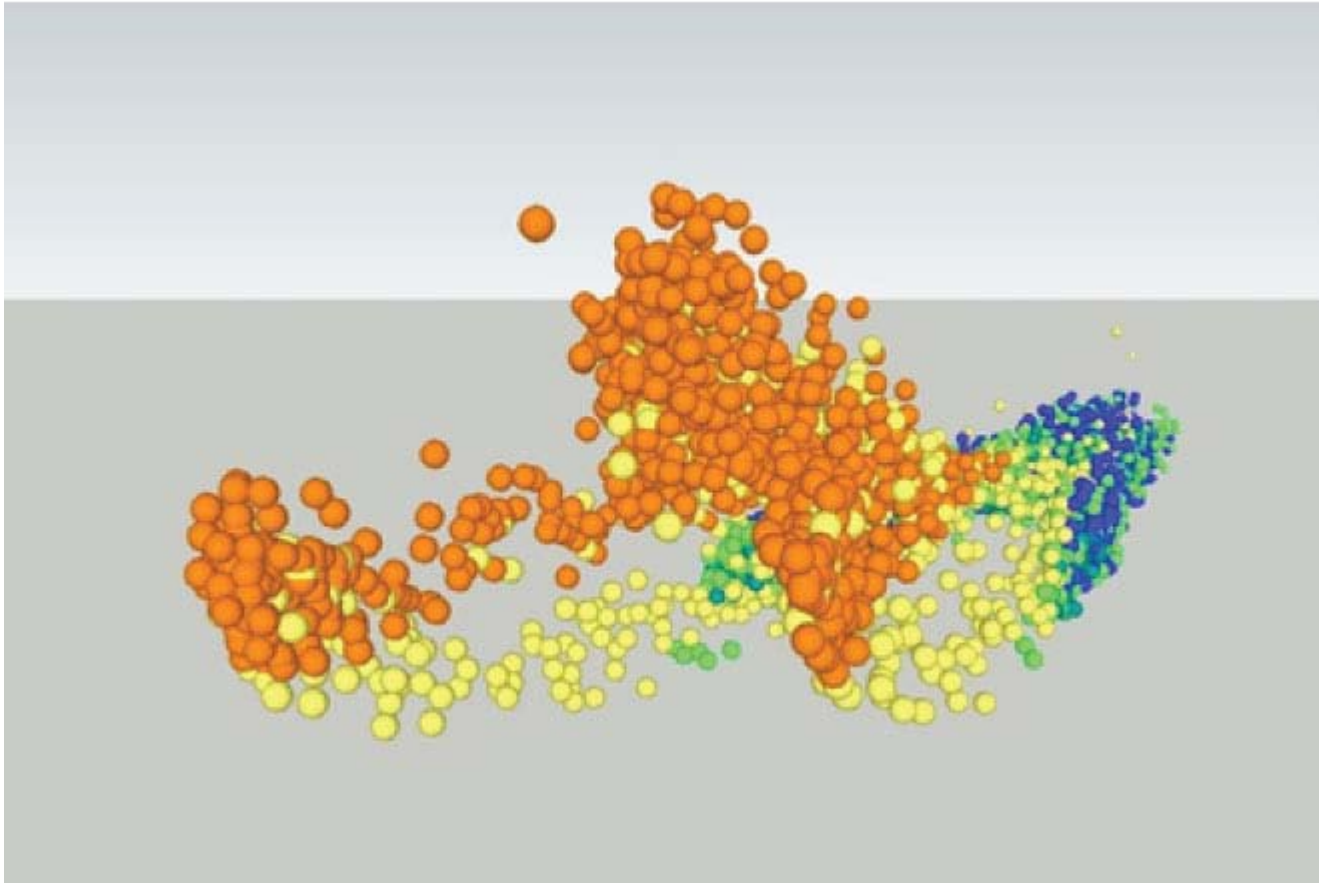
Maybe the rendering engine could be a little bit more flexible. I have problems with OpenGL on my notebook, and as much as I know, other people have the same problem.

What suggestions do you want to provide for newbie sketchup professionals who are working as a developer?

Combine everything with everything. Sketchup is flexible, use it on your way.

Please provide your feedback on sketchup-ur-space magazine?

Sketchup-ur-space is something everybody using Sketchup should know. I think there is a giant work behind, which you can find in the publications, tips-and-tricks, reviews and so on. Thank you for the opportunity for the interview, and I hope your community will keep growing.



Interview Andrew Alexander - Draftsman for an engineering consulting firm

Hello! Please share something about yourself.

I live with my wife in Mission, BC, Canada. I work as a draftsman for an engineering consulting firm that has offices across Canada and in the United States.

You have been modeling with sketchup for more than 8 years. When did you first discover sketchup and become hooked with it?

I had tried to learn other 3D programs, like the ones the professionals used in the industry. I found them not only complicated to learn, but very complicated to model with. The first time I tried SketchUp, I was able to make the type of 3D models that I wanted very quickly and easily. I was hooked from that point on.

What types of models do you generally create with sketchup and what are their applications?

SketchUp is very common in the field of architecture, for visualizations of projects and interiors. However, I am interested in using SketchUp as an object modeling tool. The first model I created was a collector's knife, and since then I have created many objects.

I also use SketchUp for work, to create visualizations of future telecom builds, as well as using it as a design tool for steel projects.

Why sketchup is very useful for 3d modeling?

It is very easy to learn, and has a small tool set to get familiar with. Just like the name, I see SketchUp as a quick sketching tool for 3D. It is so fast to model, that you can generate many quick models to test out ideas, and to use as a design tool for whatever project you are working on. You can also create very large, very complicated models as well, so it really is a program that anyone can use in any industry.

Once your model is formed, what types of finishing touches do you suggest for designers to apply on their project?

First of all, I highly recommend that certain things are done during the modeling procedure, in order to keep the model clean and easy to work with, such as using components and groups. After I create a model, I will make sure there isn't any extra geometry hiding inside the model and I clean up all erroneous linework, and of course, purge the drawing.

You had completed several projects with sketchup and among them which gave you complete satisfaction and which was most challenging. How did you utilize sketchup in those projects?

My most challenging models were the Concorde Jet and the Space Shuttle. In both of those, I had to come up with modeling techniques to properly model compound curves. This is not easy in SketchUp because SketchUp does not actually have curves, just smooth segment arcs.

Every model I make gives me satisfaction, but the two that stand out are the barbecue model, and a model I made of a wooden toy train layout. Both those models are very detailed and I spend lots of time getting things exactly the way I wanted.

What types of changes skethup brought to your workflow.

SketchUp allows you to draw first, and plan later. So in the past, where I would plan things out before modeling anything; Now I can just draw and plan as I go.

What tips do you want to provide for the budding sketchup modelers?

The best way to learn SketchUp and get better, is to pick something difficult to model. Not too difficult, so you get discouraged, but something that looks above your skill to model. Then take it slow and model it bit by bit and as you go, when you come up to a difficult section, search out techniques to get it done, and you will find you will learn faster. I find you learn better than following tutorials, because you are figuring it out for yourself, instead of just copying instructions.

What enhancement do you want to include in sketchup in near future?

To be honest, there isn't much that I would add to SketchUp, because the things that could be added (parametric modeling, true curves, etc.) would take away from the simple approach to modeling that SketchUp is so good at. I would love to see some better window management for the tool dialog boxes, and maybe improved navigation, but apart from that I wouldn't change much.

Sketchup Attribute can help a Sketchup user to work more efficiently

Sketchup is a 3D modeling program for application in several fields specially, in architectural or civil construction. 3D drawing or modeling always seems to be a hectic for designers or architects but the fact is it is one of most important part of construction. Sketchup is the tool which makes the 3D modeling easier than ever by making the designer visualizing the construction before the actual work.

There are many types of software and tools those are used to customize the designing process of various products. Every software has its own specialty providing a unique advantage to the designers. Sketchup is one of those significant software used in 3D modeling. Sketchup was originally designed as the tool for architects and engineers working in the area of construction. But now it is widely used for the designing of real-time environments specially after the acquisition by Google. The reason was the presence of too many polygons in it, which restrained its use in creating quick designs. However, after experimenting many of the models of Sketchup in the 3D warehouse, the technique was finally brought into use for Google Earth and Wonderland. Sketchup Modeling is capable of giving a form to the most innovative and impractical imagined designs.

SketchUp is the easiest way to make a 3D model. If you in hurry to complete your model, then it is the right place where you can get ready made components. In SketchUp, you can get various kinds of 3D models in – be it in big constructions or others . simply you can use it to anywhere - furniture, car, plants, landscape architecture, home, door, people, window, kitchen, stairs, art gallery, soccer stadium, police station, play grow playground, musicians, temple and many more.

There are two versions of Sketchup – Sketchup Make and Sketchup Pro. Sketchup Make is a free version while Sketchup Pro is a paid version. For the beginners or for the learning purpose, Sketchup Make is sufficient as it has all the features to make you work on it or to learn the usage of this tool. But if you want advanced application – if you are a professional designer or architect or someone who needs advanced tools for 3D modeling, then Sketchup Pro will be your ideal choice.

Sketchup has recently released its latest version - Sketchup Pro 2013 which includes several new features:

- Extension Warehouse
- Pattern Fills
- Copy Array
- Faster Vector Rendering
- Page Numbers in the Pages Panel
- Curved Label Leader Lines
- Smarter Toolbars (Windows Version)
- Increased Zoom In Capability
- HD Video Export

Now if you want more advanced application of Sketchup, then you need to use Sketchup attribute. This Sketchup attribute makes the tool more useful as it includes more applications. Google SketchUp is actually objected to create 3D objects – either models of buildings to be constructed or any other objects. But due to its wide application tools it is also useful for other purposes. That is why some SketchUp users use SketchUp to combine components into larger models of constructions – using boards, pipes, connectors, etc. to create objects – such as a deck or boat dock. It can also be used for everyday applications like allocation of kitchen appliances or furniture into a room or building.

Now the question is what is Sketchup attribute. There are some tools which allow you to attach arbitrary collections of attributes to a SketchUp entity. The attributes are defined as key/value pairs where the keys are strings.

In order to understand the process of attaching the attributes, you need to know the attribute report. An attribute report denotes a comma separated or html file which involves all the attributes and values in a model or in a selection. An attribute report also consists of all dynamic component attributes according to the model (if it contains any dynamic component).

In order to make an attribute report for Sketchup, the Sketchup users need to maintain the following process:

- Choose the Select Tool to go to the entities in the model and then select one or more entities as shown in the bounding box for respective entity.
- Then you will see the context menu of the components once you will click on the context for the chosen entity.
- Now as you have chosen your entity(s) choose File and click on the Generate Report which will be shown on the screen.
- Then select the All model attributes button to save a report containing all attributes in your model. Otherwise you can go to the existing selection attributes to save a report with the attributes in your current selection.
- Now it is the time to produce an HTML or CSV file. To do so, select "Generate HTML" file button or "Generate CSV" file button.
- Now as you are done with attributes report, you need to save it. In order to save the Attribute Report, select the Save button. You will see a dialog box showing "Save Attribute Report: on the screen, click on it to confirm.
- Now check the Yes button to show the Attribute Report – whether it is ok or not. You can see your report will be generated in Microsoft Excel or any program that can display .csv files. Now your attribute report is ready.

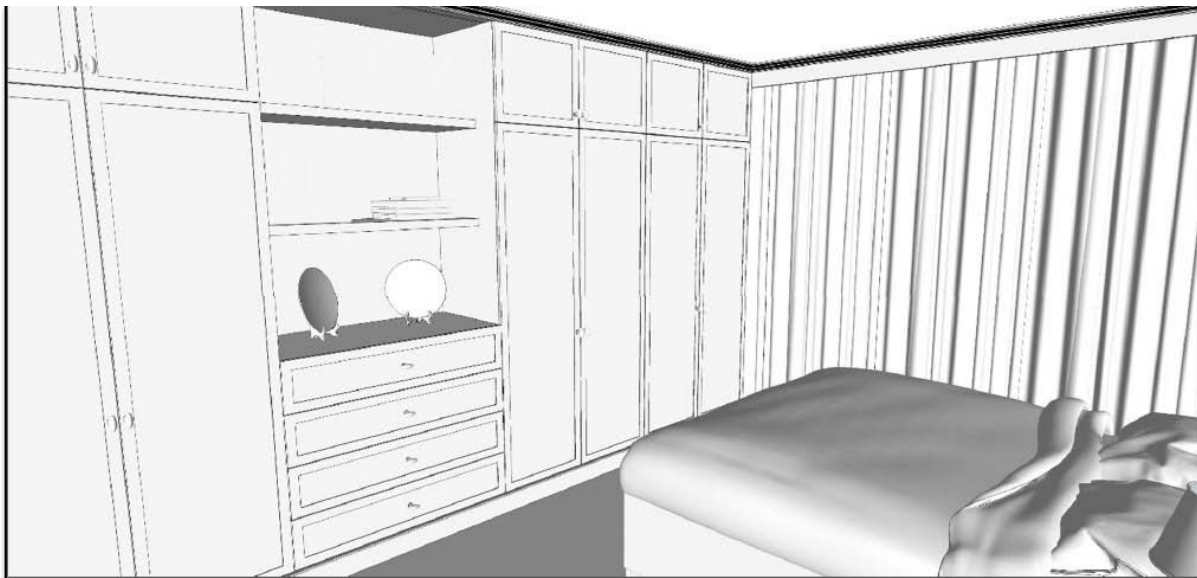
As it is already known that Sketchup is useful for many other purposes other than 3D modeling and Sketchup can be used for combining components of constructions, there are many simple tools (including Sketchup Attribute) available for enumerating objects. Dynamic Component report is another such component used by Sketchup.

To get a comprehensive report on all components in a model of construction or something else, you need to select In order to get more components or attribute or report formats, there are some plugins like SpaceDesign which will help you to get more compact report.

The Making of the bedroom with Sketchup

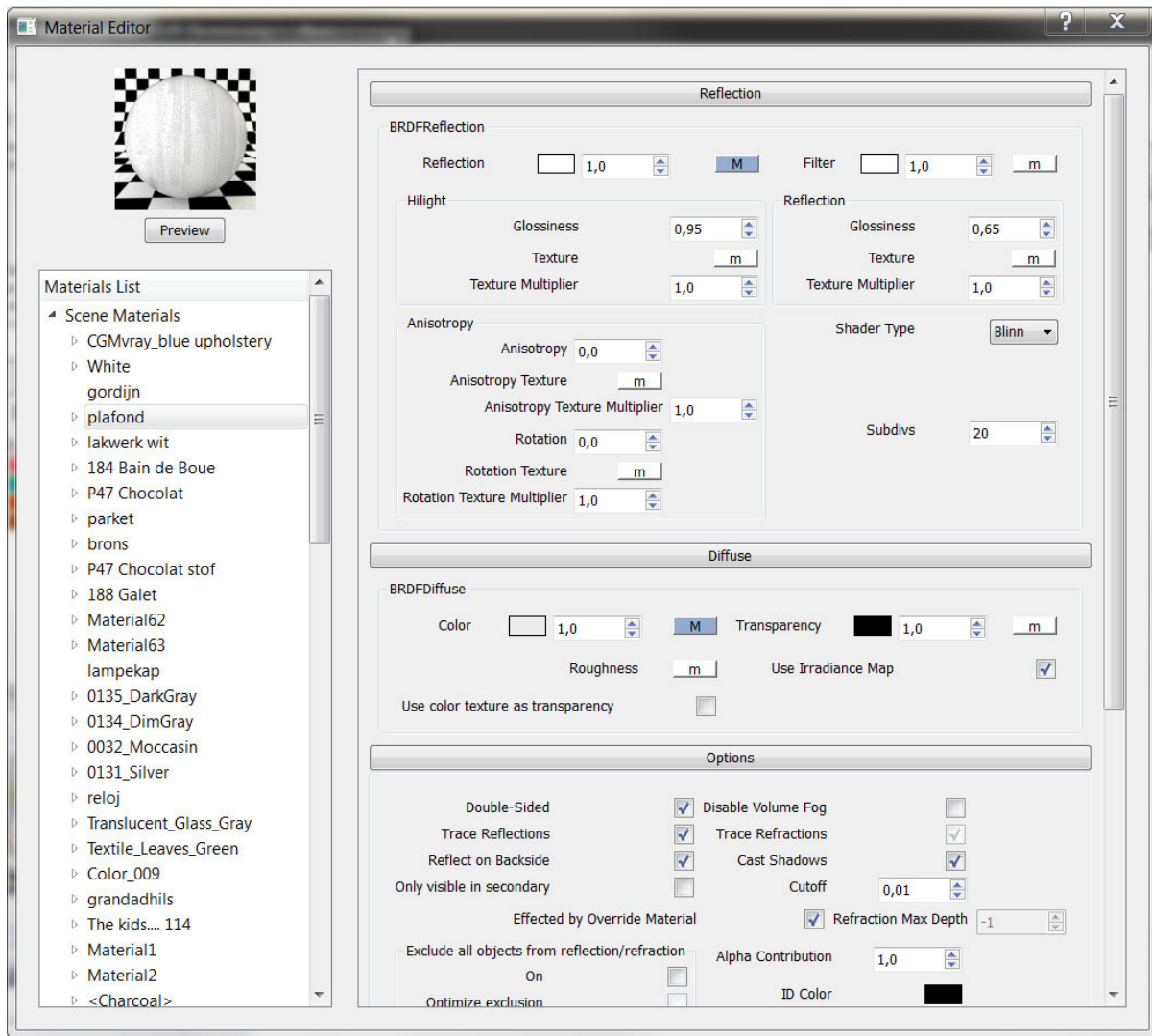
To start of I would like to say that only way to get a very good result is to make your overall model as detailed and realistic as possible. A lot of time I spend in making the model as in real life! Also in the 3D warehouse you can find some very good objects to import in your model, and if you search a little you will find some nice 3ds files of a lot of furniture, especially design furniture (chairs, sofas, ...).

The scene... It is a very simple scene of a small room where the idea was to make it as functional and cosy as possible within the 'taste' of the client.

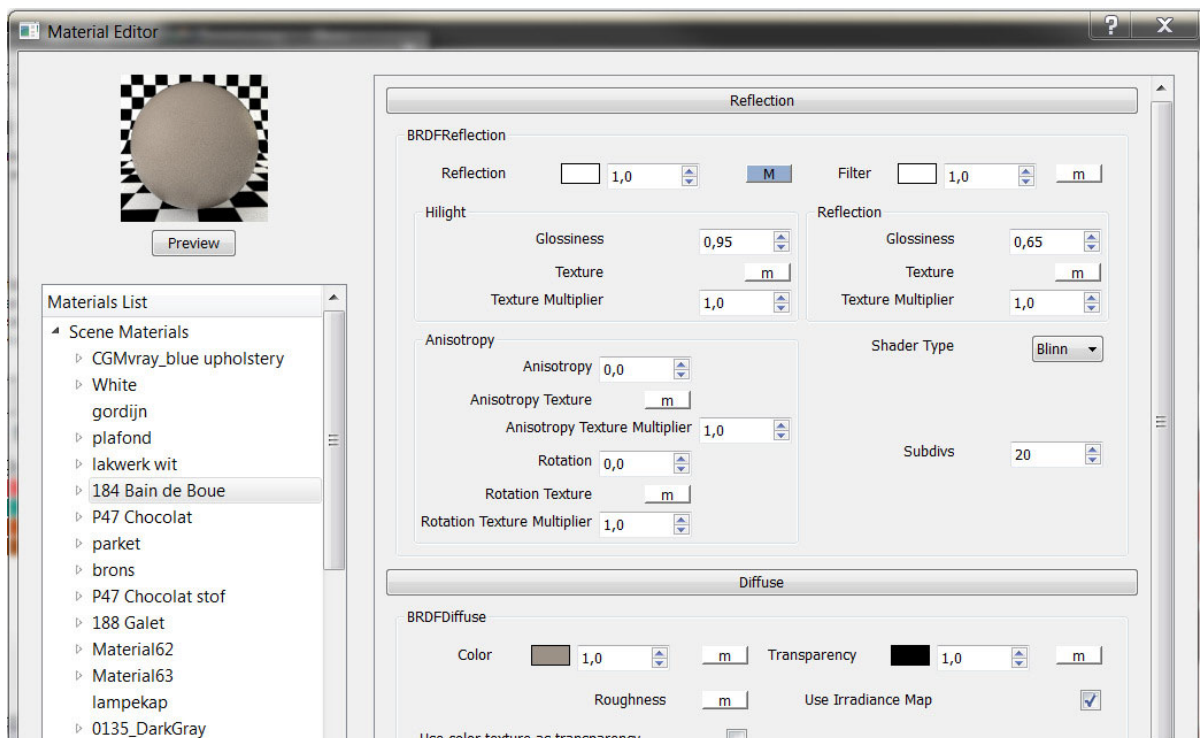


A. Materials:

1. Ceiling color: To make your interior render look brighter it helps to make your ceiling and walls reflect a little. I used a diffuse map of a wood floor as my base color, which I made white using Photoshop, but it works with any color. I always use 'tex fresnel' as my reflection. In fact, it is the same as the diffuse map I used for the floor, just in a different scale and color!



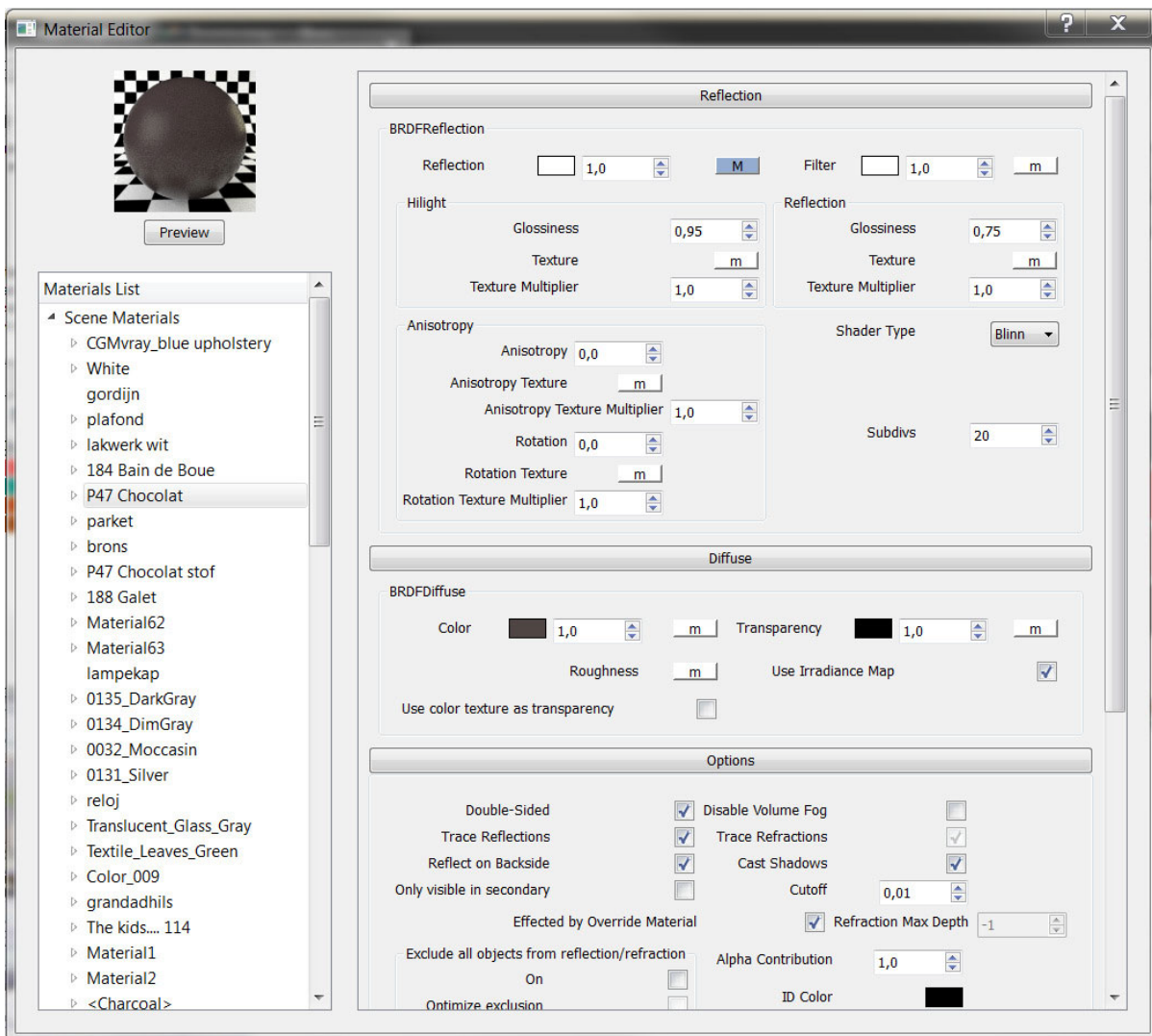
2. Wall color: The same here, as the ceiling color, I always use a little bit of reflection, to get a more realistic result in the end. It doesn't matter what color you use.



For the striping I used the two colors simultaneously, separating each color as a rectangle.



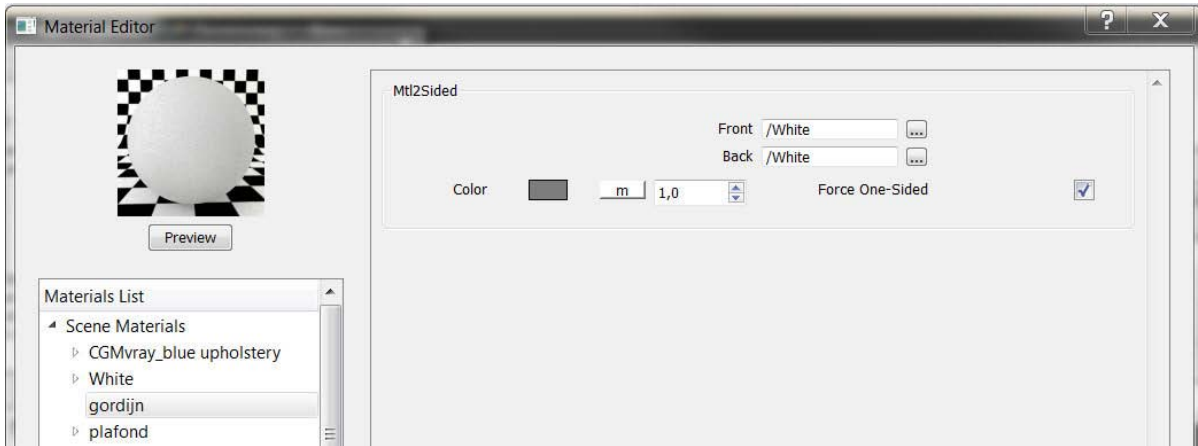
3. Furniture color: Here I use a bit more reflection glossiness, that way the furniture 'shines' a bit more than the walls or ceiling.



The picture frames I made using basic pictures I found on the internet, and 'framed' them using Fotosketcher. A superb tutorial on this is to be found on the website of Nomeradona.

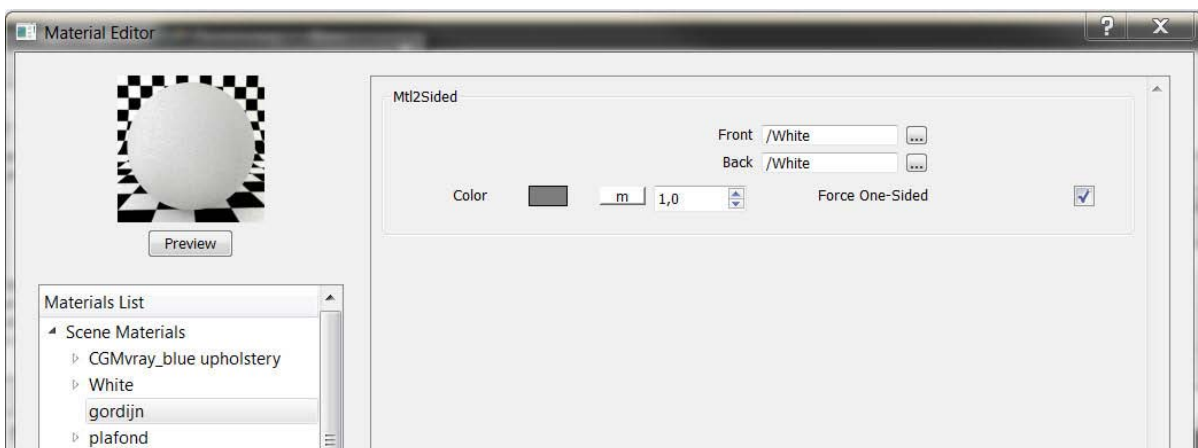
4. The curtains: This is a double sided material, that way it will become transparent. In this scene I used a basic white color (a default vray material set to white), and then you make a new material, you choose a

new 'two sided material'. Apply the front and back color, set the color to a grey value (125), and make sure you tick the 'force one sided' box.



Make sure you group the geometry on which you apply this material. You can control the transparency even more by adjusting your base material, by making this more transparent in Sketchup. I did the same technique on the lamp shades, so that way, when you place a light in it, it will shine through a bit.

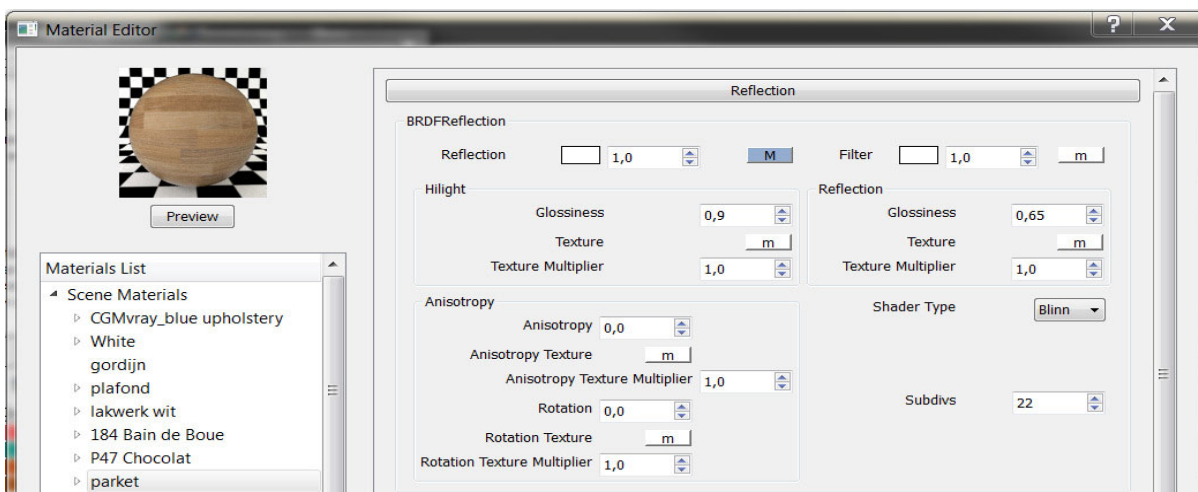
5. Floor: When you look for nice wood floors, or even tiled floors, make sure you use a seamless texture, with the highest resolution as possible. That way you get nice results. And here, the same as on the walls and ceiling, use a bit of reflection.



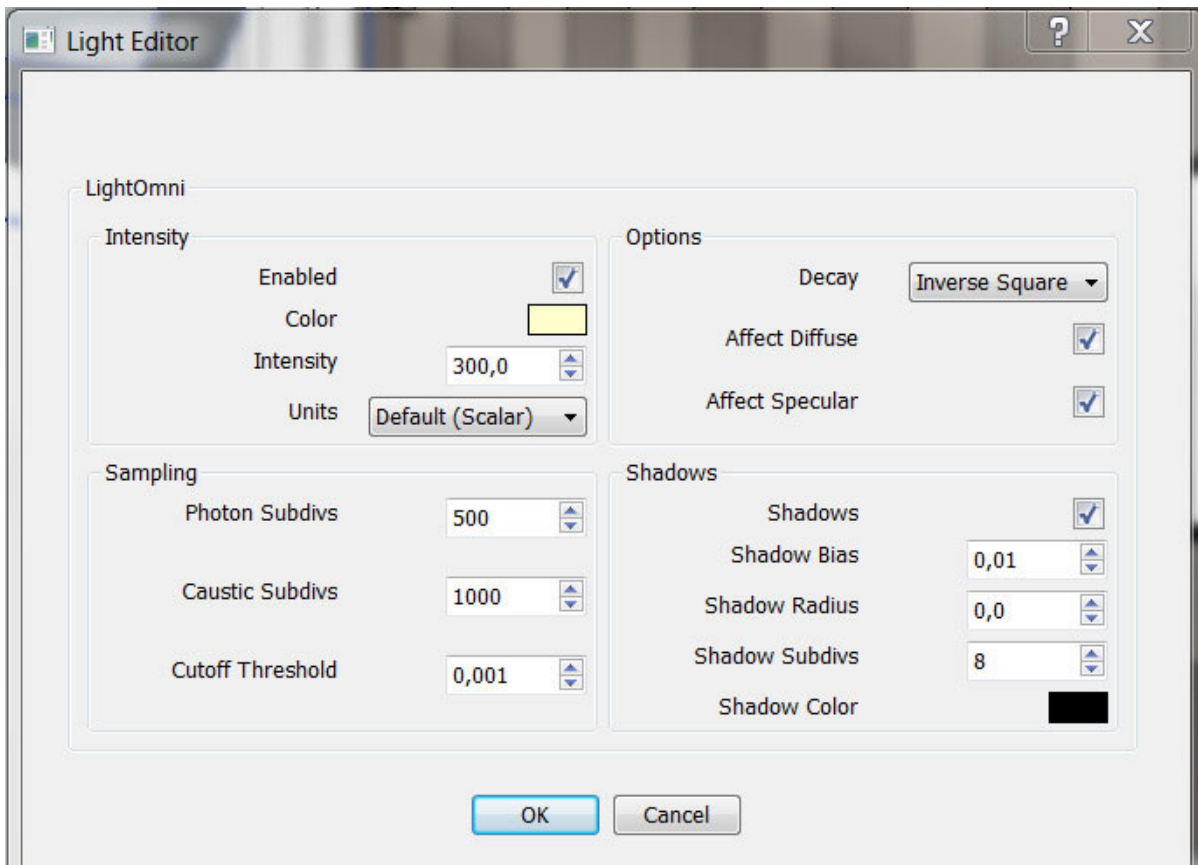
On this texture, I didn't use any bump or displacement map.

B. The settings

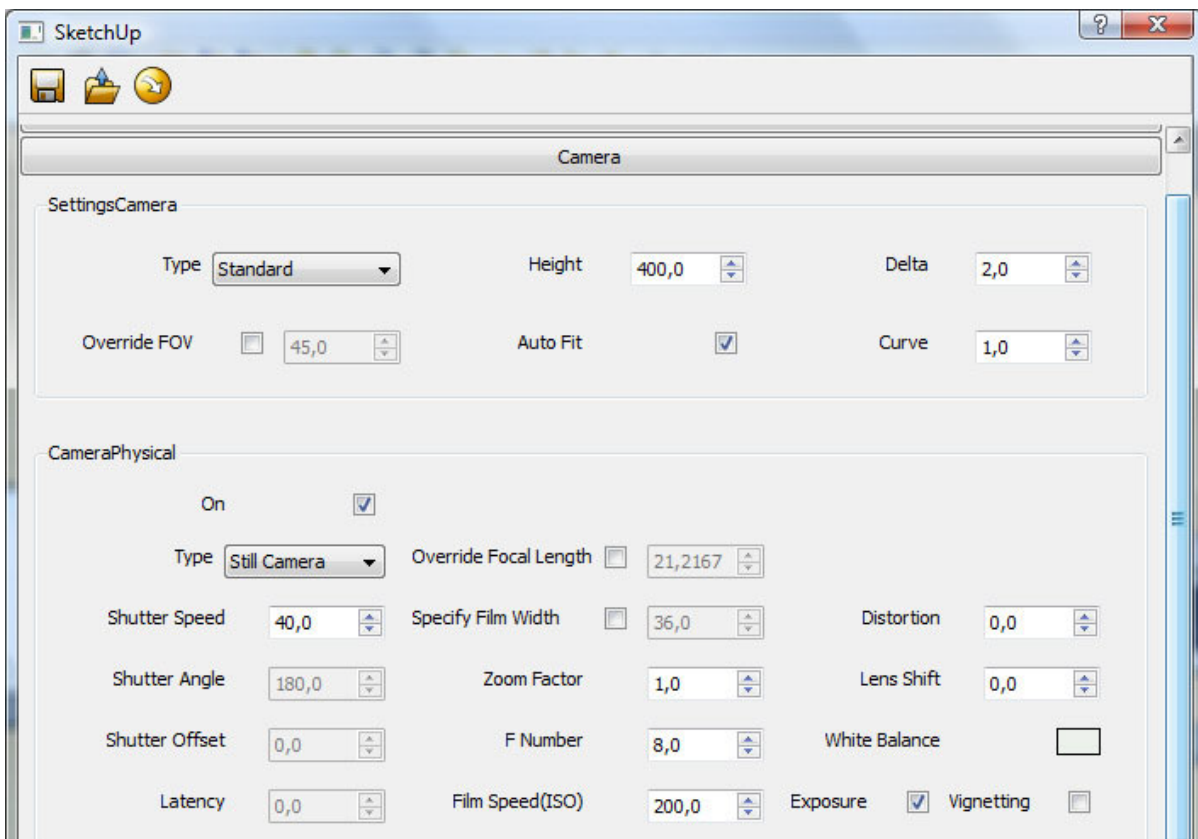
Usually for me, I find the best results are when I render my models with an HDRI as lightsource. But in this scene it wasn't necessary, because the entire scene doesn't have any light coming in from 'outside'. Instead, also used two omni lights to lighten up the scene:



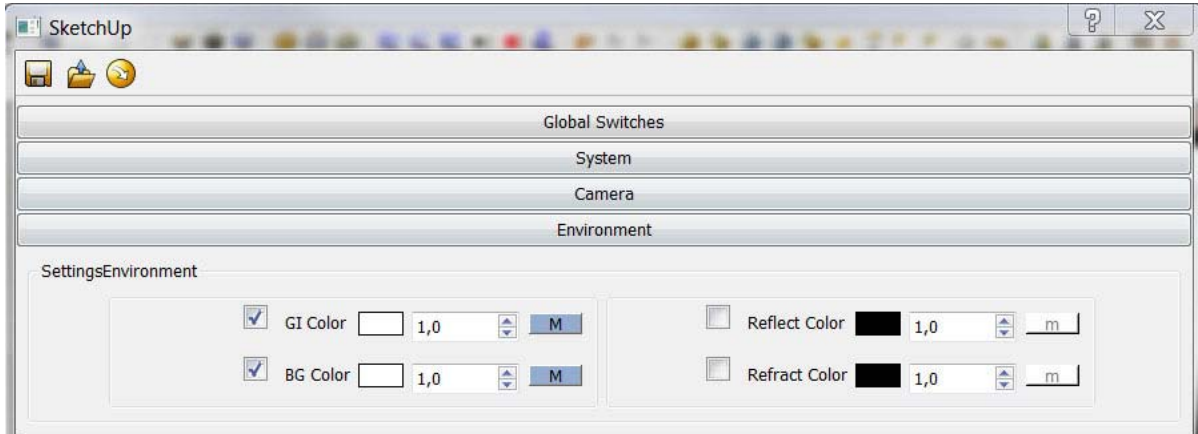
So I start off with the camera settings, I lower the shutter speed to a value between 30 and 50 to brighten up the picture, and also increase the film speed to somewhere between 175 and 225. In this scene, there is no direct light coming through the windows, so you have to brighten up the scene yourself.



I used the basic sunlight as my source of light, both in my GI color and BG color, values set to white.

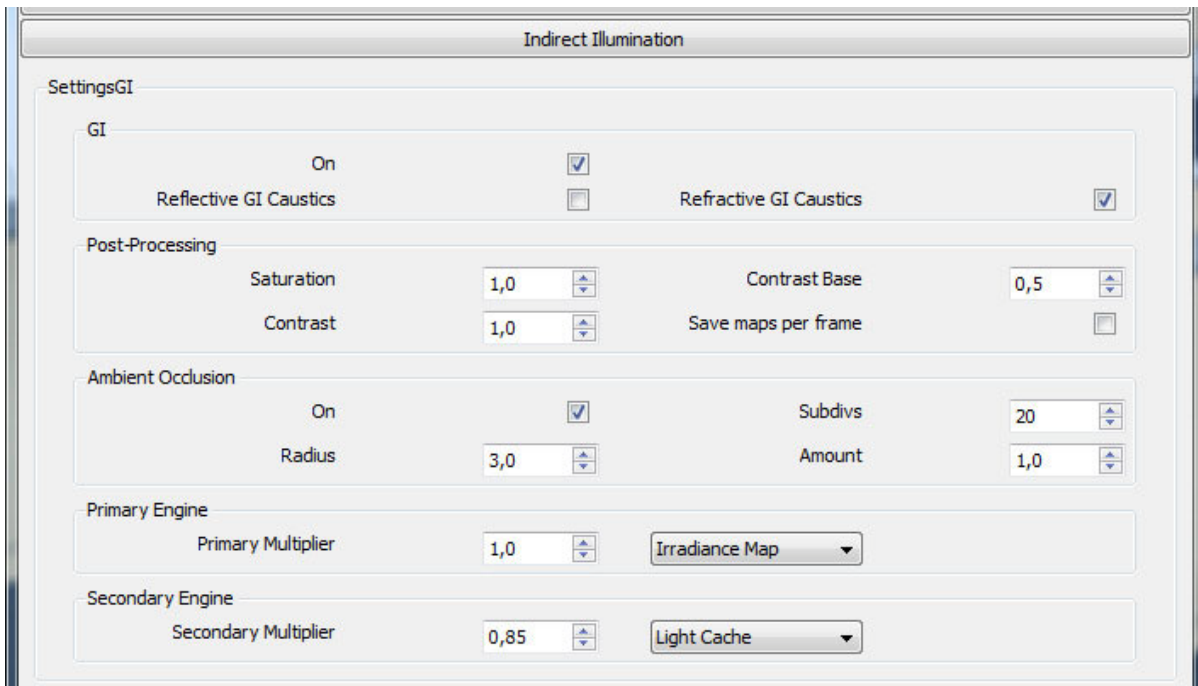


Make sure to activate the ambient occlusion, that way you will get nice clean corners. The more subdivs, the better the result. My primary engine remains the 'Irradiance map', the second is the 'Light cache'...

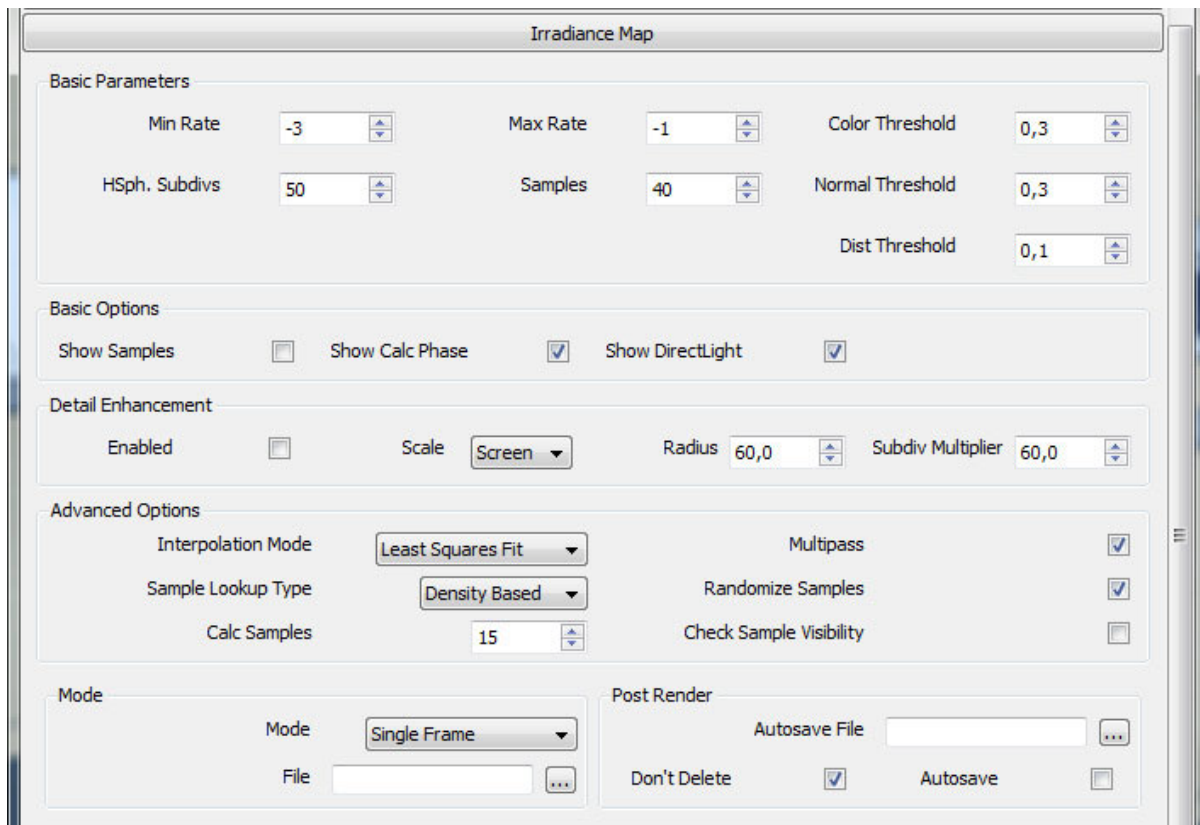


The settings for the irradiance map.

The only thing I changed are the samples, I increased them to 40.

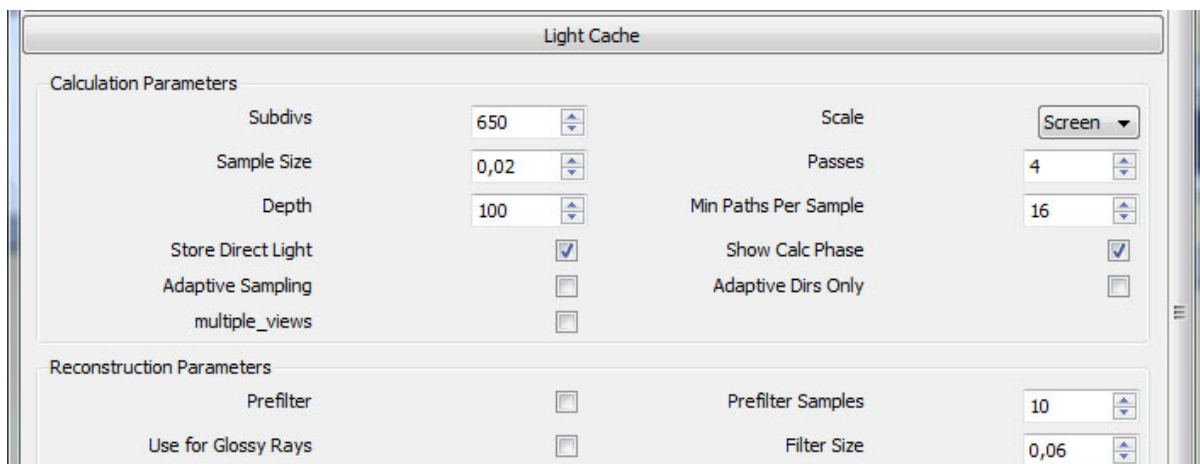


The light cache settings: The higher the value of the subdivs, the better you result, but it will have a direct impact on your render time. So, make sure you adjust it to your needs... I start off with a lower amount of subdivs, and increase it gradually, to improve the final result.



The rest of the settings weren't changed!

C. The result, without post- processing in photoshop





If you like this article or want to send me a message, please follow me on facebook or twitter (Irmin Verstappen), or take a look at my website www.irmin.be.

How to create import mechanisms inside of Sketchup with Ruby scripting

In my previous article I wrote about how can we use Sketchup for data visualization. Now, I'll show how to create import mechanisms inside of Sketchup, with the help of Ruby scripting. Basic Ruby knowledge is required. For those not familiar with scripting, I've included some useful links in the appendix section.

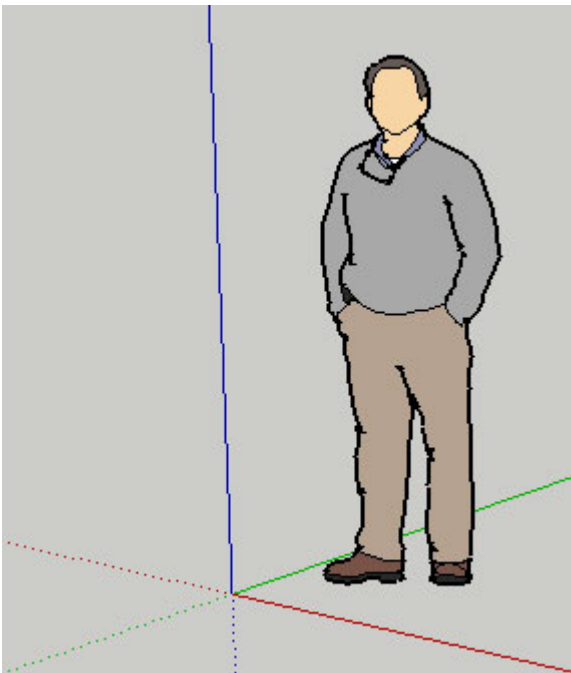
The method we will implement is capable to import CSV data, with some criteria. The result of the import process will be a mesh. Each of the mesh's nodes have to be defined with three coordinates in the CSV file.

Example of a 3x3 node mesh, defined in CSV:

This is how a 3x3 mesh looks like in our CSV. Each line of the CSV file contains three numbers, separated by commas.

The numbers are following each other as-

- red axis
- blue axis
- green axis.



So the grid itself is defined by the first and last numbers of each row, while the height at any given node in the grid is defined by the 2nd coordinate (blue axis).

Our importer will use the coordinates as indexes of an array too while building the mesh, therefore in the CSV file we keep the first and last columns as continuous integers. In the above example, they are between 0 and 2, because our mesh has 3x3 nodes.. You will see this explained by the code of the import method.

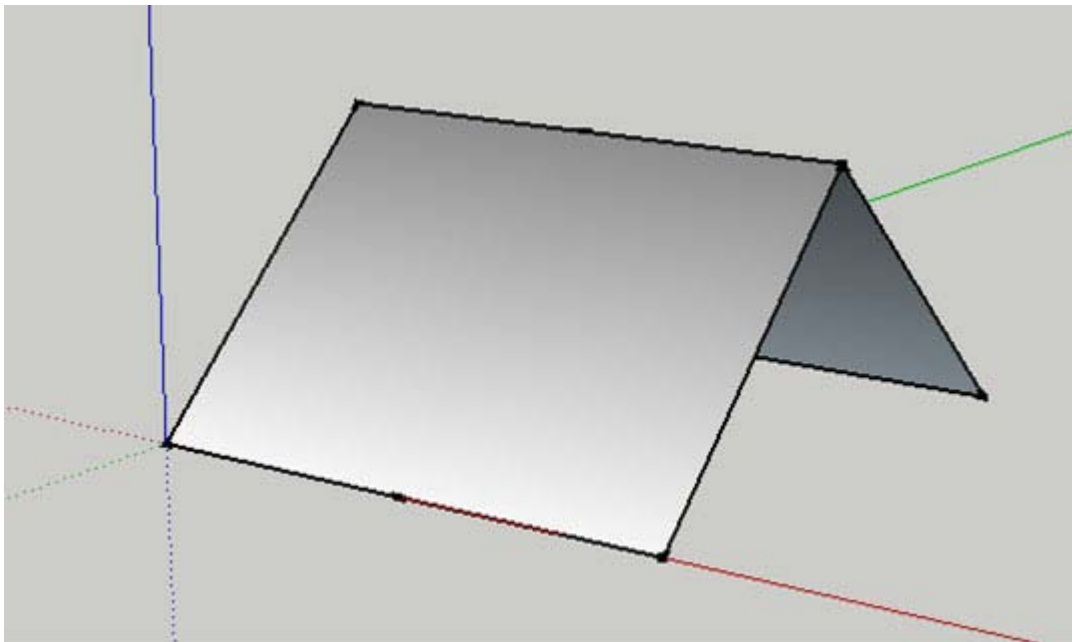
Importing such a CSV file will produce a mesh like this:

```
0;0;0
1;0;0
2;0;0
0;1;1
1;1;1
2;1;1
0;0;2
1;0;2
2;0;2
```

Let's see, how to import the above data with Ruby.

We will use Sketchup's Importer class, to implement the method. Doing so, the CSV to Mesh importer will show up in the File | Import dialog, amongst the pre-built Sketchup import methods.

We have to inherit our class from the Importer class.



There are methods, we have to implement in our class, to satisfy Sketchup's requirements, these are the following ones:

```
class CSVMeshImporter < Sketchup::Importer
end
```

Now we got an empty importer. Most of the above methods are self-explaining.

There is the possibility, to get parameters and settings before the import begins. If we would like to do so, our supports_options? method has to return true, and we have to implement a do_options method as well.

Sketchup will start the import process calling our load_file method. Return value of this method is an integer status. For details of this status follow the link with the Importer class in the appendix.

Inside of our load_file method, we will-

1. read the data
2. process text data
3. create a mesh based the processed data
4. add the mesh to the actual scene

This is how we read text data, by lines:


```
class CSVMeshImporter < Sketchup::Importer

  def description
    return "CSV to mesh importer (*.csv)"
  end

  def file_extension
    return "csv"
  end

  def id
    return "com.sketchup.importers.rpchk.csvmesh"
  end

  def supports_options?
    return false
  end

  def load_file(file_path, status)
    return 0
  end

end
```

During the processing, text data from the CSV file will be converted to numeric data. We also apply scaling in here.

```
f = File.new(fname, "r");
lines = f.readlines();
f.close();
```

The code above will split each line we've read from the text file by commas, and will convert the result to floating point numbers. We put this numbers into the `consdata[x,z]` array, values of the array will be the scaled coordinates.

```

consdata = [];
group = Sketchup.active_model.entities.add_group

l = "1m".to_l;

lines.each {
  |a|
  b = a.split(';');
  x = b[0].to_f();
  y = b[1].to_f();
  z = b[2].to_f();

  if (consdata[x] == nil)
    consdata[x] = [];
  end

  x0 = x * l;
  y0 = z * l;
  z0 = y * l;
  consdata[x][z] = [x0, y0, z0];
}

```

Finally, we create the mesh based our array:

```

mesh = Geom::PolygonMesh.new;

for a in 1..(consdata.length - 1)
  for b in 1..(consdata[a].length - 1)
    begin
      p0 = consdata[a][b]
      p1 = consdata[a-1][b]
      p2 = consdata[a-1][b-1]
      p3 = consdata[a][b-1]

    rescue
      return 1
    end

    if (p0) then p0 = Geom::Point3d.new p0 end
    if (p1) then p1 = Geom::Point3d.new p1 end
    if (p2) then p2 = Geom::Point3d.new p2 end
    if (p3) then p3 = Geom::Point3d.new p3 end

    if (p0 != nil && p2 != nil && p3 != nil) then
      mesh.add_polygon p0, p2, p3 end
      if (p0 != nil && p2 != nil && p1 != nil) then
        mesh.add_polygon p0, p1, p2 end
      end
    end
  end
end

```

Iterating through the pre-built `consdata` array we try to create each node as a `Point3d` object, and from the points we try to create polygons. Finally we add the polygons to the mesh..

When ready, we add the mesh to our group which is part of the active scene, and return 0, signing that the import was successful.

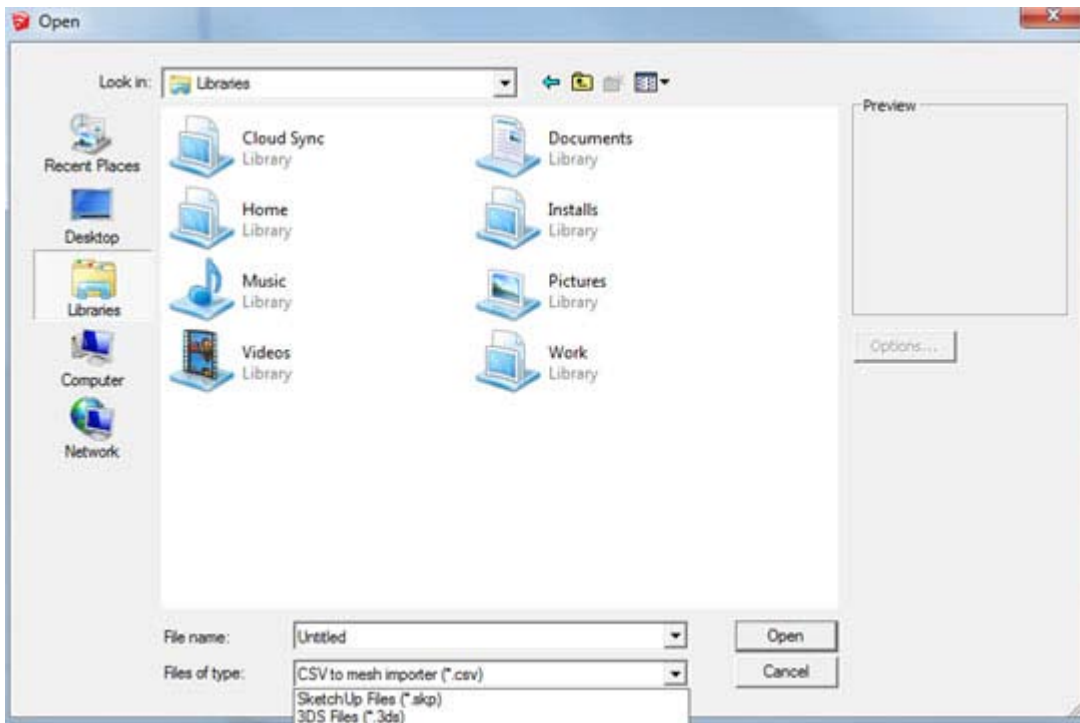
```
group.entities.fill_from_mesh mesh
return 0
```

The import class is ready, we have to instantiate it, and add to Sketchup importers as follows:

```
Sketchup.register_importer(CSVMeshImporter.new)
```

All this we put into a file, called `CSVImporter.rb`, for example, and add it to the Sketchup Plugins folder, as described in the Hello World example, you can find below in the appendix.

We can find the CSV to Mesh importer in the File | Import... menu. It should look like this:



This import method is an easy representation of how to make connection between anything and Sketchup. The code above is a passive solution, because there is no two way connection between our CSV data and Sketchup model, but we got the possibility to make active connections as well, resulting in dynamic scenes. Also notice, that this simple structure we described through a CSV file is not a limitation, we can create any kind of importers with Ruby to extend Sketchup.

Appendix - Some useful links

Sketchup / Ruby - Hello World! - http://www.sketchup.com/tutorial_helloworld.php

The Importer class - <http://www.sketchup.com/intl/en/developer/docs/ourdoc/importer.php>

Sketchup's Class Index - <http://www.sketchup.com/intl/en/developer/docs/classes.php>

Generate a high quality rendering with your Sketchup model by Raylectron version 3.02

SoftByte Labs, Inc recently launched Raylectron version 3.02, a most important improvement to their Raylectron suite.

Raylectron v3.02 can smoothly and efficiently render 3D models created with Sketchup into a photorealistic image.

Raylectron contains three diversified rendering modes. Based on the renderable scene, the users can apply raytracing with proper shadows, pathtracing with or without direct illumination and photonmapping for generating an exclusive effect.





Raylectron consists of four types of light source ranging from the sun, the sky, environment maps and any materials set as a light source (emitter) having settings for the power and coverage angle. Any materials can generate various effects like reflection (like mirror), refraction (like glass), transparency, glossiness, shininess, bump maps, normal maps, grass and background images. Shadows are not false or reproduced like "Soft shadows". Caustics are also genuine, not forged or replicated. Raylectron applies all the CPU cores and threads (user selectable) to perform rendering in quickest possible time. It can also utilize slaves by setting up Raylectron on remote computers further increasing the rendering speed.

Some of the amazing features:

- Render OBJ files.
- Rendered animation.
- Save rendered data.
- Physical sun and sky.
- Support HDR 360° maps.
- Twopoint perspective.
- Start/Stop/Resume render.

- GPU Acceleration, faster CPU.
- Free Sketchup while rendering.
- Fix Reversed Face Material tool.
- XRay vision (render through walls).
- Instancing of components and groups.
- Network render. Unlimited number of nodes.
- Grass & Fur real time preview and generation.
- Model viewer (rotate, pan, zoom as in Sketchup).
- Stereo Vision (crossedeye, no glasses required).
- Transparent background (great for saving as PNG).
- Save render in HDR, PSD, PNG, JPG and many other formats.

Raylectron v3.02 is available for free evaluation.

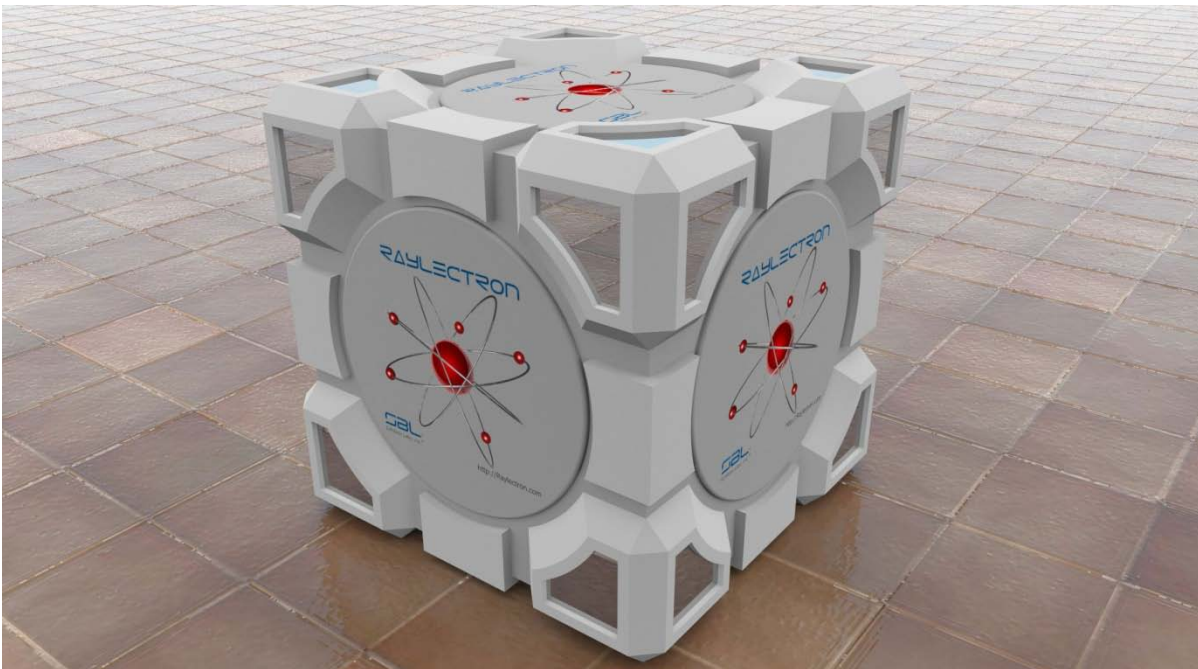
For additional information about Raylectron: <http://raylectron.com/>

Trimble Sketchup: <http://extensions.sketchup.com>













How to create an Attribute Report with Sketchup

It can only be performed with Sketchup Pro version.

An Attribute Report denotes a comma separated or html file involving all the attributes and value in a model or in a selection. An attribute report will also consist of all Dynamic component attributes if the model contains any Dynamic Components are.

The sketchup users have to maintain the following procedures to create an Attribute Report:

Choose the Select Tool to opt for one or more entities in the model. The bounding box related to each chosen entity will be highlighted.

The context menu of the components will be visible after Context-click on the component.

Choose File and click on the Generate Report. The Generate Report dialog is demonstrated.

Select the All model attributes button to save a report containing all attributes in your model or get on the existing selection attributes to save a report with the attributes in your current selection.


In order to produce either an HTML or CSV file, select the Generate HTML file button or Generate CSV file button.

To save the Attribute Report, select the Save button. After that a dialog box will be shown.

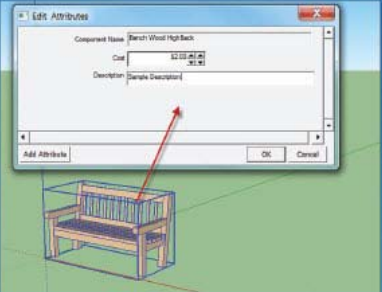
Check the Yes button to show the Attribute Report. The report will be generated in Microsoft Excel (or any program that can display .csv files).

SpaceDesign


Attributes & Reports for SketchUp


RenderPlus
TOOLS TO ENHANCE TRIMBLE SKETCHUP


Include attributes in your components and groups.



Customize your reports & format.



Include SpaceDesign reports with your product.



The users will be able to choose all components like all cabinets, in a scene having costs attributes. Then, apply the SUM formula in Microsoft Excel (after producing an Attribute Report) to find out the total cost concerning all items in the selection set. This same method can be repeated to work out total board feet for wood utilized in a project, and so on.

Review of Sketchup-ur-space

Most of us are aware of SketchUp, a 3D design tool from search engine giant Google. Using this tool, Sketch up Space (SuS) has been created which has offer readers news, features, reviews and many other things. Ever since its inception in 2010, SuS has been steadily growing and is quite popular among SketchUp professionals.

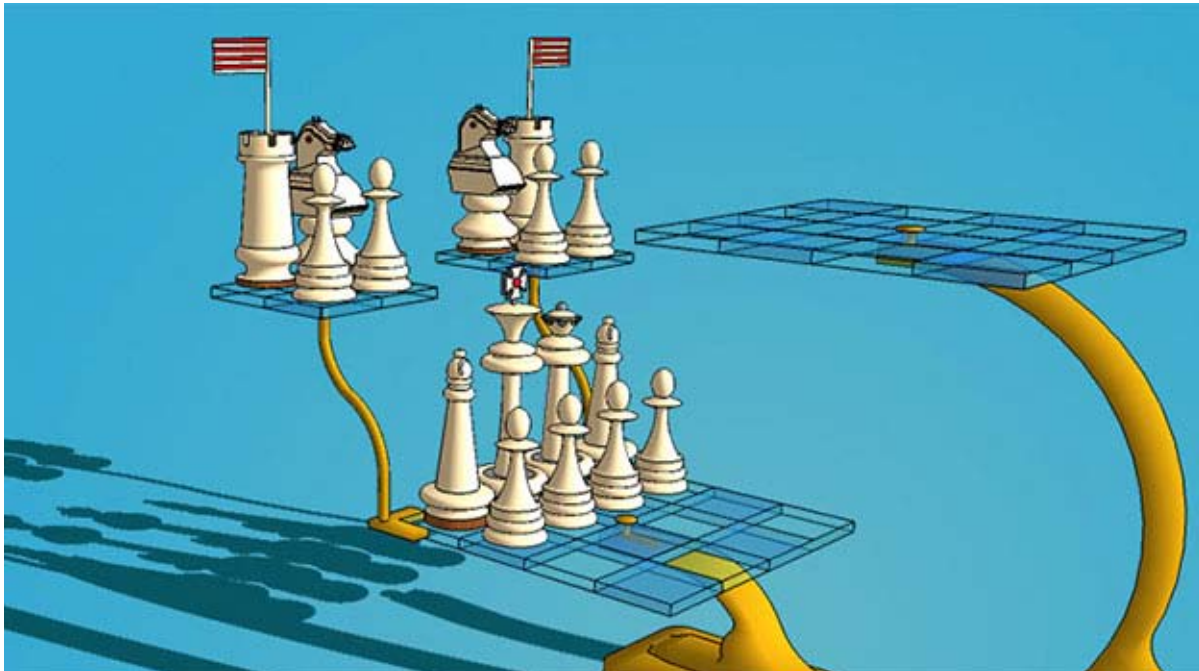
At present the magazine boasts of over 1000 subscribers and each and every day the reader base of this e-magazine is growing. Mr Rajib Dey is the editor-in-chief of the magazine and is responsible for writing cover story, blogs and other contents of the website.

Rajib's stories are put online by Mr. Manoj Kumar Singh, who is an html developer. It is Manoj's responsibility to create each and every design of the magazine with an artistic touch. Now readers can enjoy the PDF versions of the latest issues of the magazine and thanks to its team of dedicated professionals who work 24*7, that SketchUp has been able to carve a niche for itself among readers.

Matt Donley, Jim Leggitt, Nomer Adona, Daniel Tal, Jean-Luc Clauss, Bonnie Roskes, Mike Tadros, Evrim Pekaslan, Bharath Musunuri, Paul Lee, Claudio Cosentino, Adriana Granados are some of the regular contributors to this magazine. The magazine also comes up with special issues on occasions like Christmas and time and again it features insights from industry giants like Claudio Cosentino (art director of Hollywood flicks such like Dracula 3D, Cannibal World etc). At the same time, the magazine provides a platform for budding professionals to share their views on SketchUp.

most interesting section of the magazine where users get to know about several tutorials regarding the various aspects of SketchUp. Readers will also find a blog and a video section which makes them aware about the various other nuances of the software.

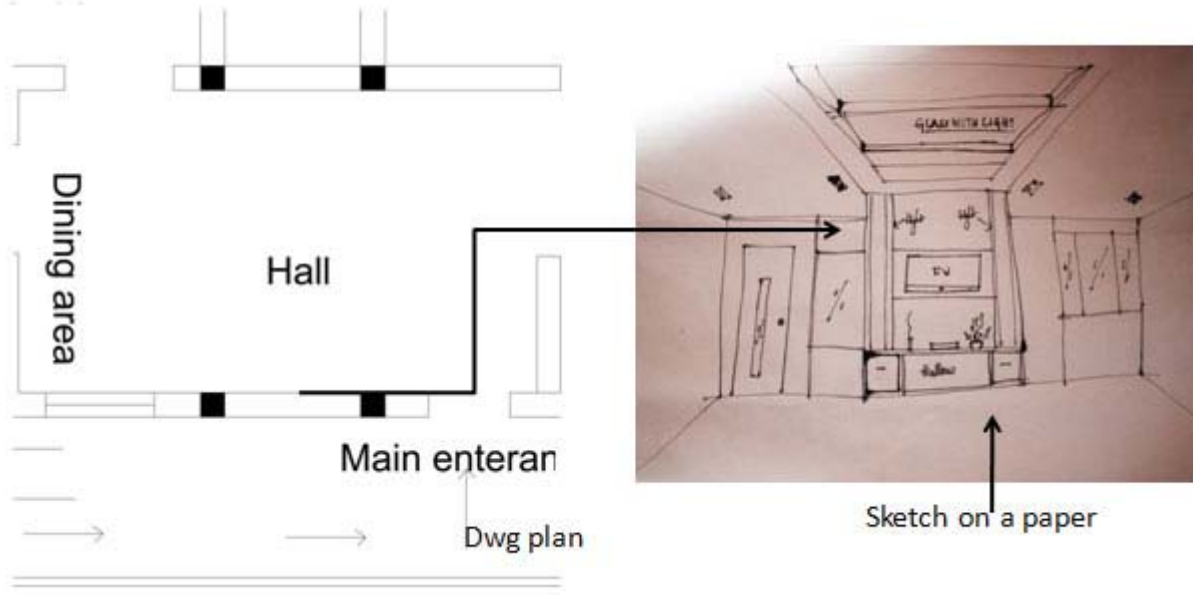
The layout of the online version of the magazine is very neat and user-friendly and users can easily navigate the section of their choice. At the same time, they can post comments and share their views about the posts. SuS team constantly endeavors to make the magazine for user friendly and it is their efforts because of which the magazine is seeing huge popularity among readers. If you are fascinated with SketchUp software, then definitely you should subscribe to this magazine.



Rending to reality with Sketchup

Hello World!! This is Bharath Musunuri, I am from India., I am an Architect by profession & a 3D Visualizer, Today I wanted to share my workflow as an upcoming architect how sketch up is essential for an Architect.

At first I draw my basic drawing in cad for the 2D reference , as on the work flow continues With the sketches , inspiration images , and some conceptual sketches.



Now I import my cad drawing In to sketchup and make it in to 3D form, in this process I will Have an idea of how the interior spaces will be when they are executed.



Now it's the 3D visualizing part , reality is the basic concept of rendering., After deciding the Materials which are to be applied I make them and add them to the 3D model in sketchup.

Now setting up the scene with the camera positions and adding some objects to make the scene Much more live.



After the set up is completed then the light testing begins. This test is to know how the applied Lights will give ambience to the internal spaces.

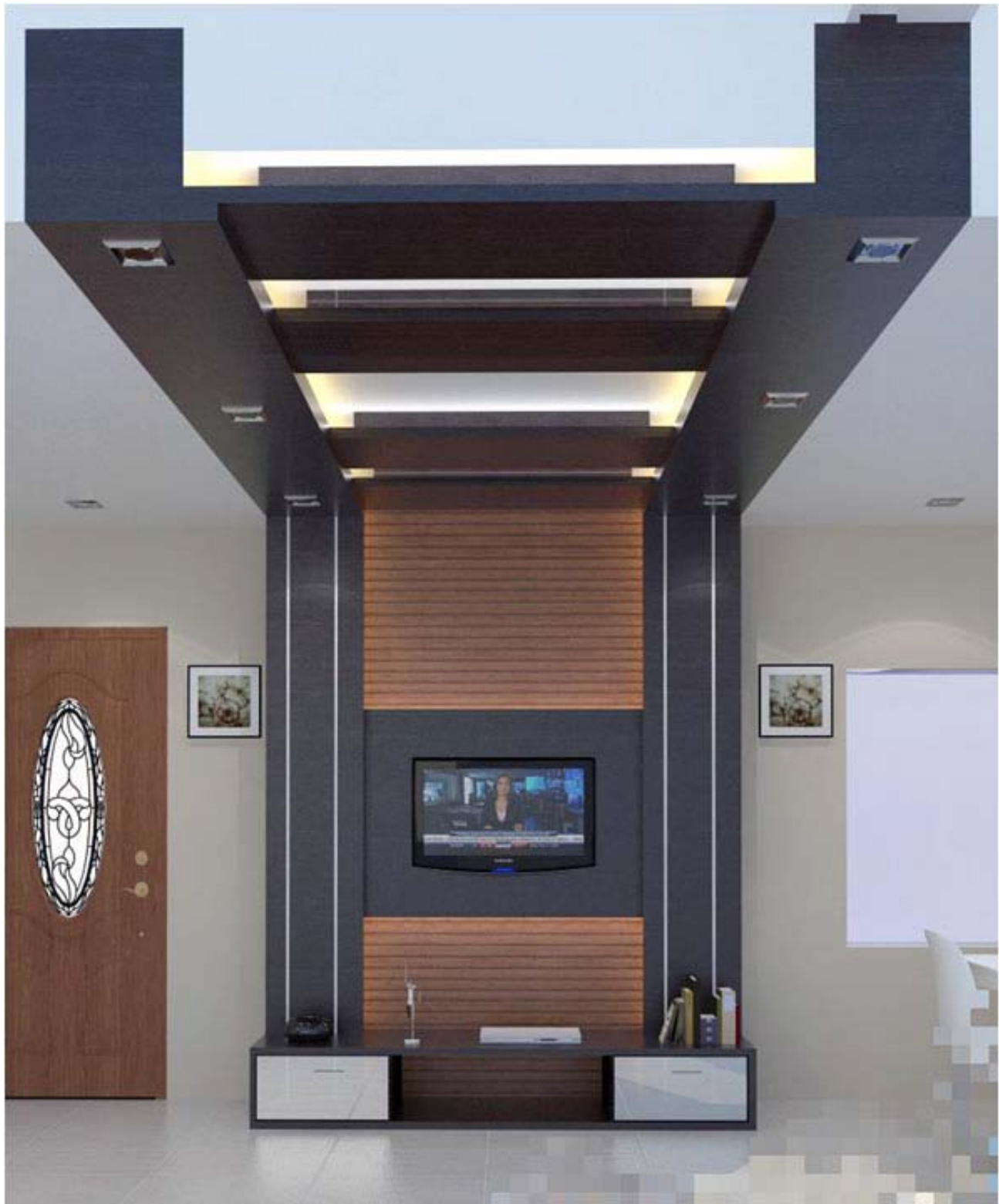
Light test-1



Light test-2



Final render



Final render-2



Now its presentation Time.. All the detailings with measurements will be presented. For this I choose sketchup layout.. After finishing my modelling and rendering I save my file in sketchup



Now I give the deatailed drawing and present it what are required for the execution. In this way I present my workflow to the client and it is easy for execution. Sketchup 4 Architect.



Rending

To

Reality



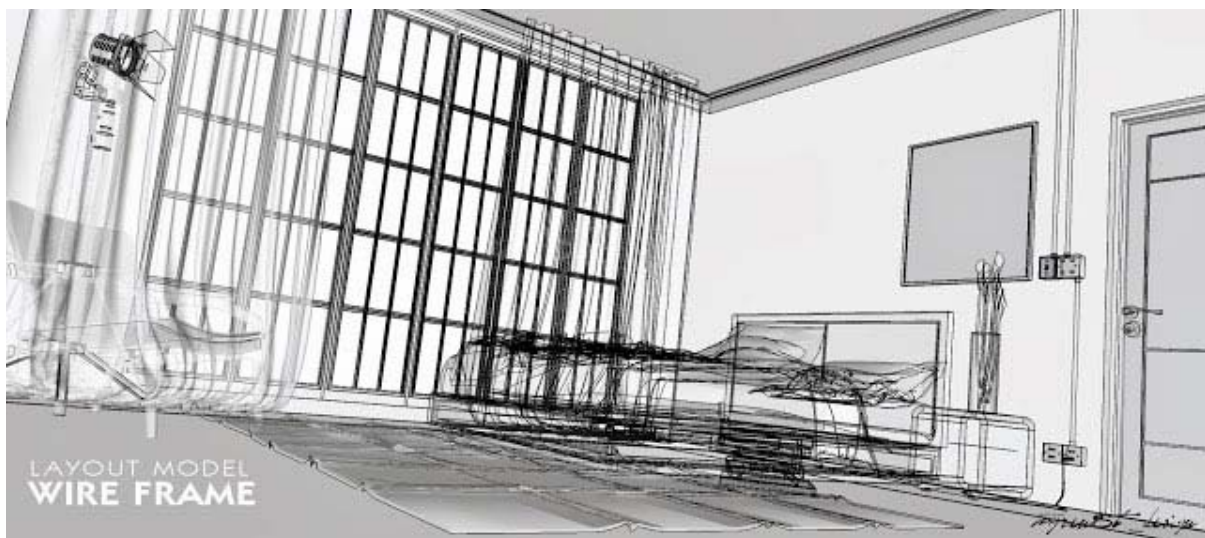
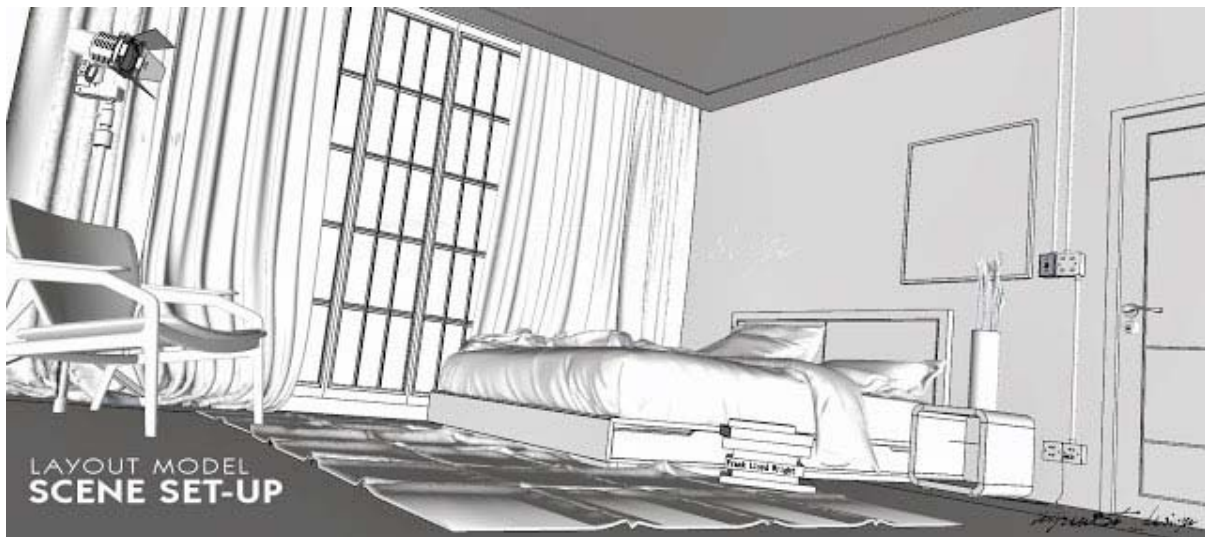
Rending

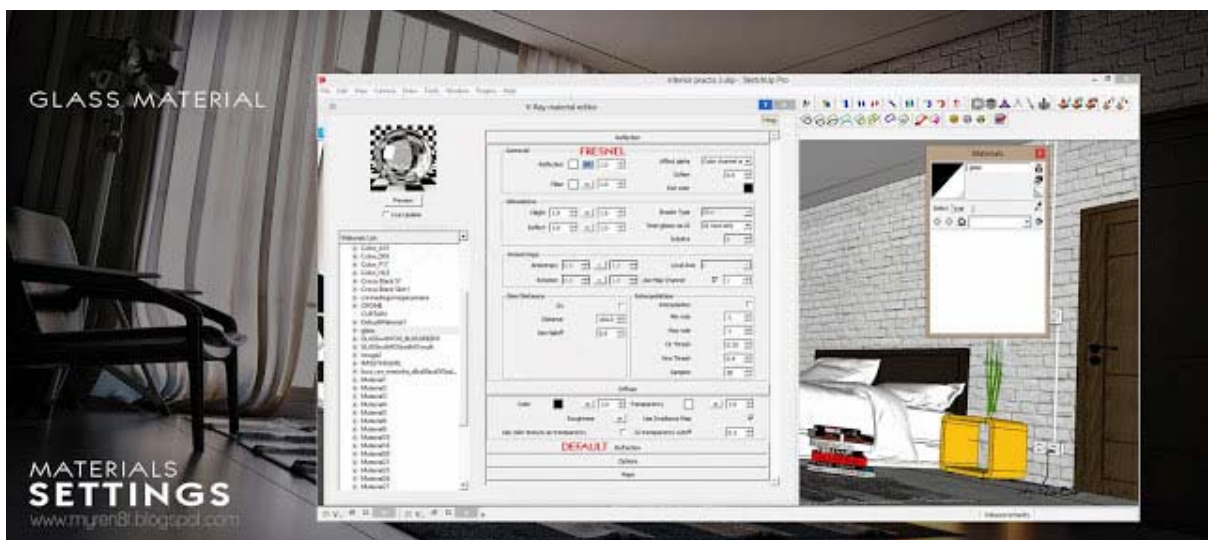
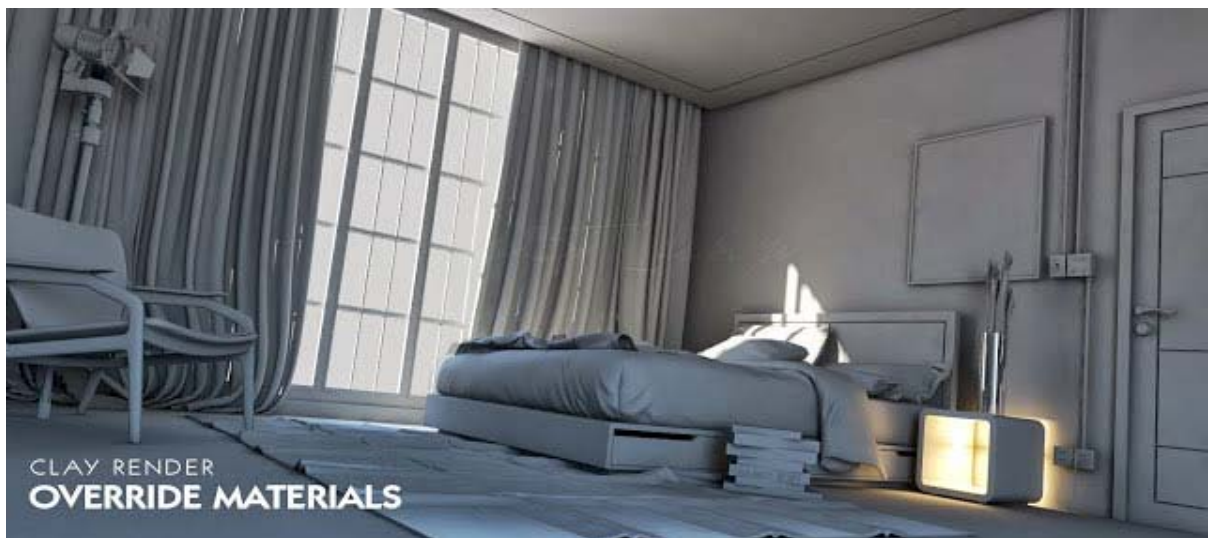
To

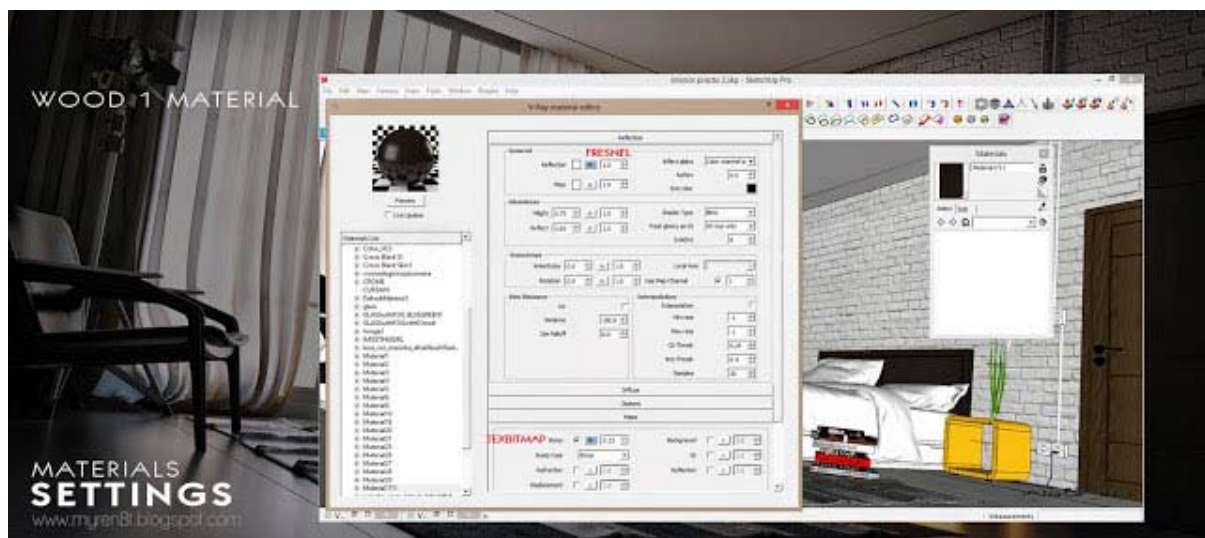
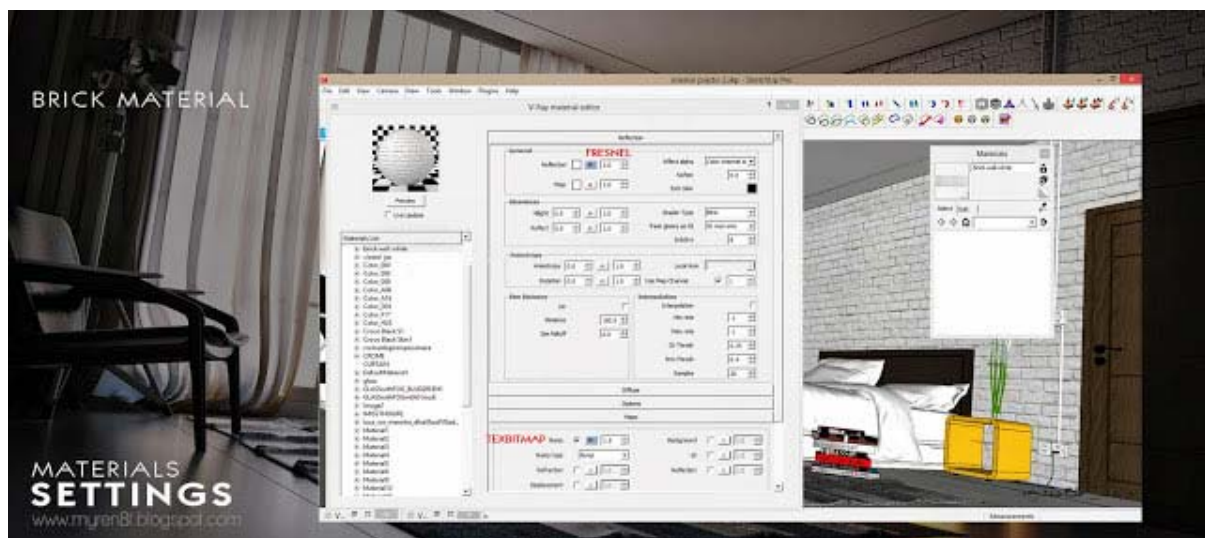
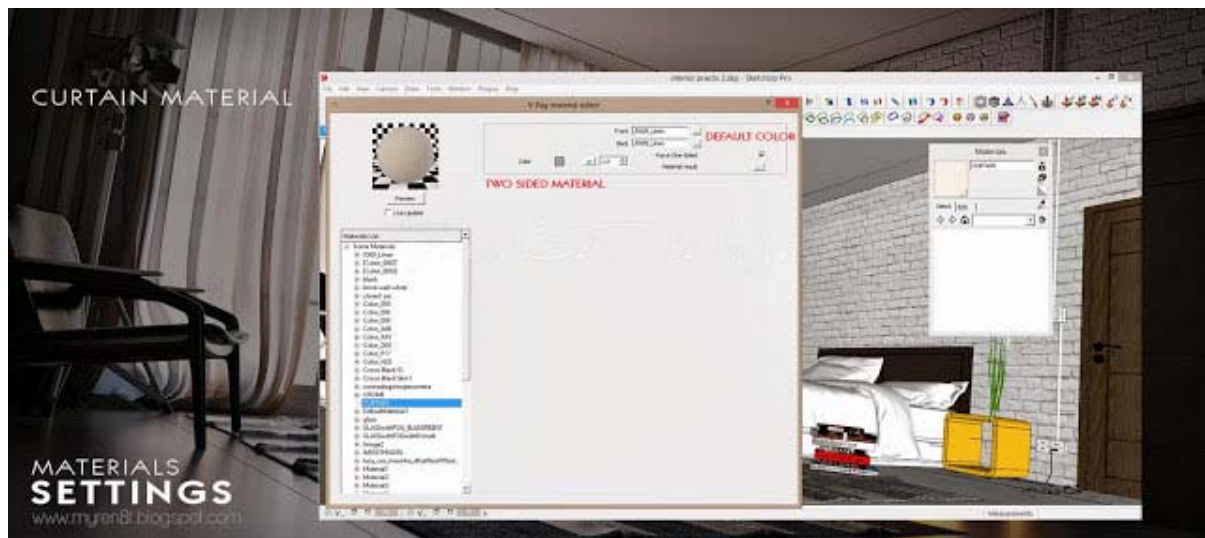
Reality

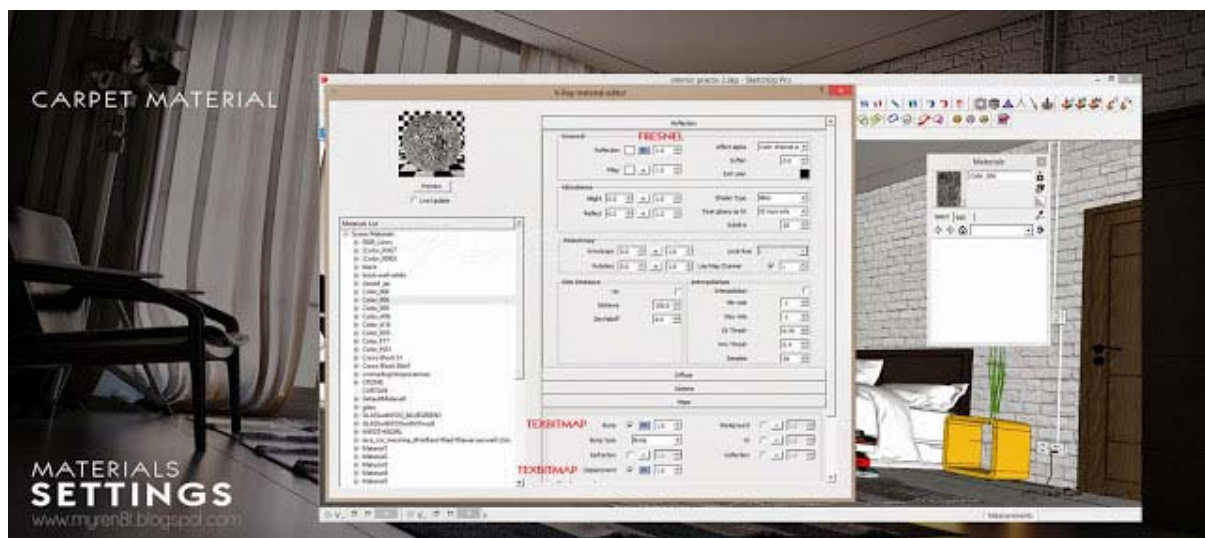
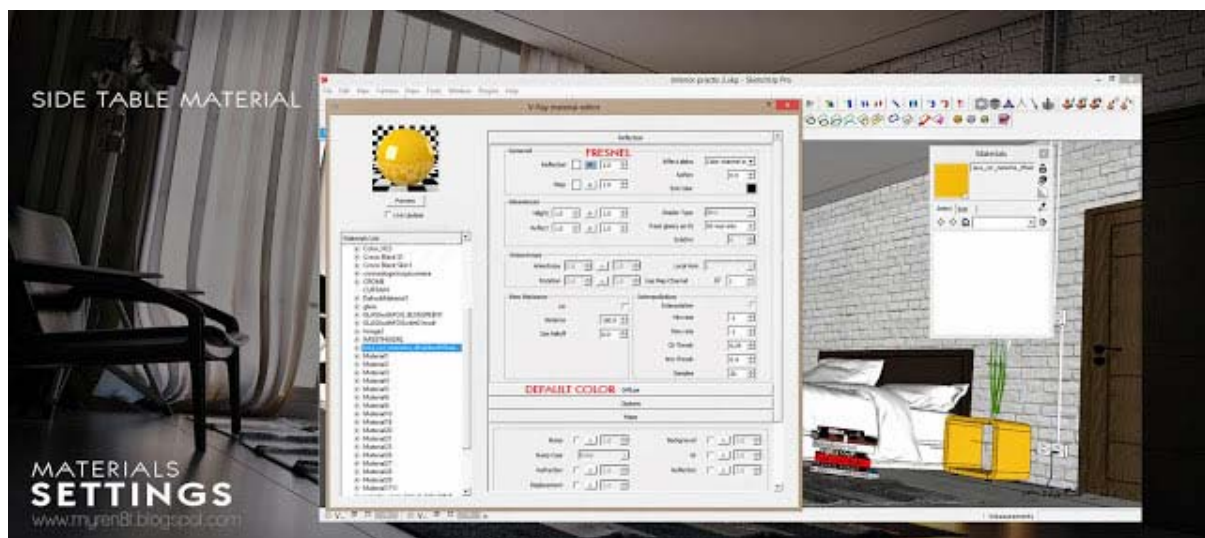
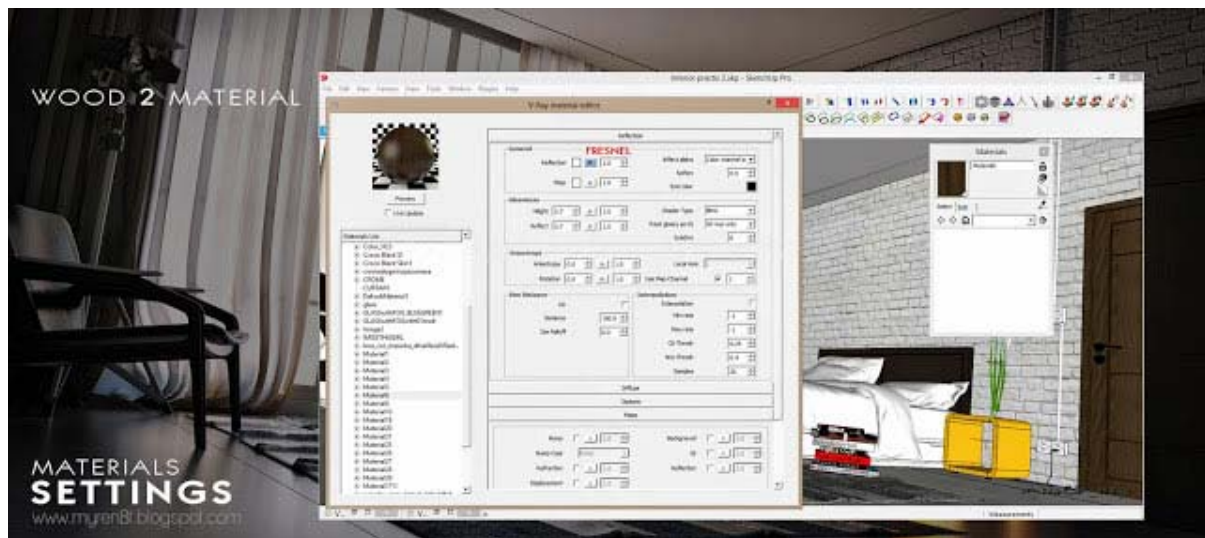
I sincerely thanks for Sketchup4architect and sketchup ur space for giving me opportunity to Make this and share my experience with you, hope this will be helpful for the newbie's GOD BLESS WORLD.

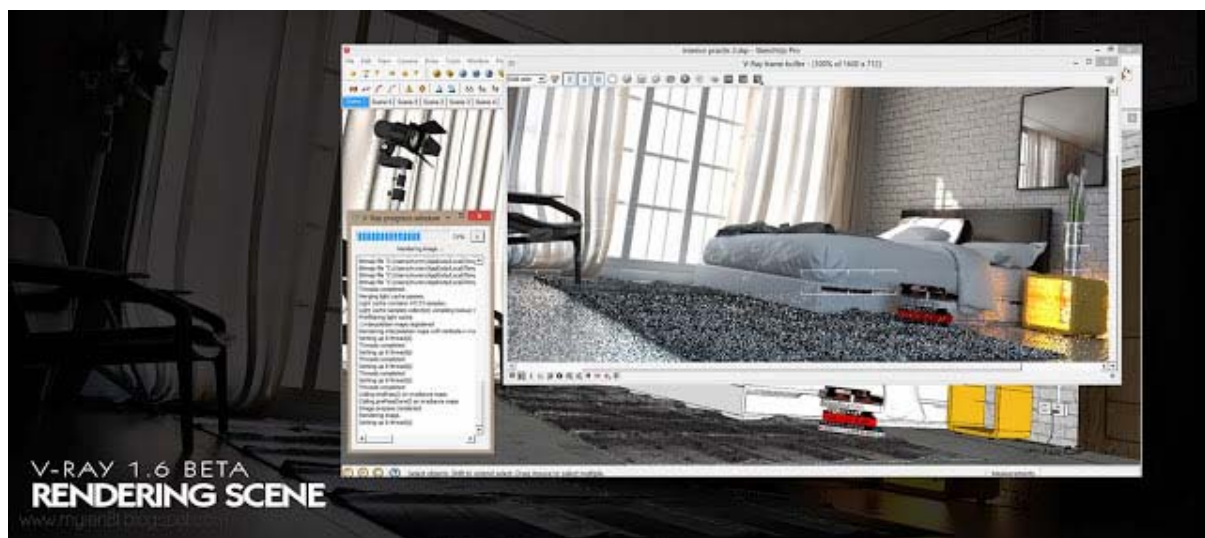
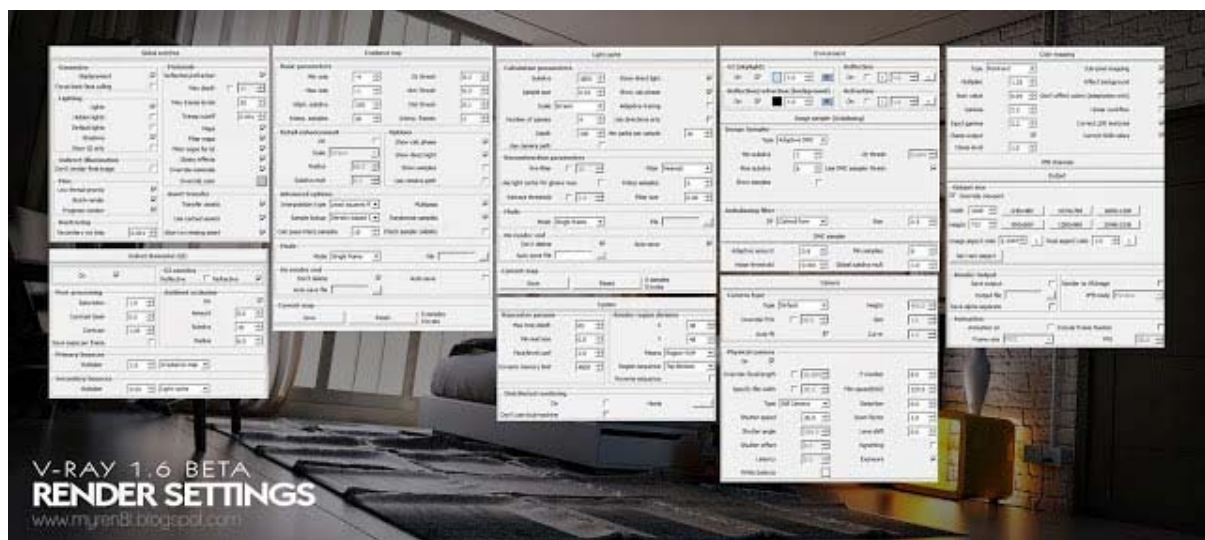
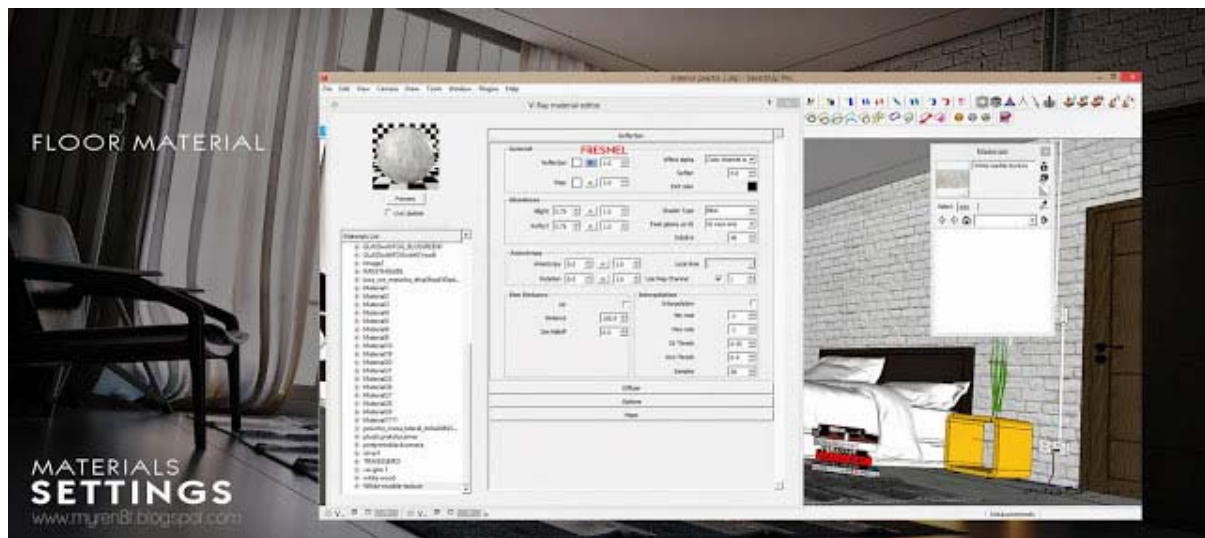
The making of Jas bedroom with Sketchup









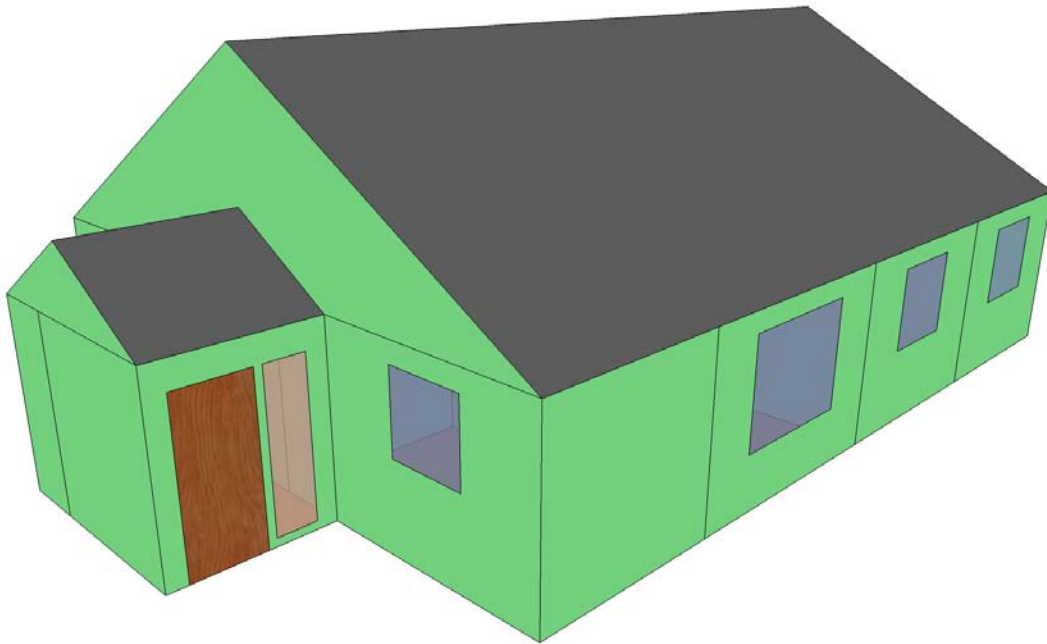




gModeller for Sketchup

With gModeller plugin, Architects, designers and energy modellers can utilize Sketchup to generate gbXML and IDF files which store the useful information further energy modeling.

This user friendly plugin is well versed with several energy and modelling systems. gModeller can be applied for executing precise energy analysis and early stage "what-if" scenarios which facilitates Sketchup to be applied to low carbon design intelligently and efficiently.



gModeller provides the following benefits to the sketchup users:-

- Transform the accessible SketchUp models into gbXML and IDF instantly with the auto convert tools.
- Categorize and label model surfaces and spaces.
- Keep the models well-suited with nearly all energy and 3D modelling systems through a variety of model exports.
- Import accessible gbXML models to analysis and edit in Trimble SketchUp without requiring any high license fees and unreasonable learning curve.
- Run an EnergyPlus simulation inside SketchUp.

https://www.youtube.com/watch?feature=player_embedded&v=T_9hyiC3IWk

Rapid Easy Design - An exclusive plugin for Sketchup

This plugin is compatible with sketchup 8 and sketchup 2013. The plugin will be useful to aid with the specification of three H furniture system products. By applying a series of programs it creates an model of individual product family.

It contains a set of tools to set up, layout and price an office furniture layout involving Three H Furniture Systems products.

RED can produce product models, assist with the arrangement and create a bill of materials containing pricing.

RED (Rapid Easy Design) is a plugin for Google SketchUp, which is designed to assist with the specification of Three H Furniture System products.

There is no library with RED. Rather, RED uses a series of programs; each of which model an individual product family. By selecting the attributes of the product you wish to create, one program can generate hundreds of thousands of individual products. Product changes are simple; click on the product, change its parameters and the new item is created.

A series of toolbars arranged with product line that contains a tool for each of the products in the line. The tool unveils a dialog box which empowers the user to set up the product according to their specifications. There will be a series of assistants to aid in positioning the several products into an arrangement. After the arrangement is finished, colors are attached applying Three H laminate and fabric selections.

Downloadable link: <http://www.three-h.com/RED/support/>

E-on Software unveils Plant Factory

e-on software, makers of the leading solutions for Digital Nature, announces the immediate availability of Plant Factory, its revolutionary new technology for creating and rendering high-quality 3D plants.

https://www.youtube.com/watch?feature=player_embedded&v=l8cIjMQJHeQ

Plant Factory is designed for the CG, SFX, Architecture and Gaming communities. It offers solutions custom-tailored for all audiences. The technology available in Plant Factory represents the culmination of e-on software's decades of expertise in the field of digital nature and delivers unsurpassed realism and performance.

With Plant Factory users can:

- Create any kind of vegetation, from simple grass to super elaborate hero trees
- Create vegetation by painting it, assembling simple building blocks, or completely graphing all plant properties
- Generate procedural geometry and materials of unlimited detail
- Animate all plant aspects using precise wind and breeze algorithms
- Export 3D vegetation to any 3D application as standard .OBJ, .3DS or animated .FBX
- Render stills and animations for compositing jobs or for use as billboards
- Expand their plant library through a dedicated 3D plant model store

Product Lineup: The Plant Factory product line comprises 3 main products, plus 2 specialty versions, each of which addresses specific customer needs and budgets:

Plant Factory Producer (\$1,495): for Production and SFX Facilities - Author fully custom intricate 3D plant models in concert with your production workflow. Hand-draw your plants, assemble pre-made components or build plants from scratch using the node graph. With expanded collaboration and composition capabilities, advanced artistic control, and unbelievable productivity, Plant Factory Producer is the perfect vegetation solution for special effects and production studios.

Plant Factory Studio (\$995): for CG Professionals and Small Studios - Designed for CG professionals and small studios, this feature-rich version of Plant Factory creates richly detailed custom plants. Hand-draw your plants, assemble pre-made components or build plants from scratch using the node graph. Produce high-quality 3D plants with unprecedented ease-of-use and export them to any other 3D application - including Vue EcoSystems.

Plant Factory Designer (\$495): Static Plants for CG Professionals - Designed for CG Professionals, Plant Factory Designer lets you hand-draw your plants, assemble pre-made components or build plants from scratch. Produce high-quality 3D plants with unprecedented ease-of-use and add them directly to your Vue Scenes and Vue EcoSystems or export them as static 3D meshes for use in other applications.

Specialty versions:

Plant Factory Artist (\$199): Plant Customization for Vue Artists. This entry level version of Plant Factory allows users of Vue Esprit, Studio and Complete to create amazing 3D plants by hand-drawing or assembling pre-made components. Plants can be customized using an extensive set of parameters and exported directly into Vue Complete, Vue Studio or Vue Esprit (with Botanica module).

Plant Factory Converter (\$99): Tweak Plants and Export as Standard 3D Meshes. Designed for CG artists using any 3D application (such as 3DS Max, Maya, Cinema 4D, Softimage, LightWave, Modo, etc). This very simple version of Plant lets the users purchase exactly the plant species they need, generate variations, adjust global settings and export as static 3D meshes.

A comprehensive comparative feature chart and full purchasing options are available on the product's website: www.plantfactory-tech.com/purchase

Plant Factory Bundles and Special Offers - For a limited time only*, customers can save up to \$700 on Plant Factory + Vue bundles.

- Plant Factory Producer + Vue 11.5 xStream: \$700 discount using the voucher code **xstream_producer**
- Plant Factory Studio + Vue 11.5 Infinite: \$400 discount using the voucher code **infinite_studio**

- Plant Factory Designer + Vue 11 Complete: \$200 discount using the voucher code **complete_designer**

Vouchers are only applicable to orders of full license for both Plant Factory and Vue. Users of e-on software's Vue 11 product line will also receive a discount. Users of older versions of Vue will get a further incentive to upgrade to Vue 11.

More information and a detailed price list is available online at: www.plantfactory-tech.com/purchase/#Bundles

A textbook for teaching SketchUp

We've spent a lot of time watching students of all ages take to SketchUp. Fearlessly, they dive right in, texturing polygons until they've created imaginatively robust landscapes, or even autofolding simple geometric structures into mind-bending helixes. Clearly, discerning kids aren't waiting for permission to explore and design in 3D. We've also seen insightful teachers recognize SketchUp's potential as a teaching platform, but for them jumping into a whole new way of learning isn't as straightforward.

This fall, [longtime SketchUp author Bonnie Roskes](#) has introduced a comprehensive (and rather large) guidebook for teaching in 3D. For middle and high school teachers as well as college and university instructors, [SketchUp 2013 Hands-On: Student Coursebook](#) bundles basic and advanced exercises, along with step-by-step modeling guides and over 50 "DIY" projects that can be assigned as homework or classwork. Bonnie's book also includes an Instructor Guide with all the solutions to these projects (so teachers can become 3D experts in step with their students).

SketchUp 2013 Hands-on covers all of SketchUp's tools and features with illustrated, step-by-step instructions. Need to challenge the more advanced modelers in class? Bonnie also provides an [add-on guide to 35 popular SketchUp extensions](#).

SketchUp 2013 Hands-on clocks in at 505 pages, so there is a handy PDF version (that is much less expensive) and a better choice for students using the book on laptops or tablets. Bonnie can set you up with an evaluation PDF, or help coordinate discounts for bookstore or group orders: just send her a note. Bonnie has been writing about SketchUp for about a decade now, so we can vouch for both her books and her enthusiasm for helping teachers use 3D to connect and engage with students.

Teaching Dynamic Components to the web : a SketchUp summer research project

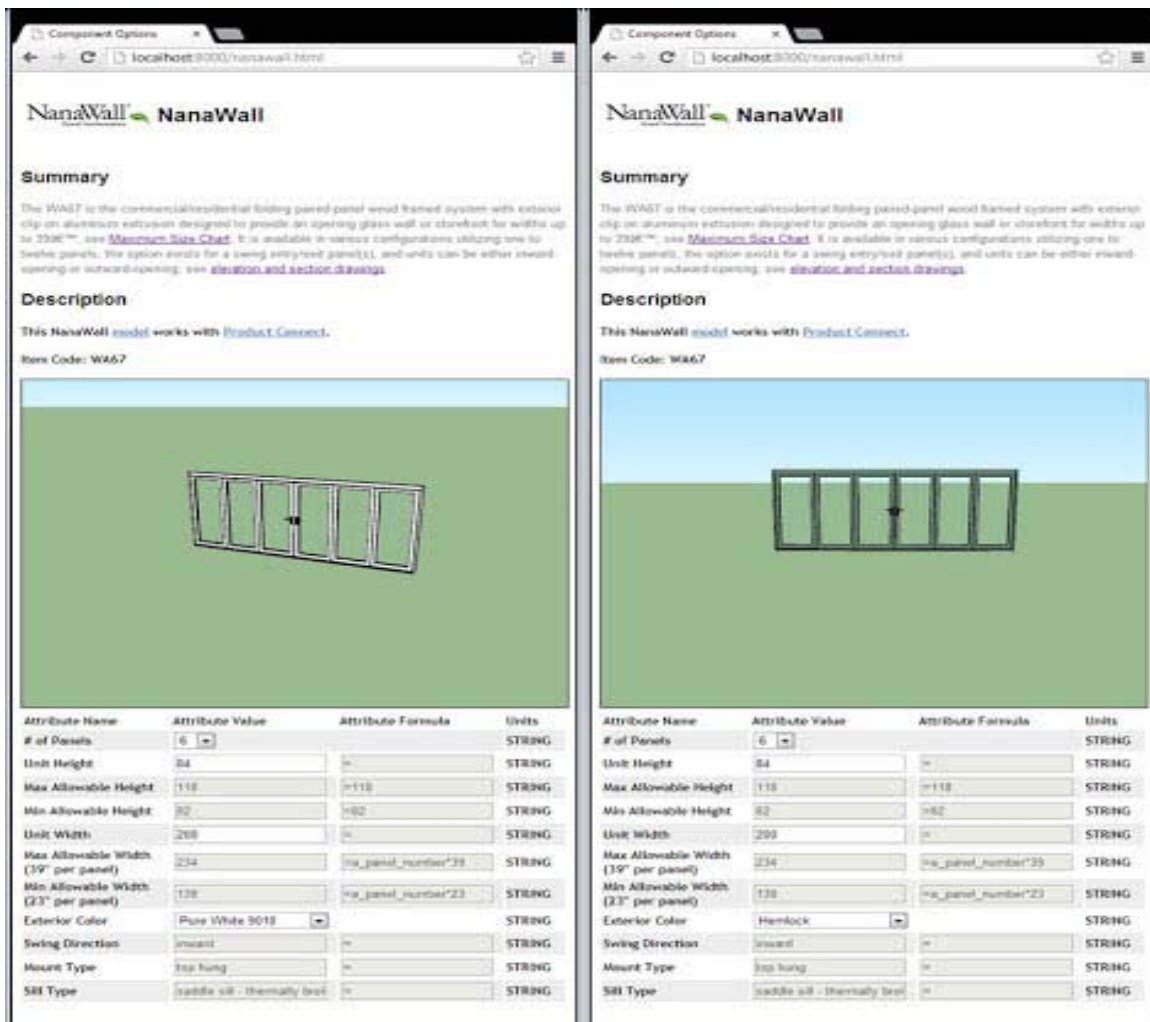
Hey there. My name is Brandon, and this summer I interned at SketchUp.

I attend the Colorado School of Mines and, as you might guess, I study computer science. Regardless of your major at Mines, all students are required to take a class on drafting. When I was offered a position on the SketchUp team this past spring, I was hesitant to believe I could accomplish anything in three short months. After all, it took me an entire semester to learn another 3D modeling program (which will remain nameless). Thankfully, SketchUp is as easy to use today as it was when I first opened it in middle school.

One of SketchUp's most powerful feature sets are [dynamic components](#), groups of geometry that have advanced functionality. To use a dynamic component today, you'd [download one from the 3D Warehouse](#) (or create it from scratch) and open it in SketchUp before you can change its parametric options. My summer research project was to investigate the feasibility of configuring those parameters from within a browser, before downloading the component to your computer. Another way of looking at it: can we teach a web browser to customize a dynamic component?

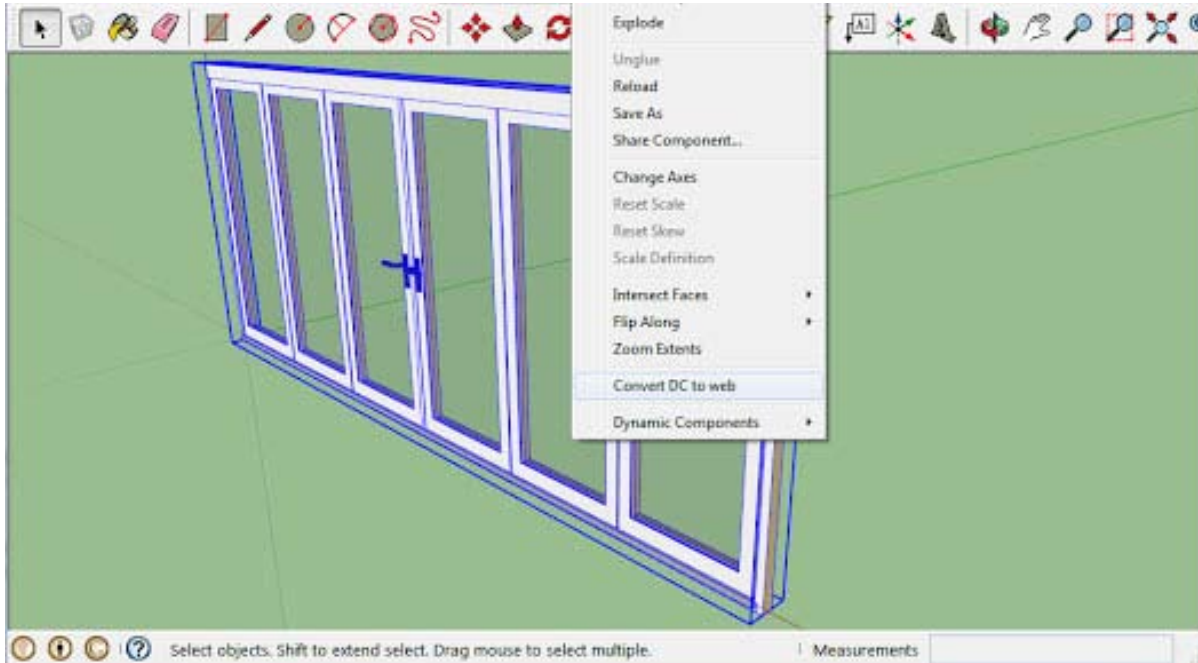
Last year, we unveiled the [SketchUp Showcase](#) which featured the prototype of a web-based model viewer that lets you to rotate and view models in a browser without having to install any additional software. It's still a prototype, but this viewer offered me a basic way to display a dynamic component online, and then redraw it as parameters changed.

I spent a great deal of time making sure that when an input parameter changed, the browser displayed component transformed just as it would inside SketchUp. To pull this off, I thoroughly investigated how dynamic components work. This involved hours of playing inside SketchUp on my own and bugging numerous engineers for help. Reading through the source code didn't hurt, either. This allowed me to properly rewrite the dynamic component functionality in JavaScript so that the behavior in a web browser would be consistent for users.



Proving that a web application could configure a SketchUp model was only one part of my research. I also had to investigate how to teach a web browser what a dynamic component is in the first place. You see, what our viewer prototype reads and displays is the geometry contained within a SketchUp file. But dynamic components are more than just geometry; they contain attributes like variable values and formulas.

To close this gap, I used [SketchUp's Ruby API](#) to create an extension that exports the component along with its dynamic properties wrapped up in a separate JavaScript object. The browser is then able to reunite the geometry from the exported file to its JavaScript counterpart, so the component can be parametrically manipulated. In a way, the extension acts like a moving truck. All the geometry gets packed and sent in one file, while all the attribute data gets sent in another. Everything ends up in the same place, albeit in pieces, and everything works just the same after being reassembled.



This idea of using technologies that require no additional software fits pretty well with SketchUp's development philosophy, and my research this summer hints at the potential of a SketchUp configurator for the web. For example, components could be viewed and modified on mobile devices, allowing people to share and collaborate more effectively. 3D Warehouse users might be able to manipulate components online, allowing them to find the right modeling asset even faster. Reporting tools could be built in to model viewers, allowing real-time cost analysis, helping designers keep projects on budget and on track.

There were many other highlights from my summer at SketchUp: helping launch SketchUp 2013, learning a ton about LayOut from architects and designers at the AIA National Convention in Denver, and mastering high-tech hardware configurations via our office espresso machine and 3D printer. All in all, I feel pretty lucky to have joined Trimble, and I'm curious to see what's next from the minds behind SketchUp.

Advent introduces Artlantis 5

Abvent has announced the launch of Artlantis 5, the latest version of the fastest, stand-alone 3D rendering application developed especially for architects and designers. Artlantis 5 combines the most advanced and efficient tools for fast and easy photo-realistic rendering of 3D projects. New features include an entirely redesigned interface; a new Artlantis Media catalog and InApp store; and a free iVisit 3D option for panoramas and VR objects. These and other new features announced with the launch of Artlantis 5 make it one of the fastest, most advanced rendering applications available for architects and designers on the market today.

New features in Artlantis 5

New Interface: The Artlantis 5 interface has been completely redesigned to take advantage of the benefits today's wider screens offer. Artlantis 5 optimizes the project's display, and offers an even larger preview size. Artlantis 5 makes it easier and more comfortable than ever to work on projects: standardized on Mac and Windows, Artlantis 5's interface is based on a single, clear window, adjustable and easy-to-use. With its inspectors grouped at the top of the screen, the working window is more readable - displaying the lists on the left and catalog at the bottom of the screen. As a result, the number of clicks needed to access the desired feature has been reduced considerably. To meet everyone's own needs and work habits, Artlantis 5 offers a new option to filter the list to optimize the content.

New Media Catalog | InApp Store: Using the new media catalog is fast and efficient. Its organization into categories and subcategories makes choosing media very fast and easy. For better use of workspace, the catalog window can be moved independently onto a second screen if desired.

Artlantis 5 also includes new shaders. Some are optimized with additional parameters like relief mapping to better simulate the depths of surfaces. In addition, non-repetitive tiling shaders and multi-texture natural shaders simulate natural surfaces like ground, grass, and water.

The Artlantis 5 revolution would not be complete without the InApp Media Store offering more than 5,000 objects and shaders of all kinds for purchase. Users can enrich their Artlantis Media catalog at any time by logging in and downloading new Media that are automatically placed in the correct categories and subcategories. Artlantis 5 includes a Media converter application so that users can convert their own library or previously purchased Artlantis Media CDs into their new Artlantis 5 catalog.

Free iVisit 3D Option for Panoramas and VR Objects: Create a realistic virtual tour inside your project with multi-node panoramas using iVisit 3D. Artlantis 5 automatically creates everything needed to view the panoramas. Based on Flash™ technology, the player is free of charge and viewable within most popular web browsers. An iVisit 3D Builder App also allows users to convert and share these panoramas on an iPad, iPhone or Android device. iVisit 3D is now available in a FREE download from Apple's App Store or Google Play. In addition, iVisit 3D VR Object allows you to manipulate and move a scene in 360°. An automatic feature, simply select the number of images to calculate horizontally and vertically to ensure a smooth animation.

Pricing and availability: Please visit www.artlantis.com for details on pricing and availability in your market!

Quickly and Easily! An exclusive look at Artlantis 5! - For an exclusive first look at Artlantis 5, sign up for the free webinar taking place on Wednesday, September 4.

RaySupreme v1.1 Released for 3D Modeling, Rendering

RaySupreme v1.1 is a major upgrade to BrainDistrict's 3D software, and includes new technology (text-to-3D) that enables users to create 3D objects and scenes by typing text via their keyboards.

The new version of the software includes up to 10 new modeling tools; Viewport background references; true point and spot lights; a revamped render dialog; global cut/copy/paste functionality for geometry; new OBJ export functionality; render quality improvements; and bug fixes.

It is available for Mac OS X, Windows 7/8, and Linux.

For more information, visit BrainDistrict.

Connect a laser distance meter and create SketchUp models

My name is Bert van't Veer and I am the lead developer of Yuzu, a software suite by Picard Innovations aimed at professionals in the field of measuring spaces and buildings. Part of this platform is an extensive SketchUp plugin which allows you to connect a laser distance meter (Leica only for now) and create SketchUp models while taking measurements in real time. Yuzu also offers a set of useful tools to automate common tasks and get things done more easily. Eventually this will be a commercial plugin, although no pricing has been set yet.

Yuzu is designed to aid in Architecture, Surveying, Interior Design, Engineering and Construction, Project Development and Facility Management. We think the tools can be useful in other areas as well, such as game development and realtime presentations, as it allows to generate continuous building models from simple floor layouts. In the near future we will also support generating certified building reports from models created with Yuzu.

For now, Yuzu only supports the Windows version of SketchUp, however a MacOS driver is in the making. Yuzu will work with both SketchUp and SketchUp Pro 8.0 or higher. Only metric units are supported at this point, so please select a corresponding template (meters/millimeters).

Here are some of the basic features Yuzu offers:

- Getting measurement data directly from a Leica Distometer with Bluetooth.
- Create 3D floorplans by drawing simple layouts with common SketchUp tools.
- Punch holes for doors and windows and create columns by measuring offsets.
- Measured extrude function.
- Angle measurement.
- Distance measurement (move objects by measuring the space between them).

We are currently releasing the first beta and we would very much appreciate the Archinect community to have a look at it. Many functions are still incomplete or missing, but we hope you get the idea of what you can do with Yuzu. We are looking forward to your feedback so we can improve Yuzu to meet your needs.

The download can be found at <http://labs.picardinnovations.com>

Milling Tools plugin

Creates Dog-Bone fillets on picked faces.

Based a request for a milling tool plugin: SketchUcation Thread.

Creates Dog-Bone fillets on the faces you click on.

- Use VCB to set tool radius.
- Use VCB to set arc segment quality. ("8s" will make arcs based on circles with 8 segments)

The face clicked on should not be connected to any other faces or edges.

Menus & Toolbars

- Tools » Milling Tools

Related Links

- [SketchUcation Forum Thread](#)
- [BitBucket Repository](#)

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.