

# SKETCHUP-UR-SPACE

Issue - November, 2014

www.sketchup-ur-space.com

## COVER STORY

Digital modeling programs & new open source tools are streamlining 3d printing process  
– **Claudio Cosentino**

## TUTORIAL

An exclusive tutorial on Mystique FX with 3ds Max  
– **Presented by Salah Hussein 3D Artist at Dragon FX Studio**

## INTERVIEW

Interview with Fred Abler, CEO of Form Fonts, a go-to subscription based collection of 3d models and textures

## ARTICLES

How SketchUp Originated and Activated

How SketchUp designers should handle 3D mouse

Sketchfab and Fule3D make joint venture for publishing 3D Model in Web

## NEWS

3D Printed Jewellery Collection for Men only

Fast style of SketchUp 2015 and its working talent

3D Model and Gadget that Matters

## BLOG

Perform the renderings of the SketchUp 8, SketchUp Make & SketchUp 2013 models with Renditioner Pro V3

What are the best things to do with Sketchup

Some useful sketchup tips on sketchup sandbox tools







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## A Letter to the desk of the Editor

The Christmas is approaching nearby and all the people are in festive mood. Keeping this in mind, we have published a specially designed Christmas issue for our readers.

In this issue, there will be an exclusive as well as informative cover story written by Claudio Cosentino, the renowned production designer and teacher from Italy. In this cover story, Mr. Cosentino focuses on the impact of latest 3d printing technology together with industrial, medical, building and space for creating a digital model through a 3d modeling software like sketchup.

In article section there exists five exclusive articles. Out of five articles, four articles are written by the editorial team of the magazine and one article is written by Fred Abler, Ceo of Form Fonts.

The first article is about some useful tricks and tips on various sketchup tools which can increase the speed of 3d modelers to a great extent.

The second article features Form Fonts, go-to subscription based collection of 3d models and textures which can be used with sketchup and various photo-real rendering programs.

The third article highlights how architectural design is evolved through digital sketching pattern with the use of some useful digital sketching tools like sketchup.

The fourth article is written by our editorial team which explains the importance of 3D mouse to the sketchup and 3d designers as well as its various applications.

The last and final article is about how sketchupfab and Fule3D have tied a knot for uploading 3d models in web.

In tutorial section, the most promising 3D artist Salah Hussein who associated with Dragon FX Studio, has presented an exclusive tutorial on Mystique FX with 3ds Max. This FX is Procedural and it can be applied to any mesh as per your choice.

In another tutorial, Warunyoo Songkran, the experienced environmental engineer, shows how sketchup dynamic components greatly facilitate the construction design process.

In interview section, the team of sketchup ur space has interviewed Artur Coelho, an ICT/arts teacher as well as sysadmin, researcher, amateur artist and science fiction fan from Portugal. With this interview, Mr Arthur briefly explains how sketchup can be integrated into the ICT curriculum.

In blog section the readers will get lots of sketchup tips and in news section there will be several current updates on sketchup world.

Hope this issue will contain the items of great interests to our readers.



Best wishes

**Rajib Dey**

Editor-in-chief

For any feedback and query please mail us at [rajib@sketchup-ur-space.com](mailto:rajib@sketchup-ur-space.com)

## Interview with Artur Coelho - an ICT/arts teacher as well as sysadmin, researcher, amateur artist and science fiction fan from Portugal

Interviewer : Rajib Dey (Editor-in-chief)

Please introduce yourself to our readers.

I'm an elementary school teacher in the Portuguese educational system. I teach introduction to communication technologies (ICT for short) to pupils in the 12 to 14 year old age range. Taking care of the school's computer systems is inherent to my job. I came into ICT via the arts, beginning my teaching career as an arts teacher, and I love to do visual experiments with a range of digital technologies from 3D to databending techniques. When I took my master's degree in educational science I was determined not to do a traditional fieldwork. I concentrated instead in the intersection between creativity, art class and digital technologies, using 3D to empower my students ideas. I was very lucky to have a perceptive thesis advisor, who showed me a lot of 3D technologies that I wasn't aware of, such as VRML. Incidentally, he was the one that challenged me to take up Sketchup for a spin to see if it was useful. My thesis is long finished, but I haven't stopped working with 3D in class and sharing my experiences within academic settings, generally in educational science conferences. I was very honored this year to be a part of Lisbon Mini Maker Faire, portugal's first maker faire, showing my pupil's 3D work to more than 10.000 visitors.

You have huge experiences teaching in 3D. How do you integrate sketchup with your profession?

First and foremost I had to find a way to integrate the tool into the ICT curriculum. Sometimes we use 3D freely with students in interdisciplinary projects, but most of my teaching is done in a specific class. After a couple of trials and experiments I've assembled a learning path for the pupils that allows me to use creative technologies, giving my students the opportunity to explorer several programs and techniques, respect curricular goals and guidelines. My programmatic approach uses two semesters. In the first the focus is in 3D modeling and animation, the second focuses on image and video editing and introduction to programming. That's where Sketchup comes in. The 3d aspect uses three main apps: Doga L3, an old but fun japanese program that teaches basic modeling concepts and delights my students with creating robots and fun vehicles, Bryce for rendering and simple animation, and, of course, Sketchup. Sketchup's simple interface makes it easy for young children to use, and I can teach them to go from the basics to more elaborate and professional work. Since my pupils are very young and part of a generalist, elementary curricula the goal is not to make them experts in these technologies, but showing them that they exist (yes, they are that young), and how to work with them, using them in project-based learning. Essentially, I use my classroom to give them an early start. And sometimes I get real lucky and spark some very promising, talented pupils. This is one of many approaches to teaching ICT. The program is open-ended. There are specific goals to achieve but the teacher is free to choose learning paths. That means that there are a lot of experiences we can give our students. Some still maintain an office-style curriculum, focused on word processing and presentations, but a lot of my colleagues are actively working with programming, multimedia, robotics and arduino. Our goal is to empower our students, showing them that they can use technology for much more than social networking and pop culture consuming.



teaching sketchup to ICT teachers (a first here, i believe) (i'm the guy in the red t-shirt)



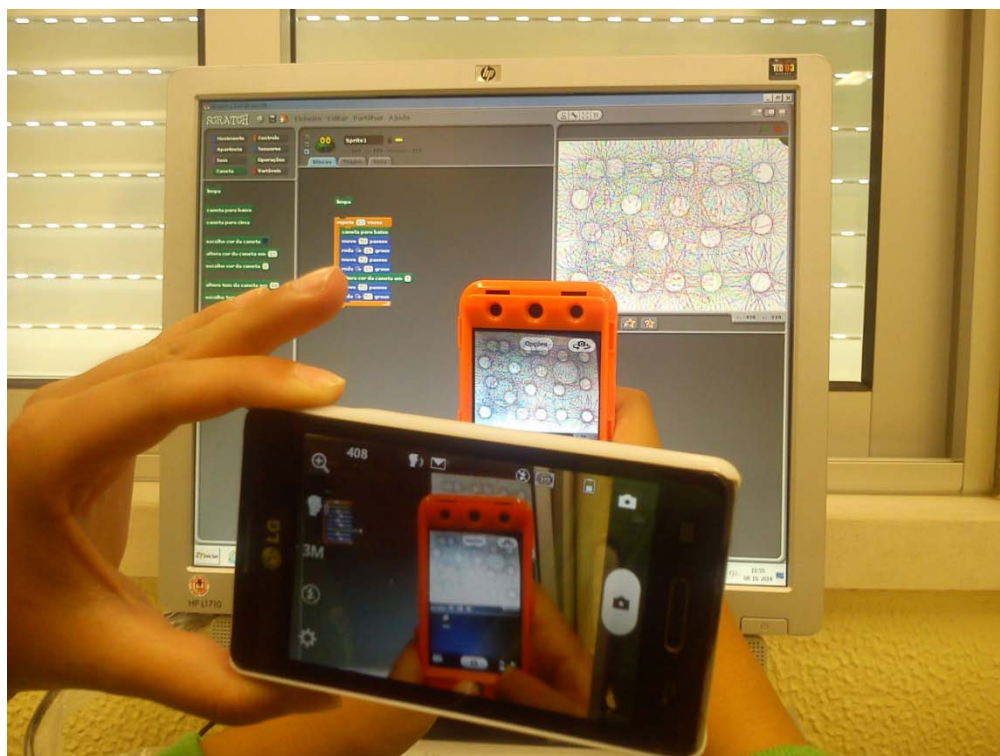
### When and how did you discover sketchup and start to use it in your professional life?

My first forays into Sketchup were a bit disappointing. Used to other simple, non-professional modeling apps, my first adventures were, shall we say, better to be forgotten. But, as I've said earlier, I had (and still do) a very prescient thesis advisor who suggested to learn a bit more and try to see if I could take it into my classroom. After getting used to it, I was amazed by how easy it was to create with Sketchup, how open-ended and flexible it is. I've become addicted, using it to teach 3D but also in my personal projects. But, essentially, I'm a teacher and my focus, Sketchup wise, is in using it as a tool to spark my pupils creativity and giving them a glimpse of professional work. I repeat this concept a lot, I know, but I do believe it's essential for teachers to be able to spark student's creativity and other abilities with digital tools if we wish elementary education to continue to be relevant in a pervasive technological environment.

### How do you evaluate sketchup as a most useful teaching tool?

Not as most useful. As extremely useful! It's easy to use and intuitive, which means that the learning curve from basic introduction to more advanced use is very fast. Young children do not get dispirited and abandon the tool for being too difficult for them. In education terms, it's also a great way to integrate knowledge. Maths, geometry and Visual Arts concepts are woven into the 3D modeling process and I go to great lengths to point out to the students that the abstract mathematical concepts that they usually find boring and difficult are actually what makes working in 3D so fun. Also, ideas such as light, coloring, textures and so on, with at best they are used to think about in bi-dimensional ways in art class, are an integral part of the process of creating a model. Remember, I'm not a professional 3D teacher and my pupils are part of the elementary schooling system, so here the idea is showing them that the compartmentalized knowledge they acquire in different classrooms can, and is, integrated and useful in other settings.

Then, of course, there's also the loftier goal of sparking their abilities. In this way Sketchup is also invaluable. It's, as we all know, a very capable and rigorous tool. With it students abilities can be nurtured in a more professional environment. That is very important for those of them that may, in the future, choose professions that are heavily dependent on 3D. It's one thing to show all of them that 3D is fun with simple programs that make it easy to create, but a necessary next step is teaching them a bit about professional workflow, project making and rigorous modeling. This, of course, is not for all, only for those that show more promise in 3D. The basic premiss of this approach is giving students a glimpse of a wide range of technologies that they may use in empowering ways. I find a lot of promising 3d modelers, but also a lot of very creative programmers or video editors. And, of course, the main goal is not to teach specialized knowledge, but to make them adept at problem solving with digital tools.



introduction to coding and a fun classroom environment.

### Can you recommend any good book on sketchup? (Written by yourself or others)?

Ah, this may seem a bit shocking for readers of this magazine. I know there are a lot of books on Sketchup, a lot of them very good, but for me the best was Aidan Chopra's Sketchup for Dummies. Yes, I've just wrote that. Yes, I've chosen a *for dummies* book as a great resource. And, for me, it was. I'm self-taught on Sketchup. I've had no teacher to show me the ropes and training me with a sequential learning approach. I had to rely on the global community. Lots of great YouTube videos out there, by the way. Chopra's book enabled me to sequentialize knowledge about Sketchup's tools and workflow, and from there establishing a learning path that makes it easy for my students to learn it.

**There are lots of institutions which provide training on sketchup & other 3d modeling software's. Can you suggest some institutes where people can undergo training at minimum cost?**

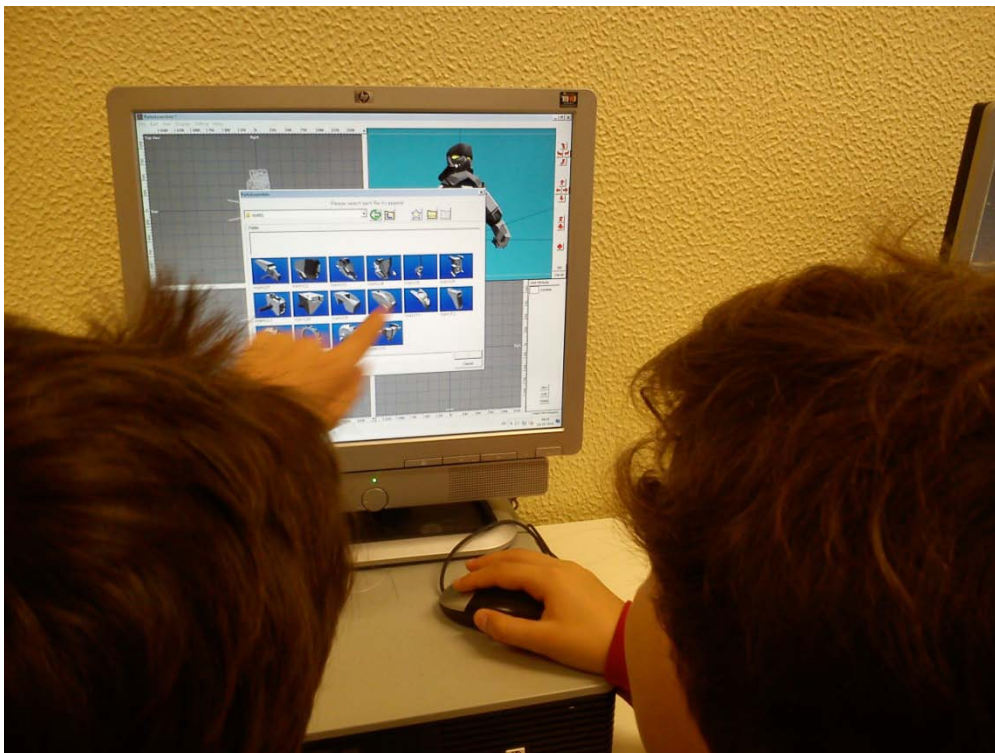
Honestly I can't answer this question easily. One of the reasons for being self-taught is that I was unable to find a training venue for Sketchup in Portugal. There are a lot of CAD and 3DS courses, Blender, even. Mysteriously, very little on Sketchup. Then again it is part of the secondary and university curricula, so I suppose over here the need for basic training in this tool is minimal. Lately I've become aware of Universidade Nova de Lisboa CITI free courses (free as in not belonging to a specific course, alas) on 3D with Blender (<http://www.citi.pt/cursoslivres/3d/>) and Odd School, which offers masterclasses and specific courses on a wide range of 3D and digital imaging practices. Not cheap, but a very good investment for aspiring professionals (<http://www.odd-school.com/pt>). For portuguese teachers Anpri (the informatics and ICT teachers association) is organizing Sketchup and general 3D courses and workshops as part of teacher's professional development (<http://www.anpri.pt/>).

**What is your most successful project where you implement sketchup?**

ICT in 3D (<http://3dalpha.blogspot.pt/>), which is the formal name I gave to the umbrella project that encompasses classroom activities and interdisciplinary projects using 3D modeling and animation. Sketchup is wildly popular with my students and activities using it (free modeling, architectural patrimony recreation, project-base work) became a very important area of this project. ICT in 3D is, essentially, using 3D and multimedia technologies in ICT class... and beyond. We're now looking into 3D printing in educational settings, which will give a whole new dimension (pun intended) to Sketchup in class.

**Why 3d visualization is important in architectural and construction design projects?**

Not being an architect or engineer I cannot give a good answer to the second part of your question. But academic ideas kick in and my answer is: 3D visualization is important because of visuo-spatial perception. Loosely, without getting into too much detail, visuo-spatial perception is about how we create accurate abstract spatial representations, how we conceptualize and think in 3D in our brains. Among other things, it allows us to mentally visualize tri-dimensional abstract models of what we want to create. Coming from art education as I do, it's a bit shocking to see how most, if not all, of art projects and activities are based on the plane and bi-dimensional visualization. This means we could do more to enhance visuo-spatial perception in our students. Of course, we do live in a 3D world, and children do interact with a lot of 3D content, but there is little work done bridging natural or playful interaction and specific abilities with professional value. This is where 3d tools become important. My very first lessons with students center specifically on this: how to mentally visualize shapes and bridge the gap to the bi-dimensional representations on screen, showing them that they can't rely on a single point of view and have to work with several perspectives and planes of representation. To put it more simply, we live in a 3D world, but in school our students are not used to think in 3D. Visualization, whether with Sketchup, gaming environments such as Minecraft, or other tools is doubly important: enhances cognitive abilities in visuospatial perception, and allows those that may follow careers in areas that are very dependent on tri-dimensional visualization to learn how to mix paper and screen visualizations with mental abstract representation.



teamwork and fun ways to learn 3D



**The latest version of Sketchup is Sketchup 2015. Please provide your feedback on this latest version of sketchup.**

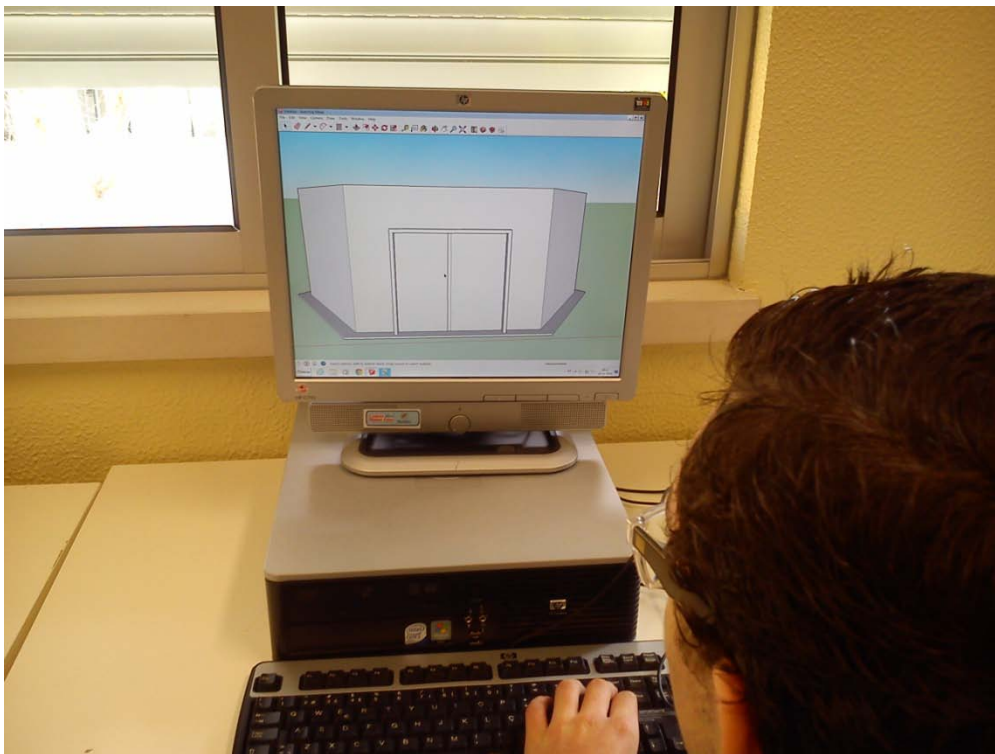
I haven't upgraded Sketchup at my school yet. I generally do it in the summer, when there's a lot of free time to do maintenance and upgrade my image discs to replicate throughout the school network. I've started to use it on my personal computer and it seems to me that it maintains the ease of use and powerful workflow that characterizes Sketchup. And I do have a curious anecdote: teaching 3D to ICT teachers in a workshop, one of them asked me if he could draw slanted surfaces (as in polygons not drawn on horizontal or vertical planes). I began to answer him no, but then I noticed the new rotated rectangle tool on Sketchup 2014...

**What suggestions do you want to provide to the professionals who are engaged in teaching with sketchup?**

Share. I've learned a lot with videos and tutorials shared by sketchup users. My very simple, elementary introduction materials are also online. Whether you teach in a professional development environment or on a more general educational setting, sharing enables the community to learn and develop more their skills. Sharing tips, tricks and approaches enables all of us to create more and have more fun with Sketchup.

**Please provide your feedback on our magazine?**

Added it to my rss feeds! It keeps me up to date on a lot of sketchup and general 3D news that normally I would not have access to in the other channels I follow. It has a very interesting mix of sharing user and creator experiences, general news and tool analysis, which is great to keep on the radar for future reference and getting heads up on new ideas.



gifted students love to expand their imagination in sketchup

# Digital modeling programs & new open source tools are streamlining 3d printing process

Claudio Cosentino

*Hello I am Claudio Cosentino, I am a production designer, a professor of Scenography at the Academy of Fine Arts of Catanzaro.*

*In an age where it is increasingly necessary to use digital modeling programs, and new open source tools are developed ever faster, the 3D modeling also invades other sectors in addition to those of the graphics, such as industrial, medical, building and space, through the use of 3D printers. Natural evolution of printing in two dimensions, 3D printing allows you to have a real reproduction of a digital model, created with a 3D modeling software.*



scenography created by art director **Marco Trentini** for the film "The Decameron" director **David Leland** 2005





model 3d whit Sketchup 8. by Paolo Daniele. student of 3rd year of Production Design. Academy of Fine Arts of Catanzaro, Italy.

we started a few years ago, the courses in 3d with the use of sketchup. so in addition to modeling, rendering and animation, we became interested in 3D printing, producing a plugin stl files, compatible with a 3D printer trade. This process for the preparation of files, we realized that: the way we design our models in sketchup had to follow the strict rules imposed by 3d printing. do not let double lines, no double intersected faces that are not continuous and connected between them. and a great cleaning of the models, very often all this attention is not enough, how do we know where we have made a mistake? Fortunately for us, helps us a very interesting plugin, which saves us a lot of time to research the error. but the most important thing is to acquire a new design method with sketchup, with models that do not have to submit internal faces hidden, or lines in excess beyond that necessary, and all models must have filled the voids and coincident, in the end you have to consider that the molded object must be closed, like a box, that is, must have a minimum thickness, that the printer interprets as a part to be printed to give a real thickness.

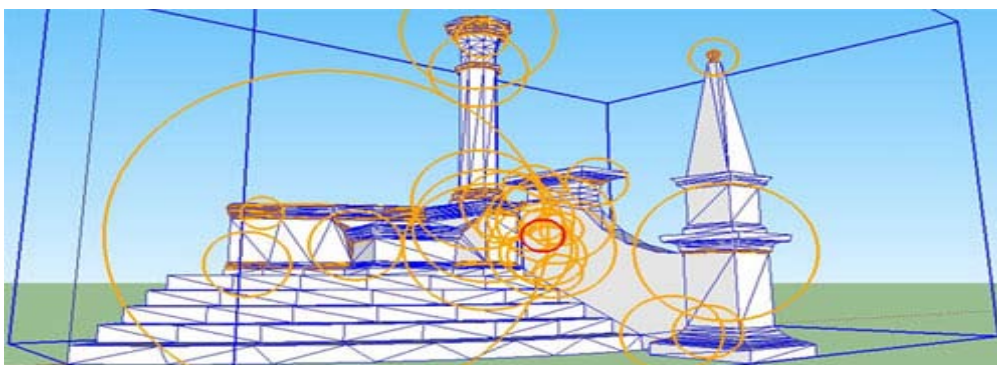
To get our solid printable, consider a design method different from the traditional modeling, through these simple steps:

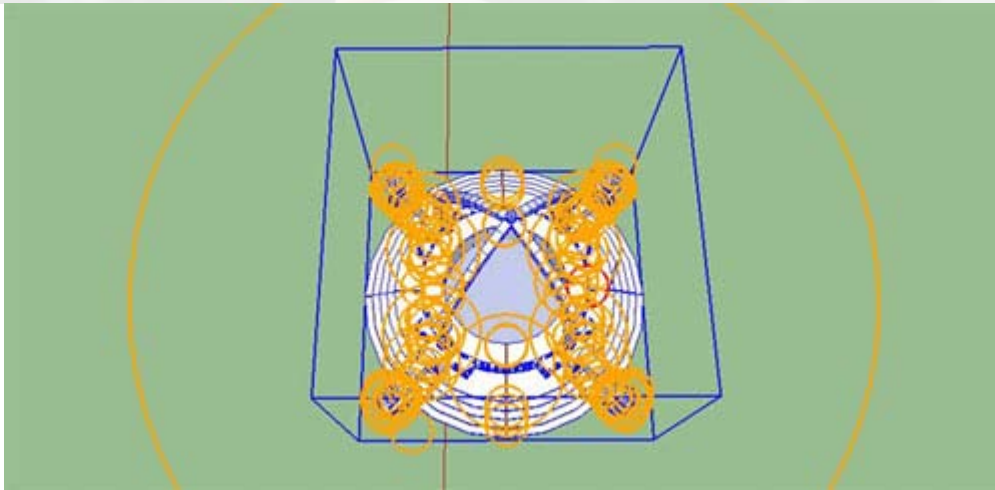
- Make sure that the 3D model that has no point or line unrelated to his geometry.
- Combine and intersect any faces or lines for the purpose of cleaning the model.
- The correct model for any errors will be recognized as solid from SketchUp plugin and software slicing needed for 3D printing.
- Check that the model is internally empty, uniform and closed, their faces clear turned outward.
- Install within Sketchup plugins needed for export .stl format recognizable by other printing software.

Here are some examples for the creation of a solid:

A plugin that helps a lot to detect problems inside and outside of the solid is "Solid Inspector." by ThomThom

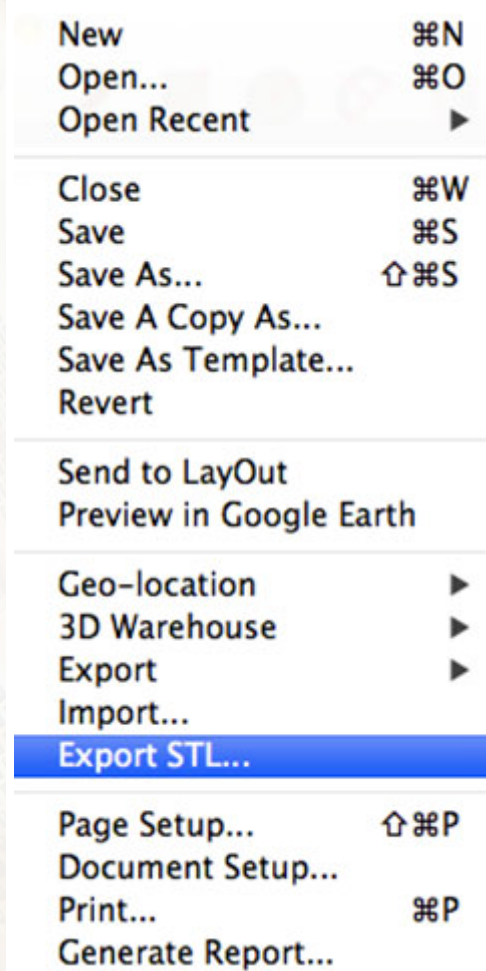
You can download the plugin at this link. <http://extensions.sketchup.com/it/content/solid-inspector>



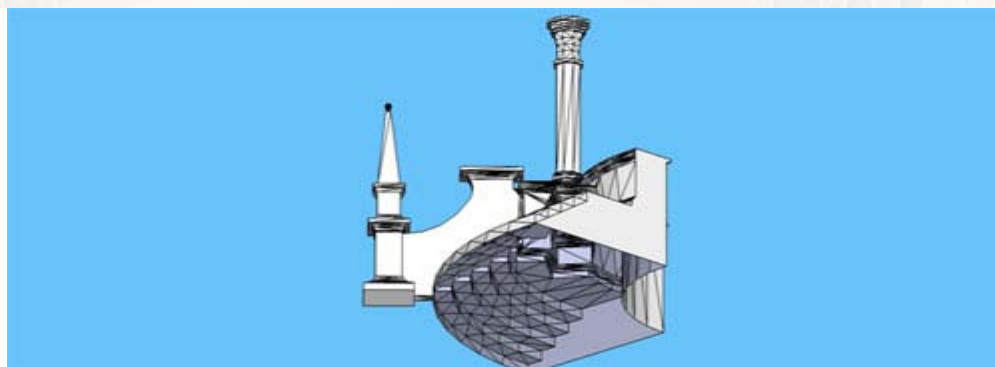


in case of errors you will notice a red circle on the element to be corrected.

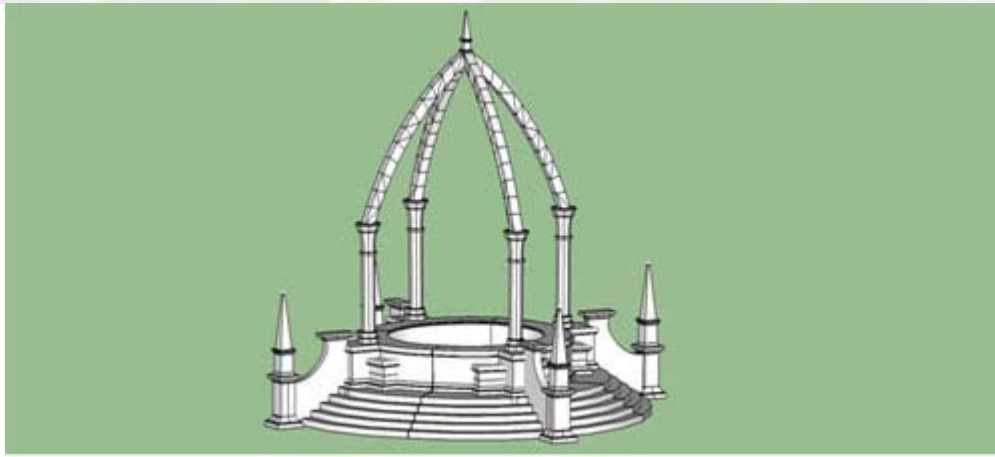
After checking that all the faces are closed and there are no errors proceed exporting the model in STL format



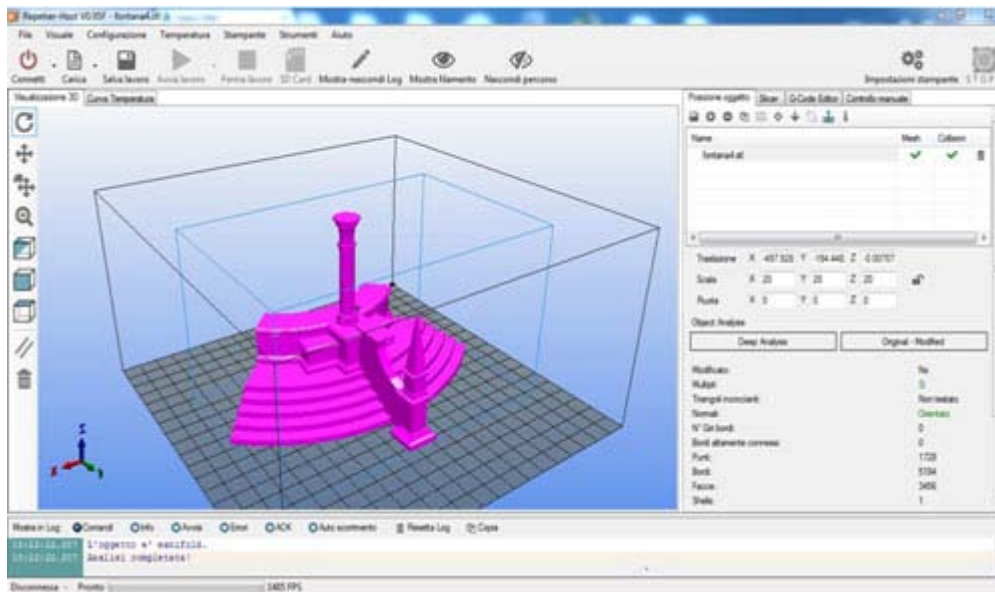
(SketchUp STL)



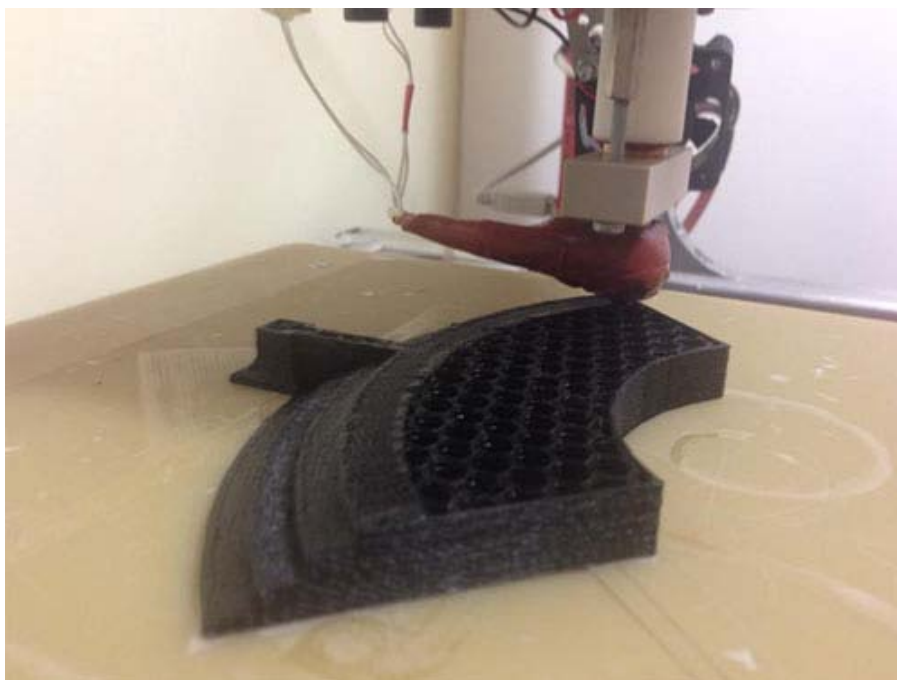




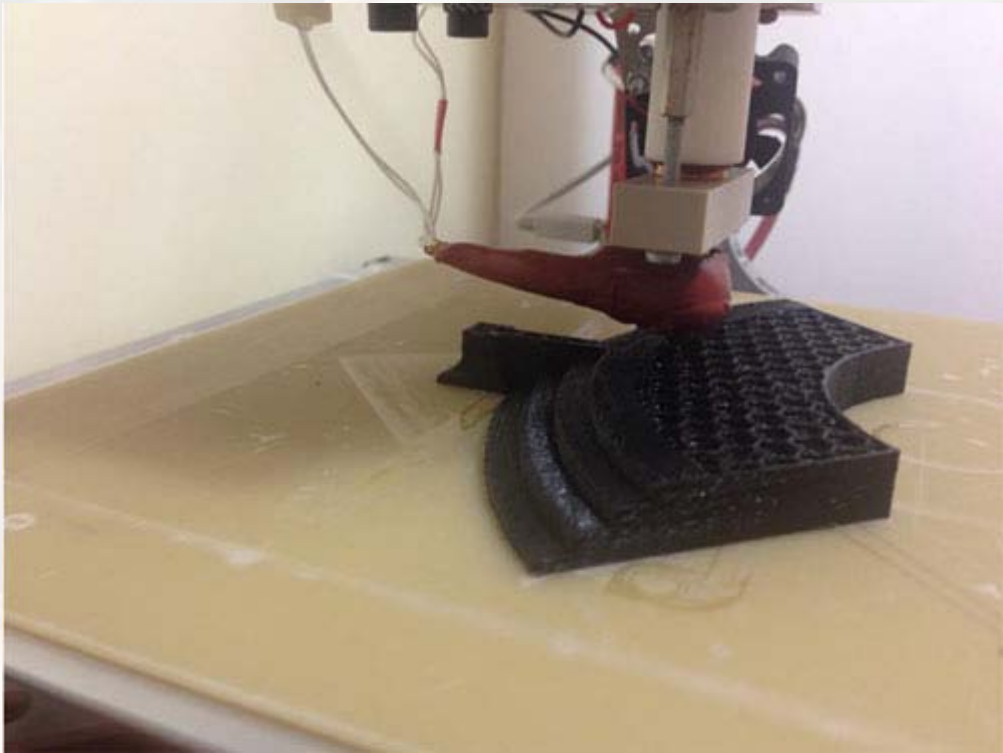
If you have been working properly, the model will be suitable to be printed in any program slicing and 3D printing, then opening it in other programs there will be no negative checkmarks or errors.



The end result is considerable comparing it with the digital model



3d printing made by the student **Vitaliano Gallo** 3rd year of the school of scenography Academy of Fine Arts of Catanzaro.

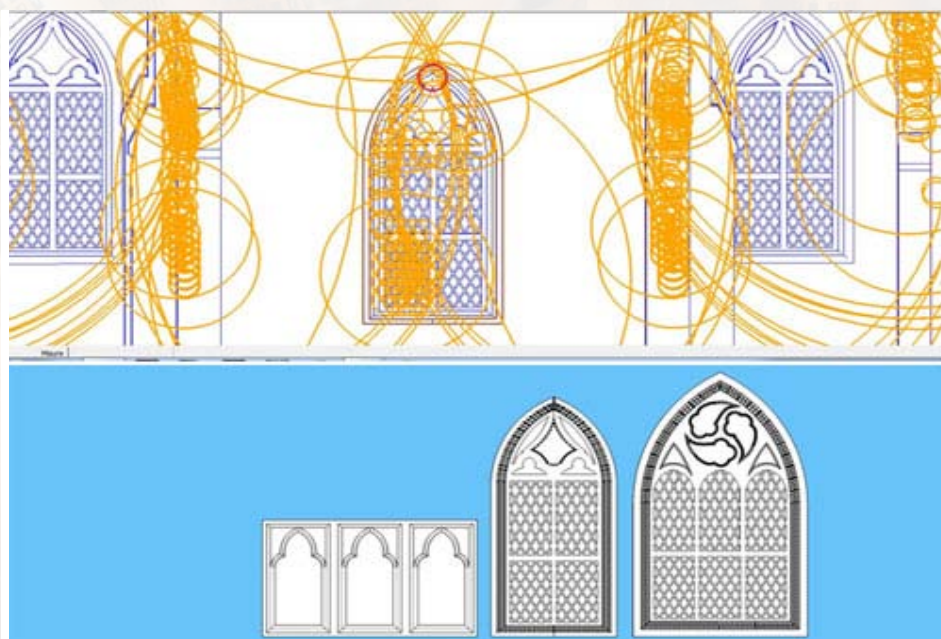


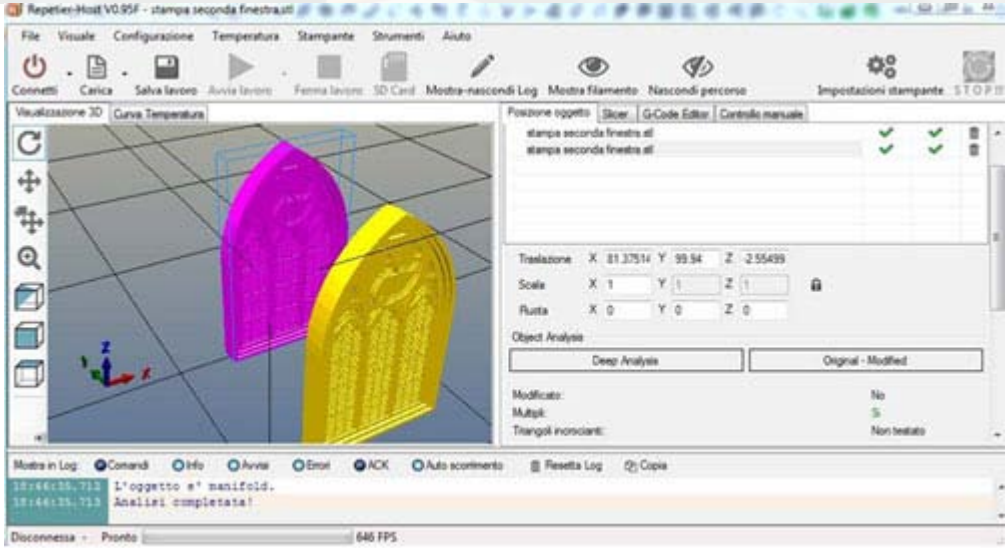




for printing the models must consider that the plate of our 3d printer may contain a model of 20 centimeters x 20 centimeters. then in the planning stage with sketchup must make the pieces that do not exceed these measures, then you can pasting or predispose before with the slots suitable for assembly.

for printing of the models must consider that the plate of our 3d printer may contain a model of 20 centimeters x 20 centimeters. then in the planning stage with sketchup must make the pieces that do not exceed these measures, then you can pasting or predispose before with the slots suitable for assembly.

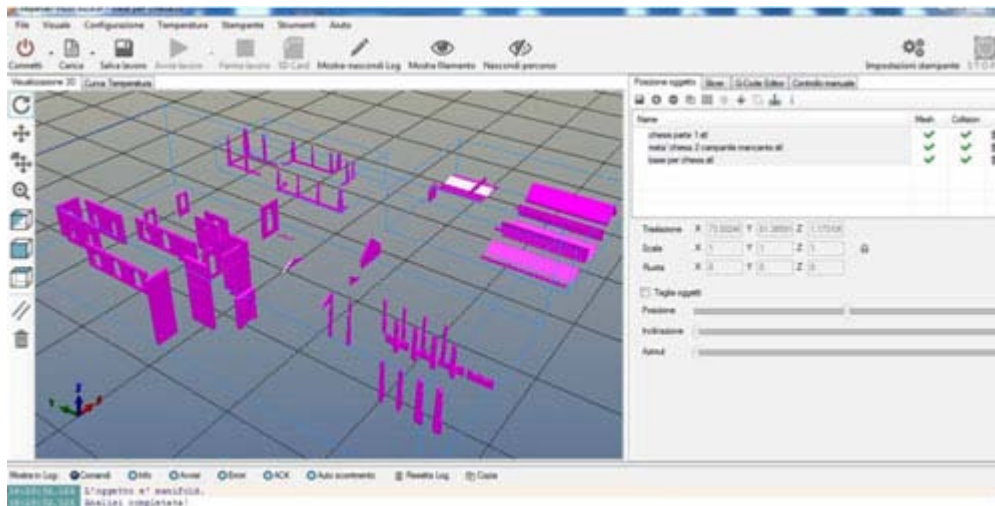




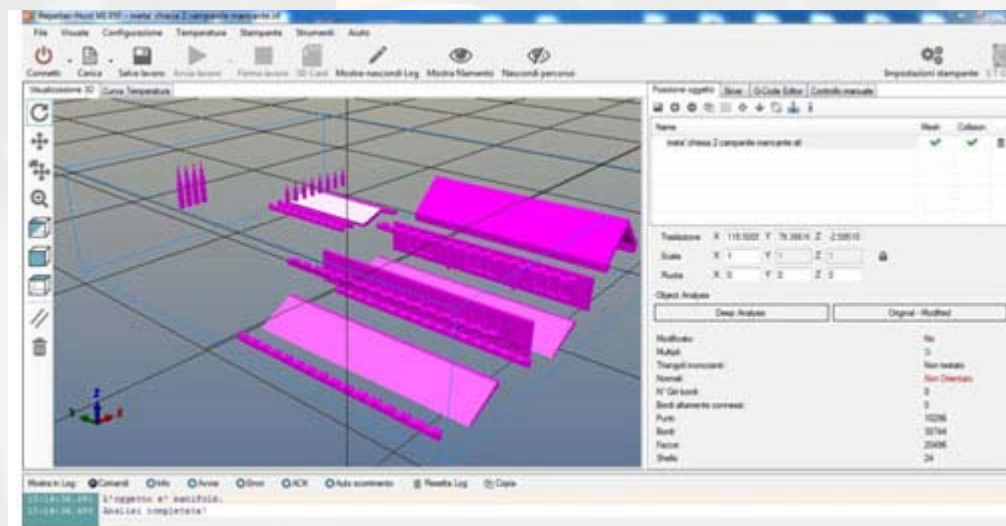




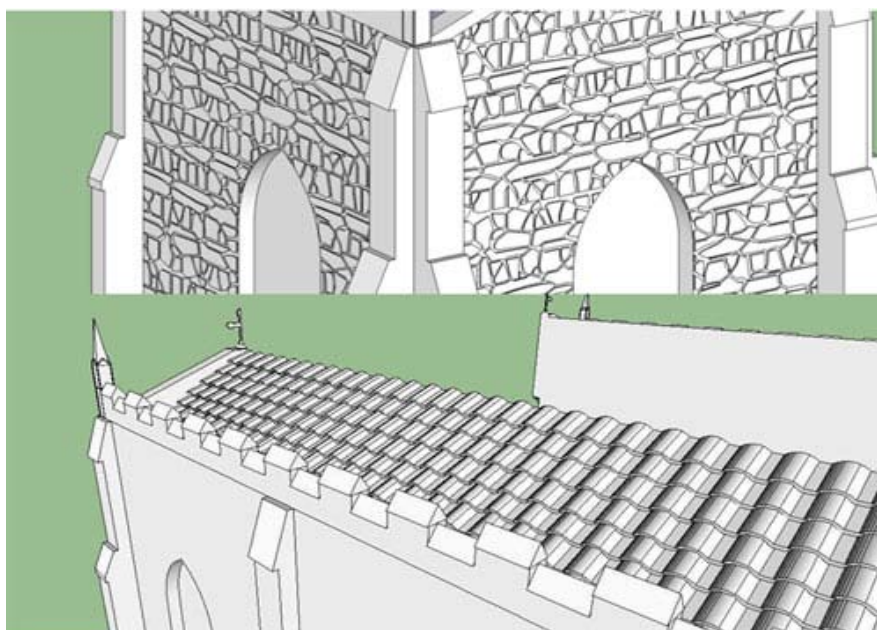
example print medium resolution 3d printing times are acceptable



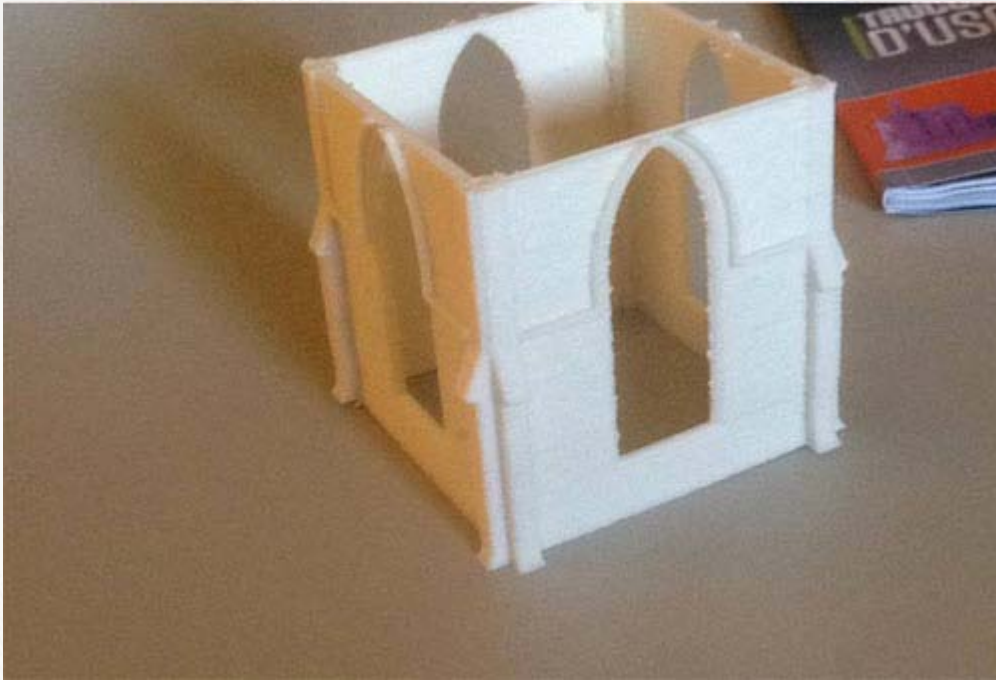
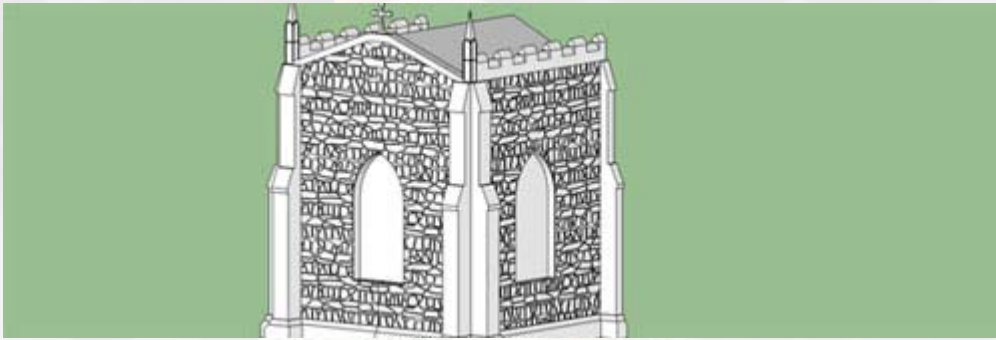
all these pieces will be printed individually and then hand assembled.



model 3d whit Sketchup 8. by Paolo Daniele. student of 3rd year of Production Design. Academy of Fine Arts of Catanzaro, Italy.







example Print Low Resolution 3d printing times are much faster.





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if you do not need many details on your model you can use a print with a detail very low, with a significant printing speed, useful for example for testing.



## SketchUp - some tips and tactics

Debamoy Ghosh

SketchUp is known for its speed activities. It is a quick 3D modeling programme. It often uses as landscaping architects. SketchUp is not so tough to learn, but it takes some time to become expert in this trade. Kevin Pfeiffer, writer of landarchs.com has come up with this article. We made an excerpt.

Yes, there are some shortcuts to save the time; still it will take some time to learn. We are trying to present some tricks for your help:-

**How to lock axis:** Functioning shape on 3D space on a 2D screen is not simple. There is much confusion taken place automatically. If you shift to a circle, you may feel that it would go up along y-axis, witnessed that goes along z-axis. In that case you have to use arrow keys for locking the axis. The up and down arrows are Y-axis (Blue) and in the left, the Z-axis (green), then turn right x-axis (red). The movement will be known from here.

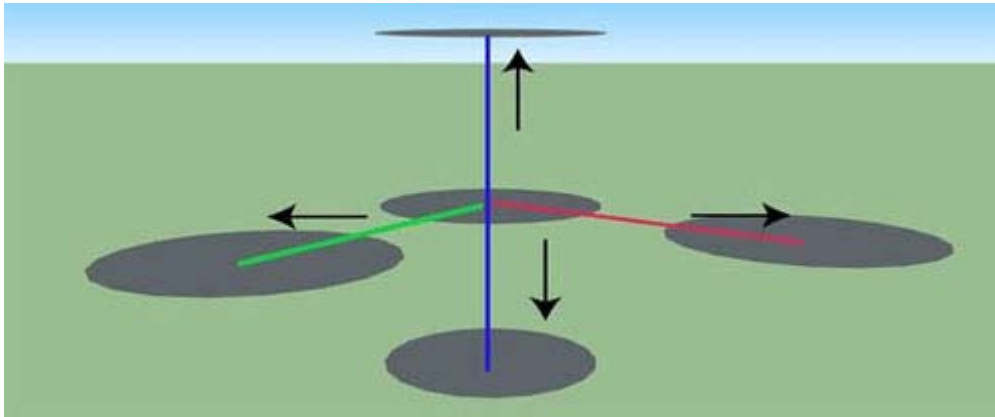


Image Courtesy: landarchs.com

**Use of array tool:** Many people simply copy and paste the sketchup shape objects and other things. Many people also repeatedly try Ctrl+v to paste it. It is suggested to use AutoCAD array tool for speedy use of sketchup.

Watch this video learning:

<https://www.youtube.com/watch?v=7agSNyk8JQA>

**Photoshop for vegetation must:** Sketchup has many downloadable options ([3D Warehouse](#)), but while growing vegetation, the file size creates a problem. The best route is to use Photoshop with PNG format.



Image Courtesy: landarchs.com

**For Large Tool set:** see this flow chart

view> toolbars...> large tool set.

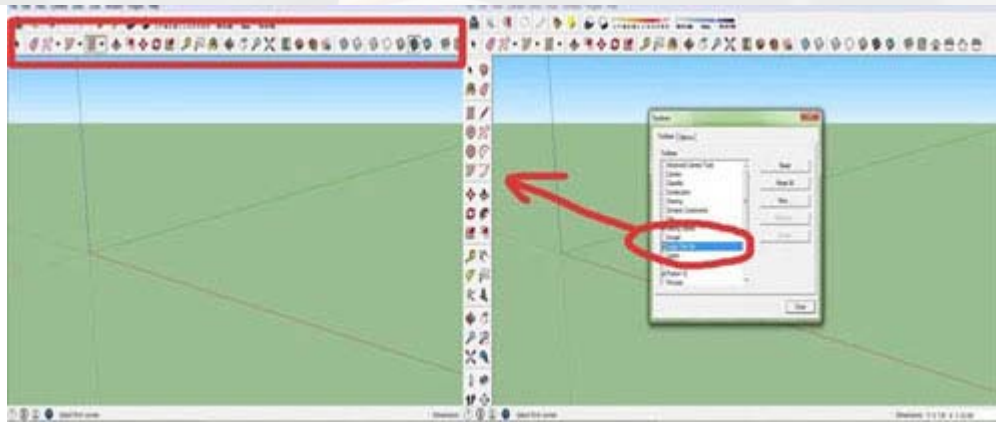


Image Courtesy: landarchs.com

**Hotkeys:** If the designers wish to speed up the project, then they can use hotkeys. Follow this: window>preferences>shortcuts to obtain the page. SketchUp has developed a list of shortcuts and hotkeys.

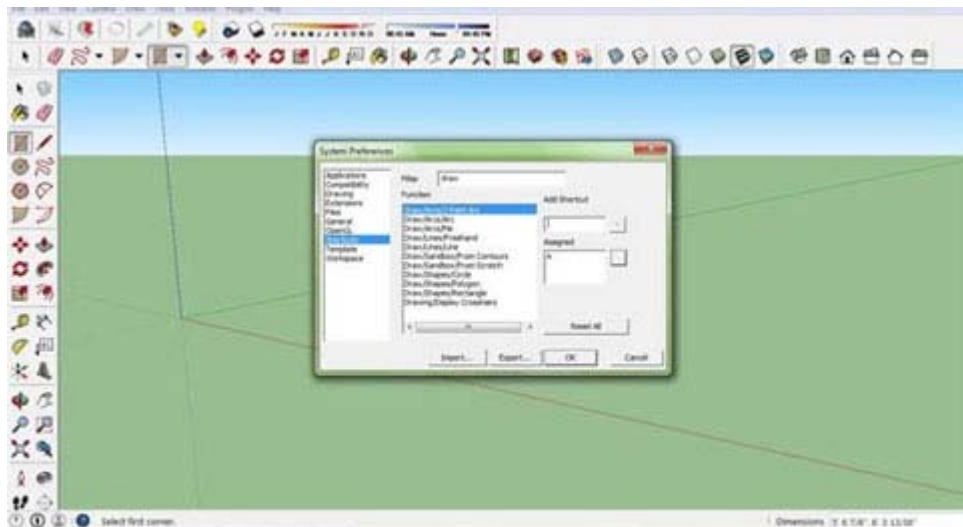


Image Courtesy: landarchs.com

**Plugins:** These are made for enhancing the capacity of SketchUp. Click the links

- <https://extensions.sketchup.com/en/content/soap-skin-bubble>
- <https://extensions.sketchup.com/en/content/sketchup-stl>
- <https://extensions.sketchup.com/en/content/3d-tree-maker>
- <http://www.suplugins.com/supodium-v2.php>

Side count for polygon:

<https://www.youtube.com/watch?v=h9R2N0nNb7I>

This video tutorial can guide the designers.

**Selecting by click:** The Selection on the screen is a major problem in Sketchup. Count the number of click and then, select the face and the face and edge and the whole of the object.



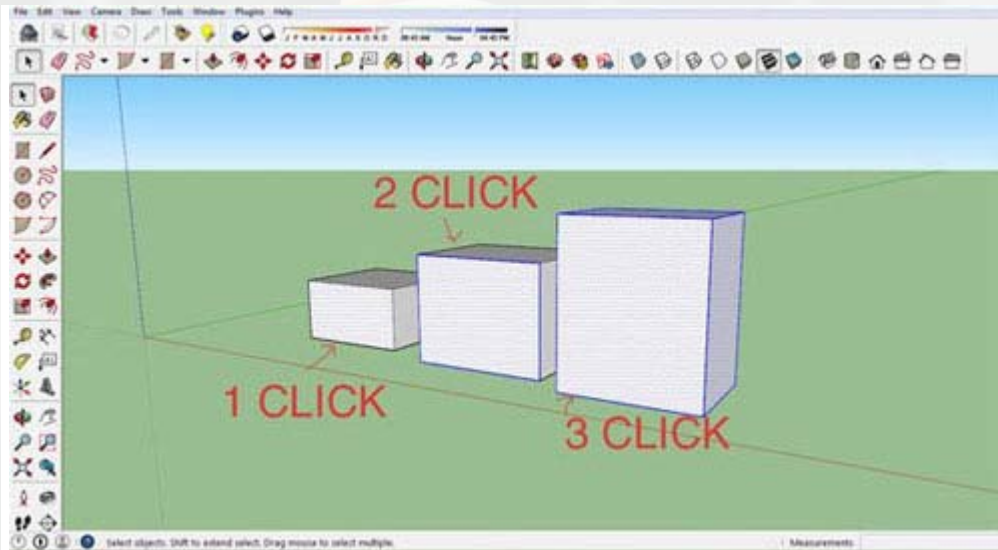


Image Courtesy: landarchs.com

**Measurement tool:** The designers need to syn into the measurement, angle and rest of the data into sketchup. This is the similarity between sketchup and autoCAD that designers do not need to select the textbox contributing data.

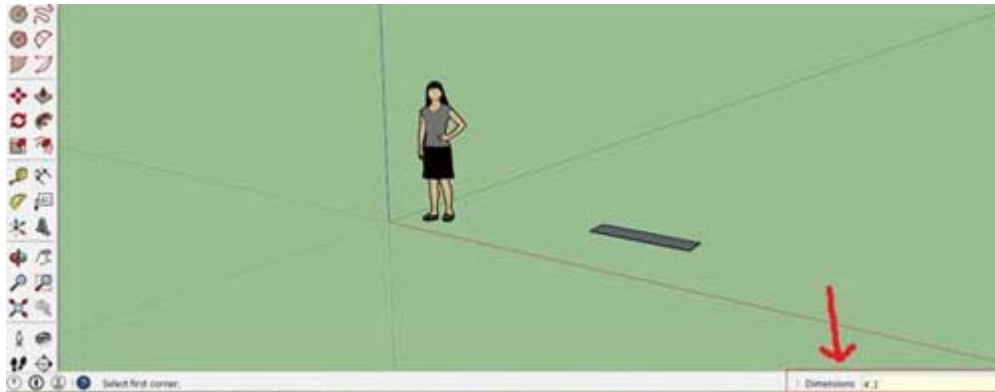


Image Courtesy: landarchs.com

There is also a ruler tool which marks line on XYZ.

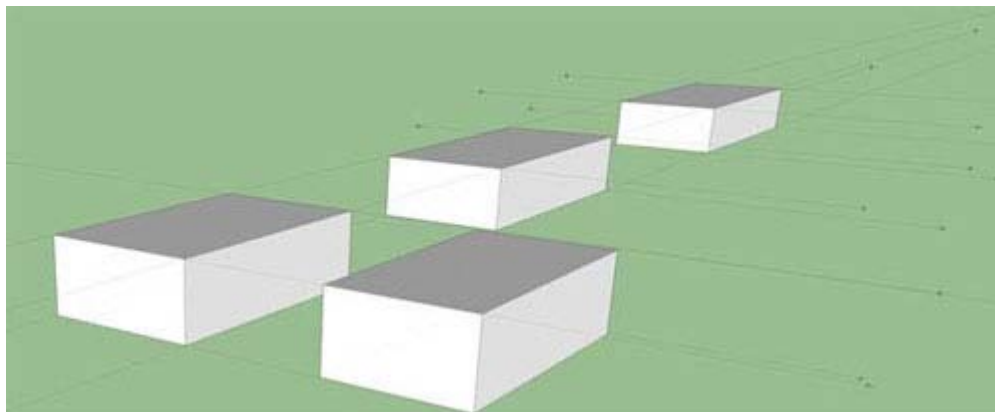


Image Courtesy: landarchs.com

# Interview with Fred Abler, Ceo of Form Fonts, a go-to subscription based collection of 3d models and textures

**Fred Abler**

Form Fonts is our go-to subscription based collection of 3d models and textures. I have been a member of Form Fonts for the last 9 years and I absolutely cannot exist without this service as a professional designer and visualization artist. The amount of time I save and the value added to my 3d presentations is unmeasurable.

One of my favorite features of Form Fonts is that you can search generic terms like “cars” or “coffee table”, and also brand specific terms such as “Audi” or “Design Within Reach”. The collections are enormous and the quality of the models is unmatched. Form Fonts models and textures look excellent in SketchUp and photo-real rendering programs.

Recently we had a chance to chat with Fred Abler, CEO of Form Fonts, to better understand how this resource came to be. Visit Form Fonts here to browse the collections and sign up.

## FormFonts 3D : A Decade of Serving Up 3D Models!

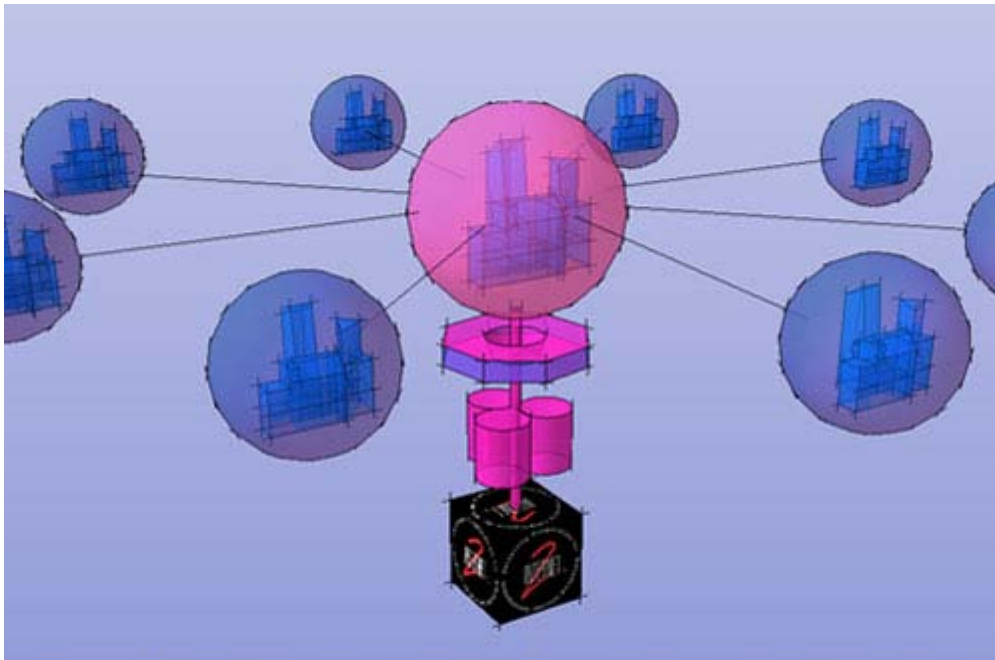
**Editors Note:** As FormFonts 3D is turning 10, we thought it might be interesting to review the history of the pioneer of 3D Model Stock for SketchUp. This is an interview with Fred Abler, CEO of FormFonts.com.

**SketchUp Magazine:** *How and when did FormFonts get started?*

**Abler:** In 2001, I was working at the CAD Research Center at Cal Poly, San Luis Obispo, CA where I had done my architecture degrees. We developed some pretty cool agent-based spatial decision support systems. But over time, the lab basically became a military defense contractor. I wanted to get back to into architecture, and I was especially keen on the potential for ‘smart objects’ in architecture.

A friend at ESRI introduced me to SketchUp, and I was immediately taken by this little 3D modeler. It was just a joy to use. It was only for visualization of course, but that’s where the marketplace was in 2001. At the time I was also on a campus committee for Internet2 Research - a consortium of 260 universities worldwide connected by a super-fast fiber-optic research network.

Because Internet2 promised unlimited bandwidth, I began to wonder what impact capacious bandwidth would have on 3D modeling. It occurred to me that the effects would be significant.



**Fig 1.** SketchUp model of conceptual 3D Model Server running in high bandwidth environment Internet2. Model by Fred Abler 2002.

Of course we all had BIM-like dreams. But where to start? At the time, huge 3D CAD libraries came on-disc with shrink-wrapped software, or were sold separately. These ‘block libraries’ were pretty basic, outdated the minute you installed them, and they took up significant amounts of disc space.



Sketchup was really the first “downloadable” 3D modeler. So I thought: Wouldn't it be great if you didn't have to download all those stock models? You should just be able to go out to the web, search for what you want, and then download just what you need. And because everyone would be able to download the very latest version of a SketchUp component, it would actually be practical to update the 3D model library on an ongoing basis.

**SketchUp Magazine :** What today we would call “the Cloud” and/or “Software As A Service”.

**Fred Abler:** Yes, exactly. But in early 2000's we didn't have the cloud yet. It was called a “Service Oriented Architecture”.

**SketchUp Magazine:** So how did you test your idea for a 3D Content Cloud?

**Abler:** I approached @Last Software in Boulder, Co. and very enthusiastically pitched them on my idea for a ‘living library of 3D SketchUp components”. I hired a Computer Science student (Paul Thormahlen) at Cal Poly to write the software for a 3d model server and called it “Objective Networks”. I paid for everything out of my own pocket, and designed ObjectiveNetworks.com so users could upload their own models, and share them with the SketchUp community.

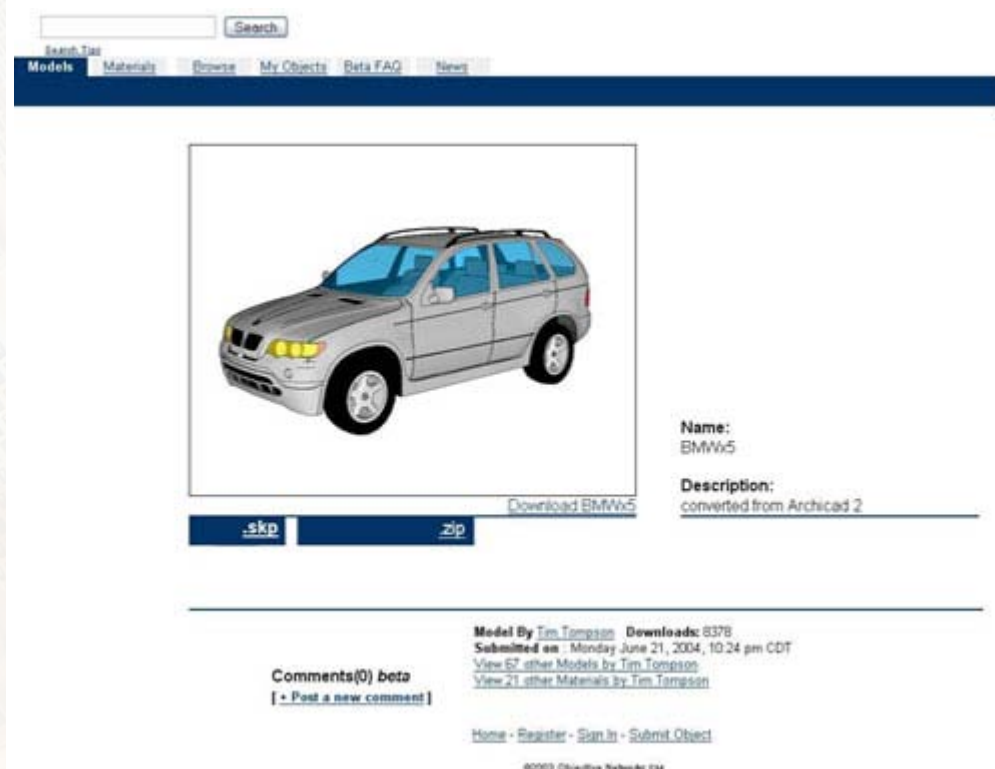
**SketchUp Magazine:** Did you charge for this, or was it free?

**Abler:** It was all completely free. At that time it was still unthinkable to charge for anything on the Internet.

**SketchUp Magazine:** Why do you think ObjectiveNetworks ultimately worked?

There was nothing else like it at the time. TurboSquid was the only player and they charged pretty dearly for their high-poly models. So being first helped a lot. But I also decided that we should show the number of downloads for each contributor's model, kind of as a way to thank them for sharing their model in the first place.

We had some amazing modelers who were very generous like Markus Sillander, Anri JoJo, and Alan Fraser, etc. Word got out pretty quickly you could score free 3D models on Objective Networks, and the SketchUp community was still very small (by today's standards). So fans would upload their sketchup components to Objective Networks, and the model counts would rise almost instantly. In fact, a little too quickly.



**Fig 2. Objective Networks screen shot (c. 2003 ) showing free 3D SketchUp Components. Objective Networks was the forerunner to the Sketchup 3D Warehouse, and FormFonts 3D.**

This made me take a closer look at the Downloads count, and I discovered something pretty interesting. As soon as an artist uploaded their model to share, they would do something very strange. They would instantly turn-around and download it themselves 10 or 15 times.

Apparently, artists didn't want anyone to think their model was "un-loved" or "no-good" so they primed the pump! This was fine with me if the artists wanted to provide a little of their own social proof. In the three years ObjectiveNetworks was online, we served out almost 5,000,000 free 3D components to the nascent SketchUp Community.

**SketchUp Magazine: And didn't @Last Software give you some grant money at some point?**

**Abler:** Yes, I demonstrated a private beta version of Objective Networks to Brad Schell at an ESRI conference in 2002. And when I showed them how you could drag 'n drop a 3D model from ObjectiveNetworks.com directly into the SketchUp workspace, they almost fell on the floor laughing with delight.

After that, I asked @Last for some grant money and they graciously gave me \$5,000. I took the grant money to the Dean of Research at Cal Poly SLO, and she matched it with in-kind equipment and bandwidth, and, that's how we got our first server.

**SketchUp Magazine: So then, How did ObjectiveNetworks become FormFonts.com?**

**Abler:** As ObjectiveNetworks got larger and larger, the limits of crowdsourcing became painfully obvious. We tried several ways to get the crowd to help us quality-control the models. But all of these efforts were unsuccessful.

After awhile, the brilliant modelers that were contributing to ObjectiveNetworks started to get a bit resentful. They didn't like the fact that their work was surrounded by junky models people had scrounged up somewhere. And the imbalance between "givers and takers" became too hard to ignore. So many more people were downloading models than uploading them, that it started to feel truly unfair to those that were contributing.

As it got worse and worse, the model quality just became almost random. And in many ways, ObjectiveNetworks became a victim of its own success. The more people that used it, the worse it got. It's the same complaint a lot of people still have with free sites today.

So the choice was to shutter the site, or turn "pro" and use the lessons learned from the free site as a kind of test marketing. I eventually chose the latter, and then began contacting a few of the most talented 3D modelers in the world at the time (Alan Fraser, Allister Godfrey, Nino Alvarez, etc.).

Most of these guys were already selling small collections of their own models on CD, and Alister had even started a small website. But the community reaction to actually charging for 3D content had been pretty hostile, so everyone pretty much said they would gladly throw in their lot with me, should I started a commercial version of Objective Networks

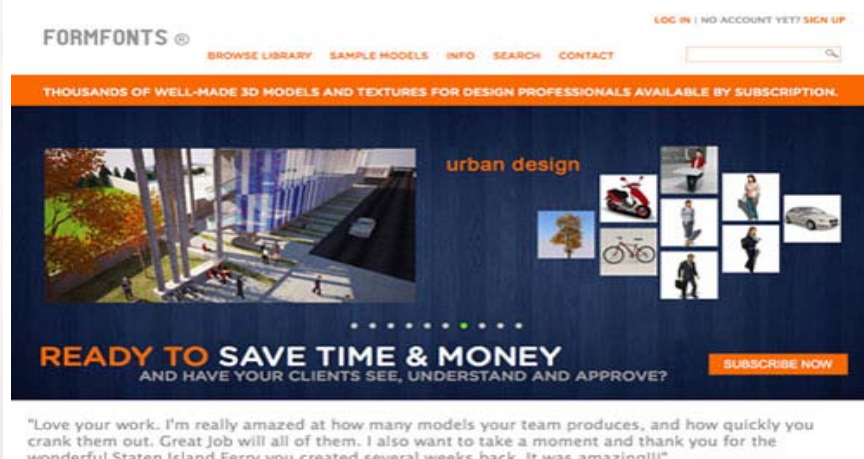
**SketchUp Magazine: So you started FormFonts.com in 2004?**

**Abler:** Yes, while ObjectiveNetworks was still serving out free 3D models, I hired Cal Poly students to develop a 'subscription' version of ObjectiveNetworks. I also asked my architecture classmate Marc Frederickson, to invest and partner with me in starting FormFonts.

Marc provided most of the initial capital we needed to set up commercial grade servers, software development, hosting, accounting etc. Today Marc is what I call our Chief Operations Officer. But Marc doesn't really like titles, so let's just say he wears many hats.

When FormFonts became the first website to sell 3D content by subscription, most everyone thought (and a few said openly) that we would fail. In 2004 paid content was pretty much an unknown, and selling content on CDs was the established norm.

But in retrospect, we really didn't have a choice in the matter. The subscription model was the only thing we could do. We couldn't charge much money without a serious backlash, and we just didn't have that many 3D models to begin with.





**Fig 3. Splash page of FormFonts.com today.**

We couldn't leverage the thousands of Objective Networks 3D models because the quality was so variable. And we only had about 120 professionally made models when we launched FormFonts 3D, so we couldn't charge much. I decided to ask \$33 and make the subscription period just 3 months, and automatically renewing.

Fortunately, we got the price right and our best was spot on. There was simply no other place you could get professionally made SketchUp components at the time. So once people tried and liked our professional 3d models, they decided to stay with us.

**SketchUp Magazine: So ten years on, how many 3D models do you have, and what does your subscriber base look like today?**

**Abler:** FormFonts has more than 50,000 3D models and assets under management. Our annual subscription has been \$199 for 5 years now. We'll probably need to raise our subscription rates a bit next year, provided the economy keeps improving.

**SketchUp Magazine: And who are your customers?**

About 70% of our subscribers are architects, landscape architects, contractors and other AEC design professionals. 20% are in the entertainment industry (film and tv production designers) and 10% are various design professionals (e.g. trade-show booth and event designers).

We also of course support many more file formats now, so our 3D model library is available to a much larger universe of 3D modelers, not just SketchUp users.

**SketchUp Magazine : So what will the next 10 years look like for FormFonts?**

**Abler:** The subscription model has been very very good to us, and FormFonts will keep improving our service in some new and interesting ways. We also have been asked to expand the types of 3D models we make, and we're currently moving into 3D geo-content and mapping.

**Editors Note:** Please check in how FormFonts 3D is doing today, and visit their website : [www.formfonts.com](http://www.formfonts.com)

# How SketchUp Originated and Activated

Debamoy Ghosh

Many people ask what is sketch. Some artists believe in manual sketch and some have traditionally gone for digital. They generally use sketchup.

But there is a question that why it is sketchup? There could be many more, or why we use digital sketching pattern.

There is also the technique of manual sketching. Some people say it is now impractical, tough to learn.

The growing question is in the creative world that manual sketching now obsolete? What is the fundamental idea of the digital tool in the architectural design?

## The three stage of architectural design:

- Schematic
- Development
- Documentation

There can be physical and mock-up model. The digital revolution, the primary design using pen or pencil, paper drawing, concept building into 2D and 3D can be presented.

Architects start to build up designs and make construction documents, but the schematic design procedure was not really computerized.

## The changing scenario: 1960

The computer-aided design (CAD) started to originate a new direction to research, speedily applied to architectural business.

## The changing scenario: 1970

It became a commercial product for sale.



Image Courtesy: teslaoutsourcingservices.com

## The changing scenario: 1980

This is the age of personal computer. This is also the year where Autodesk started to work.

The computer-aided designs – architectural and engineering were started to come. The old generations of CAD programs stays mostly drafting tools on personal computers.



These things are prepared by the engineer, but they were typically not designers. They need architectural draft and design.

### **The changing scenario: 1999**

The search was on for an alternative programme which is for architect. They also need CAD. But an an alternative programme was much of the requirement. Later @last Software was born and various sketching programme were developed.

### **The changing scenario: 2000**

SketchUp was born in August 2000. Now it can be said that SketchUp is easy-running software. A 2D drawing can be alternate into 3D drawing. But more importantly, it can be done sharply. This is an award winning programme.

### **The changing scenario: 2006**

Google bought it in 2006. Then it was known as Google SketchUp. SketchUp is based on AutoCAD – function, icons, form-creating, manipulation and rendering command.

Skill, experience, easy to use, simplicity, interface, accessibility are they main factor.



Image Courtesy: cabecitasrapadas.org

The programme has a tri-parted design process -- schematic sketch design, mass study, presentation for alternative design. It can be implemented in easy process – interior design, rendering and construction sketch. But it cannot cope with complex sketch and realistic rendering.

# How SketchUp designers should handle 3D mouse

Debamoy Ghosh

The 3D mouse(s) are best known devices for the users of the SketchUp and 3D designers. It is really an awesome product. The 3D mouse can work in a speedy way. It is like working is fun here with 3D mouse(s).

This is the 3D mouse using guidelines that could be followed —and provide videos that dive deeper into each concept.

First of all, to set up a 3D mouse(s):

- You need to bring this 3D mouse outside the box. But process of setting up is not so easy. There are many benefit of using the 3D Mouse in your system. This amazing video has been powered by 3Dconnexion. Karen Harris has described the nutshell of the video that it works. It is very fast and smooth.
- [https://www.youtube.com/watch?v=fe7\\_ooiA170&list=PL502EC97AD4F7BA13](https://www.youtube.com/watch?v=fe7_ooiA170&list=PL502EC97AD4F7BA13)
- The users can download the device from 3Dconnexion website.
- Then the installer has to run.
- Now plug in the USB cable and USB dongle.
- Use the 3D mouse with non-dominant hand.
- The users have to grip the 3D mouse cap gently between your thumb and index finger.
- Softly push, pull, twist or tilt.
- Practice is the best option.

## Customization of 3D Mouse(s):

It can be made to use in SketchUp too, as it has the programmable button. It has two programmable buttons. The users can assign favourite application and keyboard shortcuts.

<https://www.youtube.com/watch?v=p22idrpgNRg&list=PL502EC97AD4F7BA13>

## What is the right 3D mouse(s)?

3D mice permit SketchUp users to work quicker by allowing the place to 3D content using mouse to select.

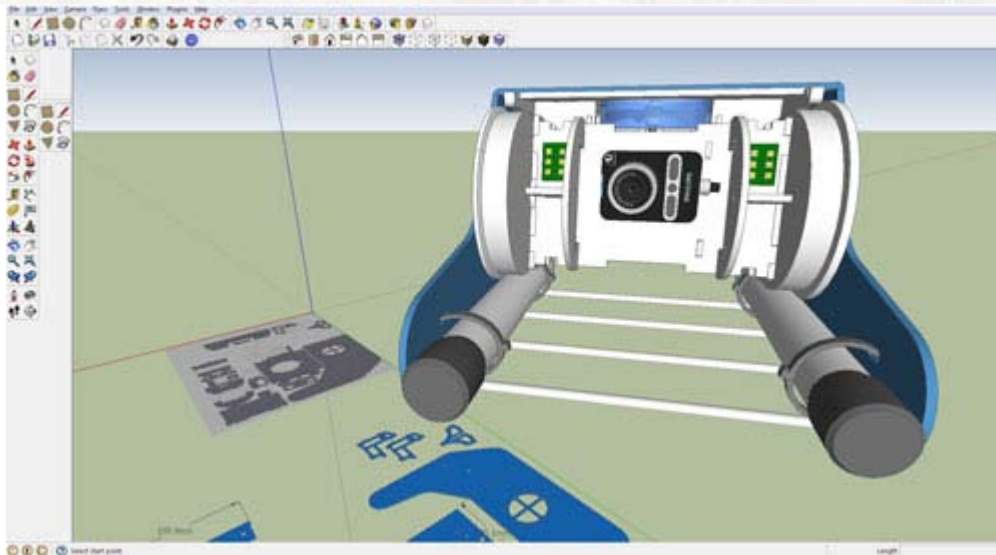


Image Courtesy: community.openrov.com

Ref: [www.3dconnexion.com](http://www.3dconnexion.com)



# Sketchfab and Fuel3D make joint venture for publishing 3D Model in Web

**Debamoy Ghosh**

Now if you are an expert designer, you can upload your 3D model to websites.

How? If you ask, the answer is, the brand new Sketchfab and Fuel3D is bringing this opportunity to the budding modellers all the way.

The Fuel3D has prepared a 3D scanner – which itself can be activated holding in hand. It also has some important features, likewise: gives a variation of high-resolution colour, shape and capture different 3D modeling apps.

There are some game developing apps are there. The 3D scanner can produce exact model of human body.

Fuel3D can merge pre-calibrated stereo camera with photometric picture for capturing 3D model within seconds. This firm is dedicated to make sophisticated 3D scanner and 3D system.

This scanner was primarily prepared for the health image taking purpose. But later it was taken to the market.

Ron Daniel, a professor of Engineering Science, Oxford University made this technology. Fuel3D has many technocrats, scientists and engineers as their employees.

Stuart Mead, the CEO was a great fun raiser. He raised around \$300,000 by campaign. Later windfall happened their in this company. Private investments were on the way to here. The distribution and retail partners' were signed in across the globe.

There is an option 'publish to sketchfab' in the Fuel3D scanner – used for editing and viewing doing something with Fuel3D studio.

The online publication like Sketchfab is one of the best known for 3D model. The CEO of Sketchfab, Alban Denoyel also expressed happiness. Denoyel feels interested people want a plat form which can help to grow viewing and sharing the 3D content.



Image Courtesy: 3dprint.com

The Fuel3D scanner will be in the market in the coming year. This great joint venture will expectantly guide to the fast extension of accessible 3D models, both for printing and claim, within the Sketchfab model depository.

<https://sketchfab.com/models/98FkJnqlrr9cDrhSYqXhRVjgoos/embed>



Image Courtesy: 3dprint.com

Ref: [www.3dprint.com](http://www.3dprint.com)



# Perform the renderings of the SketchUp 8, SketchUp Make & SketchUp 2013 models with Renditioner Pro V3

**Rajib Dey : Editor-in-chief**

IMSI Design releases [Renditioner Pro V3](#), the most updated version of Renditioner that contains some advanced features and superior print quality.

The users can use Renditioner Pro v3 to create eye-catching photorealistic renderings of the models through [SketchUp 8](#), SketchUp Make, SketchUp 2013.

Renditioner Pro v3 functions directly inside sketchup and load any model automatically. Just arrange the model for rendering through discerning drag and drop, lighting, material, camera and environment controls.

There exist some professional rendering controls like Progressive and Sub-Image rendering which facilitate the users to promptly check and envisage diversified rendering scene variations of their design. Multi-threaded rendering will result in increasing the regeneration time to cope with your system.

Renditioner Pro v3 contains the following exclusive features:-

**Superior quality Cameras and Lighting with HDR:** High Dynamic Range (HDR) facilitates a high quality tonal and contrast detail revealing a completely new set of lighting possibilities with added realism.

**Expanded Libraries of Content:** Renditioner Pro contains a well structured library having more than 150 materials, 72 finishes, 50, 2D and 3D bump maps, and 27, 2D and 3D backgrounds. The users can easily use them into the models by just dragging and dropping them. There are also supplementary content accessible through the LightWorks' Aspects Digital Asset Library.

**Simplified User Interface with Tutorials:** Maneuver any [SketchUp model](#) through professional image controls which are smoothly arranged into brief menus for getting quickly.

**Multiple output formats:** All the rendered images are saved as .JPG, .PNG, .TIF, .BMP, and .TGA file fomats

**Animation:** The users can view a rotating animation of their model on its X-axis with turntable animation inside Renditioner Pro.

**Drag, Orbit, Look Around, Track In, and Walk Tools:** The users can experience better control viewing and orienting the model with the above tools.

**New Glossy Optimization:** Glossy optimization enhances the rendering speed of scenes having glossy [materials](#).



**Material Blurring:** It will create advanced material quality for producing more photorealistic renders and speeding up the rendering time.

**Progressive Rendering:** By applying Progressive Rendering, the user will get a blocky, low quality view of the scene although the rendering calculations are carried out.

**Sub-image rendering:** Characterize a segment of an image to render, rather than rendering the whole image. It will streamline the process of rendering of just the area of the image as per your choice.

[Downloadable link](#)



Image Courtesy : [www.imsidesign.com](http://www.imsidesign.com)



# What are the best things to do with Sketchup

**Rajib Dey : Editor-in-chief**

**Apply keyboard shortcuts.** Keyboard shortcuts are very useful to save significant time while creating complex models with sketchup. Sketchup includes a wide array of shortcut keys which can enhance your drawing process. You can also customize and create your own shortcut keys by selecting Layers, Standard and Tool Set according to your choice. There are also predefined set of shortcuts inside sketchup. The [quick reference card](#) consists of various keyboard shortcut lists. Every version of sketchup contains its own reference card. One can [export](#) keyboard shortcuts for allocating amid other copies of sketchup. One can go through the window menu, select preference and then shortcut menu. In order to load it, just press the import button (available in shortcut window) and choose "preferences.dat".

**Watch tutorials.** There are also several useful video tutorials on sketchup which help to learn how to use sketchup for 3d modeling, visualization, rendering, animation, wood working projects etc. These videos will help you to learn the basic and advanced features of sketchup. Besides, one can also learn the application of various tools inside sketchup. Google provides a series of sketchup video tutorial on [their site](#). These short videos focuses on all ranging from the SketchUp tools, to advanced SketchUp uses, LayOut, Style Builder, as well as using SketchUp with Google Earth. You also visit some good third-party sites.

Download pre-defined objects. While designing objects with sketchup, you can save significant time through Googles [Bonus Packs](#) or getting [materials](#) from the world's largest repository of free, high-quality, 3D content which can be utilized in your models.

**Edit pre-made objects.** Any items of these pre-made objects can also be customized. You can use or remove components stairs, counters and bathtubs. Press edit/component/explode and you can maneuver all the individual parts.

**Apply layers.** One can take help from layers in SketchUp to perform specific tasks smoothly as well as create your models neatly and make them workable. Gather your knowledge on how to apply layers and utilize them mostly in your designs. Here are some good tips.

[help.sketchup.com](http://help.sketchup.com)  
[www.sites.google.com/site/sketchupsage/faster/layers](http://www.sites.google.com/site/sketchupsage/faster/layers)

**Be trained at moving objects in sketchup.** Sketchup can be a handy tool for moving objects. If you face any problem in manipulating objects, just get help from keyboard shortcuts. The arrow keys demonstrate the direction, and shift will be applied to lock in movement along a specific plane.

**Explore innovations.** Discover the new features of SketchUp and apply them for diversified applications. Test new things ranging from scaling the drawings from a photo or designing crafts or other fun projects.



Image Courtesy: [photos1.blogger.com](http://photos1.blogger.com)

Ref.: [www.sketchupfans.com](http://www.sketchupfans.com)

## Some useful sketchup tips on sketchup sandbox tools

Rajib Dey : Editor-in-chief

SketchUp sandbox conception denotes a surface that is created and controlled through sandbox tools. A sandbox in SketchUp as well as other 3D modeling tools can be termed as a triangulated irregular network or TIN in terrain modeling jargon.

TIN is similar to a sandbox as it contains a boundary along with a sculpted surface (sand). Sandbox tools are available inside SketchUp which can be applied for generating and maneuvering TINs.

In TIN, there are various connected triangular faces which appear to be one continuous smooth surface if they are smoothed.

Besides producing terrain with the sandbox tools, one will be able to generate other organic shapes (the shapes like crafted manually) with these tools.

The sandbox tools are also compatible with polygon mesh which is another type of TIN-like surface. A polygon mesh is identical to a TIN, but having faces over three vertices.

SketchUp's Sandbox from Scratch tool and Sandbox from Contours tool only generate TINs, but one can import a polygon mesh as well as make a polygon mesh (by hand) applying other SketchUp tools.

**Triangulation:** Triangles in a TIN are adjustable in diverse directions. The orientation of triangles is denoted as triangulation. In a TIN some triangles can be adjusted vertically and at the same time others can be adjusted horizontally. It is vital as some sandbox tools facilitate the users to modify the direction of the triangles in order to further smooth TINs.

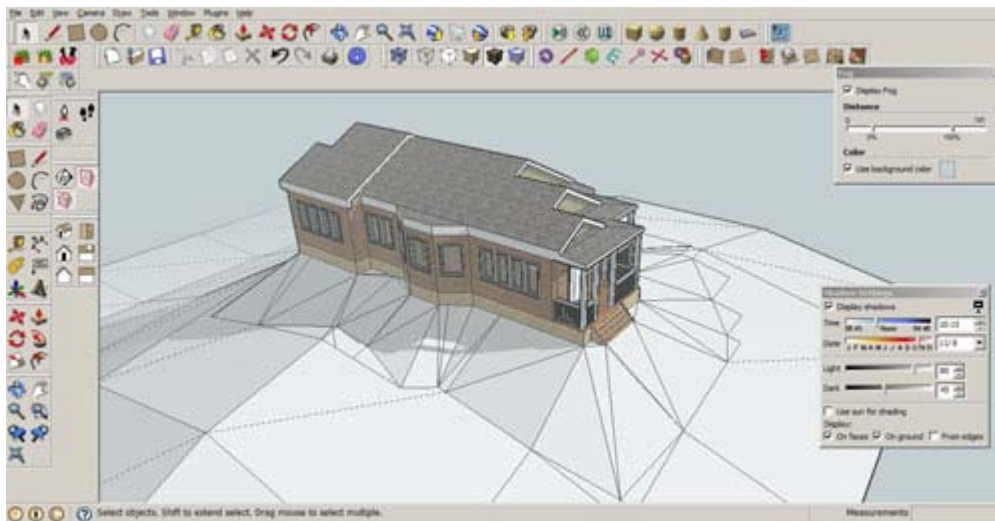


Image Courtesy: [geovisualization.wordpress.com](http://geovisualization.wordpress.com)

How to generate a TIN: The following methods can help a user to get a starting TIN as the basis of their model:-

- Produce or import contour lines and apply the Sandbox From Contours tool for generating a TIN.
- Import an image of a site plan or contour map and use the freehand tool to get its contours. Subsequently, fine-tune the contours to their exact elevation and apply the Sandbox From Contours tool to make a TIN.
- Import a TIN applying the SketchUp ArcGIS Plug-in accessible on the SketchUp Plugins index. ArcGIS is Geographic Information System for performing with geographical information like the location of buildings inside a world-wide global coordinate system.
- Import a digital terrain Model (DTM) file.
- Make sandbox (TIN) with the Sandbox From Scratch tool.

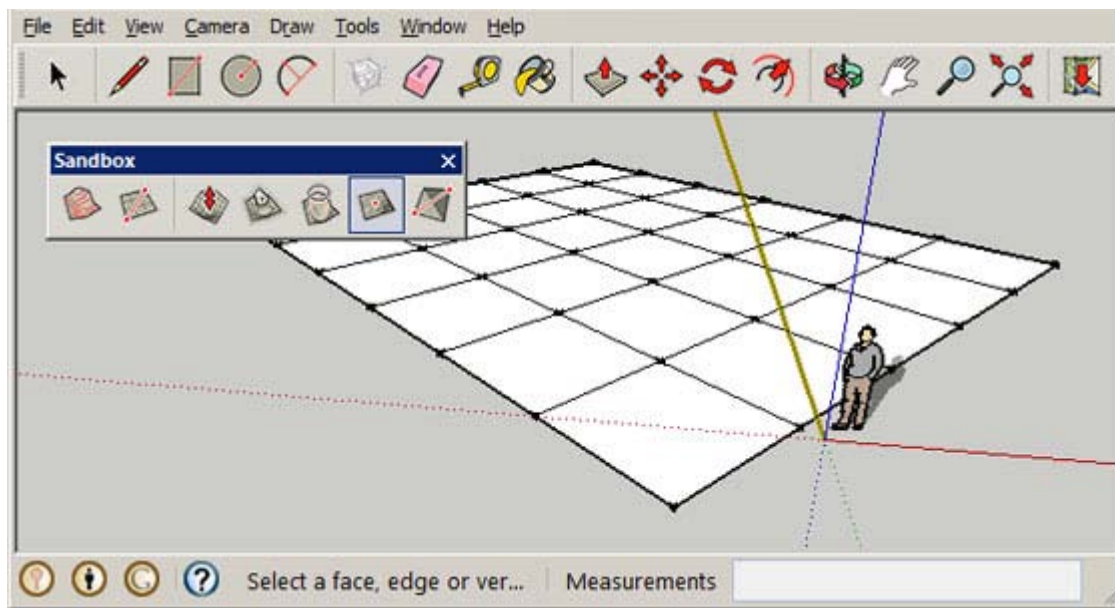
**How to alter a TIN:** There are several tools inside sketchup which are useful for altering TINs. These tools range from Sandbox From Scratch, Sandbox From Contours, Smoove, Drape, Add Detail, Flip Edge etc. These sandbox tools are applied to produce organic geometry or geometry that looks like hand-crafted.

**Functional terrain:** The phrase functional terrain can describe a terrain having no portion bending back upon itself generating overhangs, underhangs, or caves. While sketching a vertical line through the terrain at any point as well as the line only touches the terrain at one point, the terrain will be in operation.



It is vital as some specific tools like the Smooove tool, can produce unanticipated results at the time of performing with nonfunctional terrain (the neighboring points incorporated in the sculpting operation by the Smooove tool are frequently unwanted)..

<https://www.youtube.com/watch?v=AvtgwfBe84c>



Ref : [www.help.sketchup.com](http://www.help.sketchup.com)

# An exclusive course for sketchup users' alias "Trimble SketchUp for Digital Fabrication and Prototyping"

**Rajib Dey : Editor-in-chief**

Participate with an exclusive course on Trimble sketchup alias Trimble SketchUp for Digital Fabrication and Prototyping. By undergoing this sketchup course, one can transform their 2d sketches into real time 3d presentation. One can learn how to produce 3D drawings to be utilized together with digital fabrication. Besides, one can learn how to apply sketchup for producing model in 3D that can be used with a 3D printer.

The course will commence from Monday 24th November and continue for four week (four consecutive Mondays) focusing on the fundamentals of sketchup with the basic layout, menus and tools panels, to handy plugins and corporeal applications. This course will run over a four week period portraying the potential that lies within the friendly and forgiving interface of this 3d modeling software.

Maximum 12 people can be accommodated with the course and classes will commence on four consecutive Mondays from 7pm – 10pm.

**WEEK 1:** In first week, the attendees will go through a short presentation on sketchup and its diversified usages. After that the attendees can walk around the prospective of each machine in the FabLab analyzing the relationship amid them and the Trimble Sketchup software. There will be small tasks for the week facilitating users to be well versed with the software and generate 3d models of their own.

**WEEK 2:** In second week there will be discussion on how to resolve issues occurred in accomplishing the tasks in first week's class. After that, the attendees will be introduced to a wide array of new features of sketchup as well as how to become successful in dealing with problems by apply the various tools inside sketchup. The attendees also learn how to convert the 3d objects into simple 2d versions by creating very simple forms on the laser cutter. Learn how to apply the software to prototype a jigsaw like assembly method with the help of a series of 2d planes which will transform into 3d objects.

**WEEK 3 & 4:** In the 3rd & 4th week, the attendees have to make a 3d object of their own with the knowledge gathered in 1st and 2nd week. The generated model will then be 3d printed in the final week. Explore the requisites essential for exporting the files and make them 3d printable. Each user will then gets scope for creating the design of a unique object and print it themselves. The cost of the complete course is 40 euros for students and 80 euros for adults.

[Register your seat now](#)

For more information, call +353 61 213 438 or send mail to [fablab@saul.ie](mailto:fablab@saul.ie)





# An exclusive tutorial on Mystique FX with 3ds Max

**Presented by Salah Hussein 3D Artist at Dragon FX Studio**

My inspiration come from X-men days of future past. This FX is Procedural so you can apply it to any mesh you want,



open 3ds max  
create Thinking Particles System  
go to modifiers panel click on properties  
from TP system create Group and name it Active  
create two Dynamic set and name it 1- Birth 2- Run  
in birth dynamic set create matter waves from operators

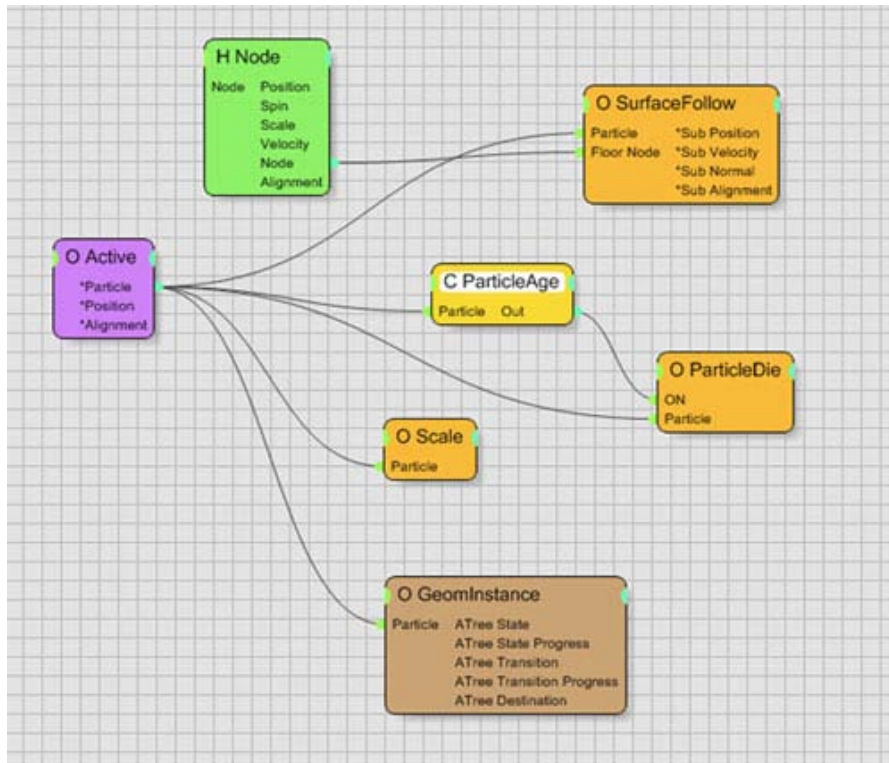
Open it  
pick object you want to scatter on it  
in Group : select Active Group  
make the other settings like the image (01) below



in birth Run set  
make ppass group and select the active group

create \*\*

Node from helper  
surface Follow From operators  
Scale From operators  
GeomInstance From operators  
particle Die From operators  
Particle Age From Conditions  
connected like the image below (02)

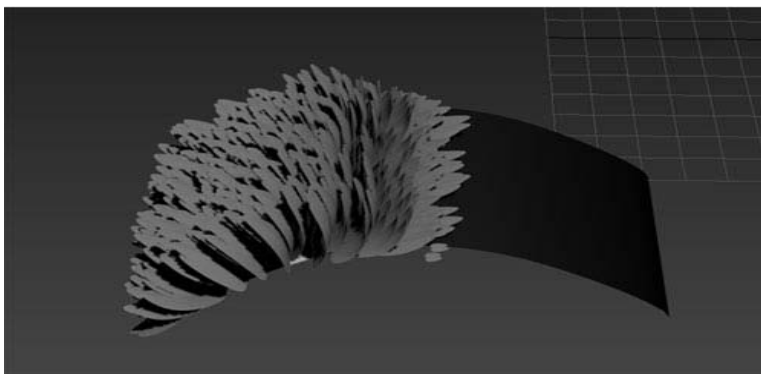


in node  
pick the same object to keep the particles follow if your object is animated

in Particle Age make it Absolute and set the age of you particles

In GeomInstance pick your feather to make scatter in the object pr you can use my Feather you can dwnload the scene file from here you can find it in the description

<http://player.vimeo.com/video/112587229>



if you need any help you can email me  
My Email : [salahinpeak@hotmail.com](mailto:salahinpeak@hotmail.com)



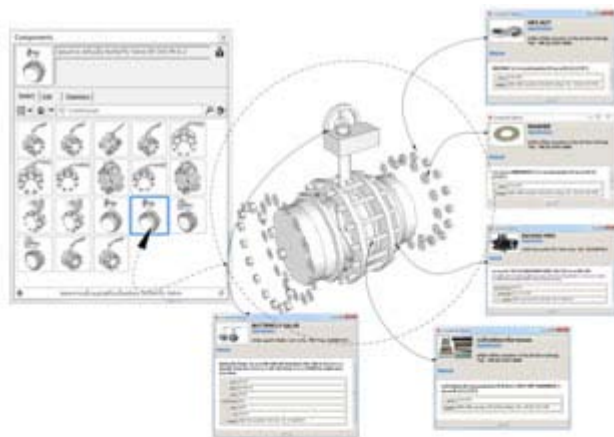
# Importance of sketchup dynamic components in construction

Warunyoo Songkran

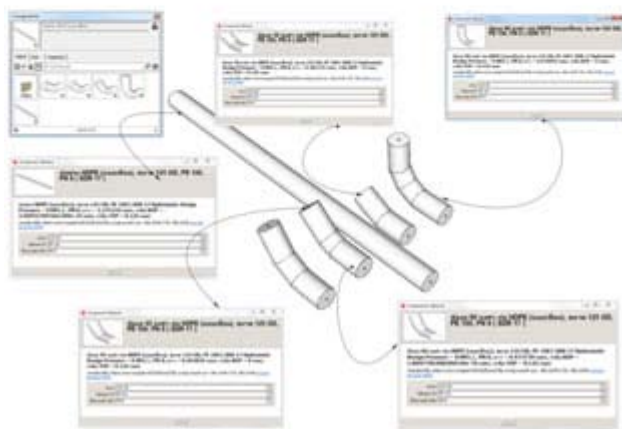
## PART 01- Making Component Database

The Dynamic components will represent anything in the construction world such as pumps, pipes, valves, steel, concrete or electrical instruments. The attributes that are assigned into the dynamic components can be simple pieces of extra information like Part Number, Cost and Weight. Attributes can also contain spatial relationships (like how two parts are positioned relative to each other), and behaviors (like animation and smart scaling). Some Dynamic Components are very simple (a pipe elbow with a part number attached), and some are very complex.

An example of my dynamic component database



Valve and fittings



Pipes and fittings

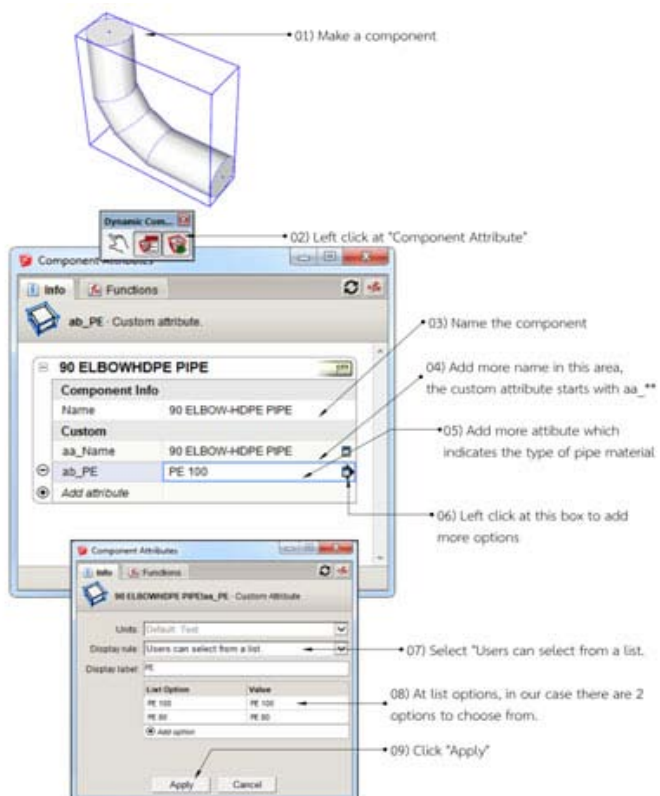


Concrete piles

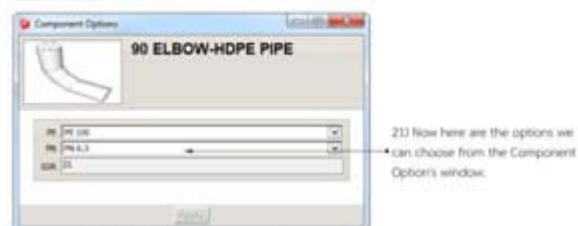
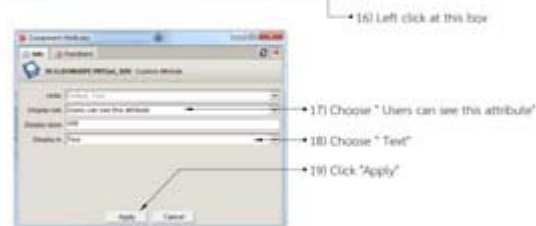
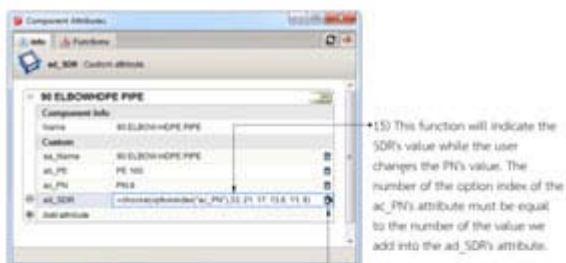
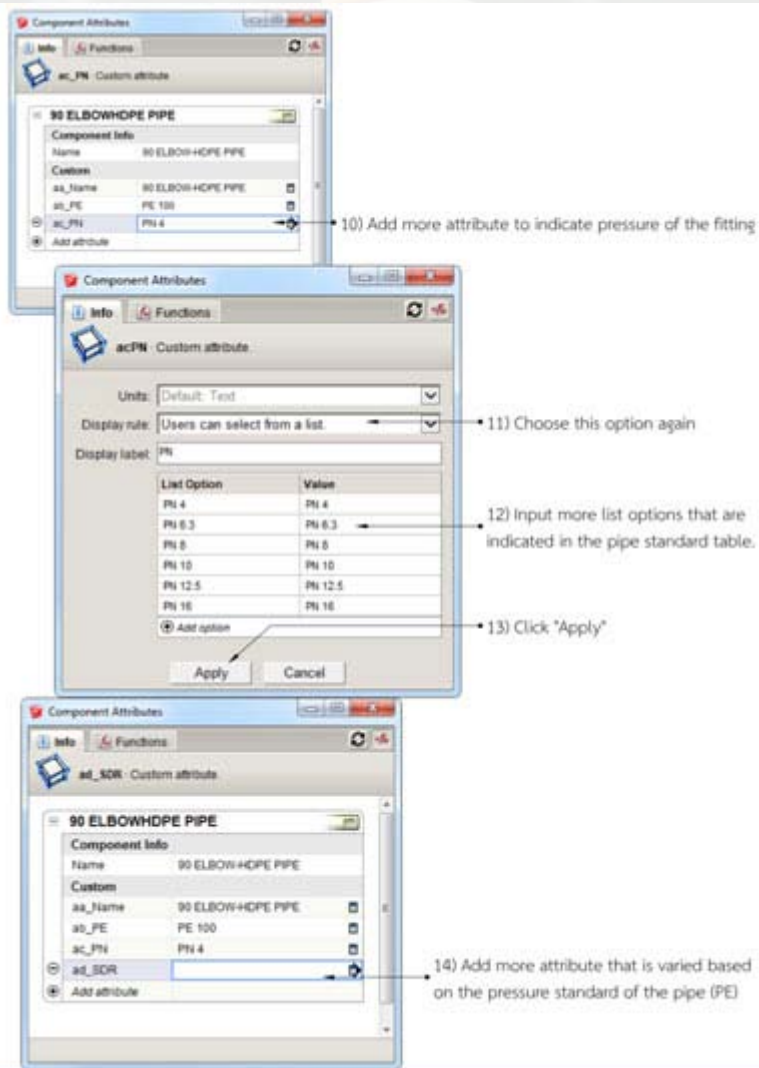


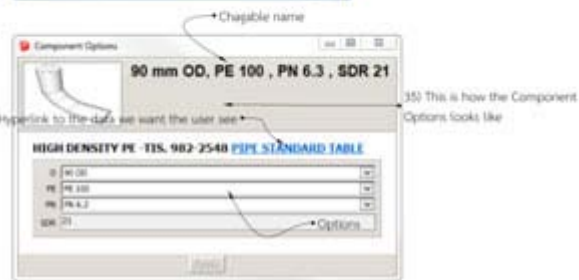
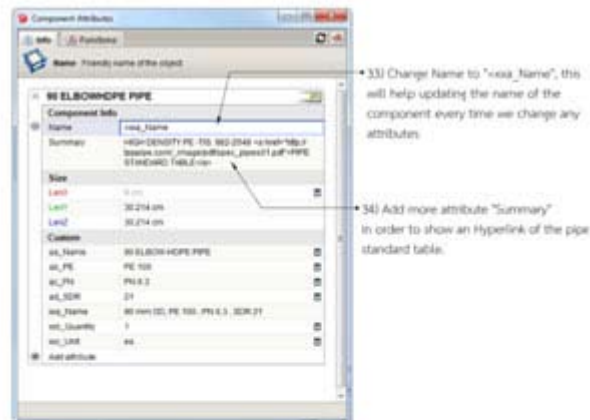
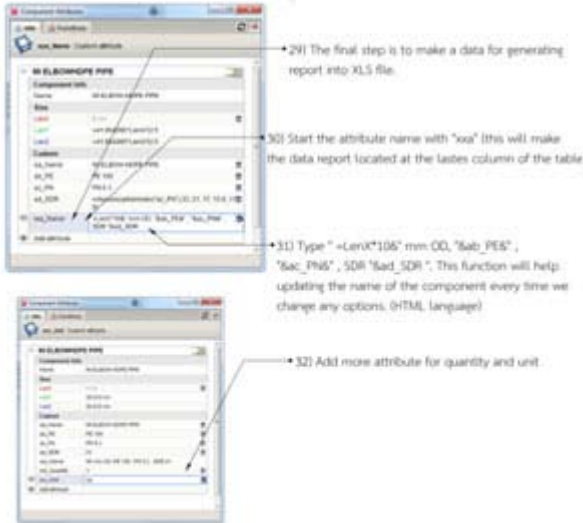
Steels

An example of how I make these components







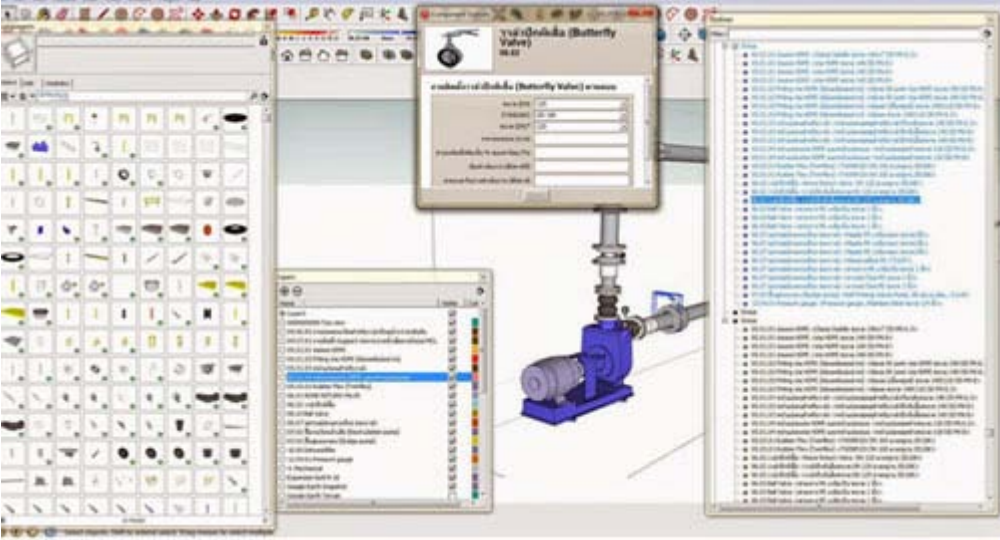
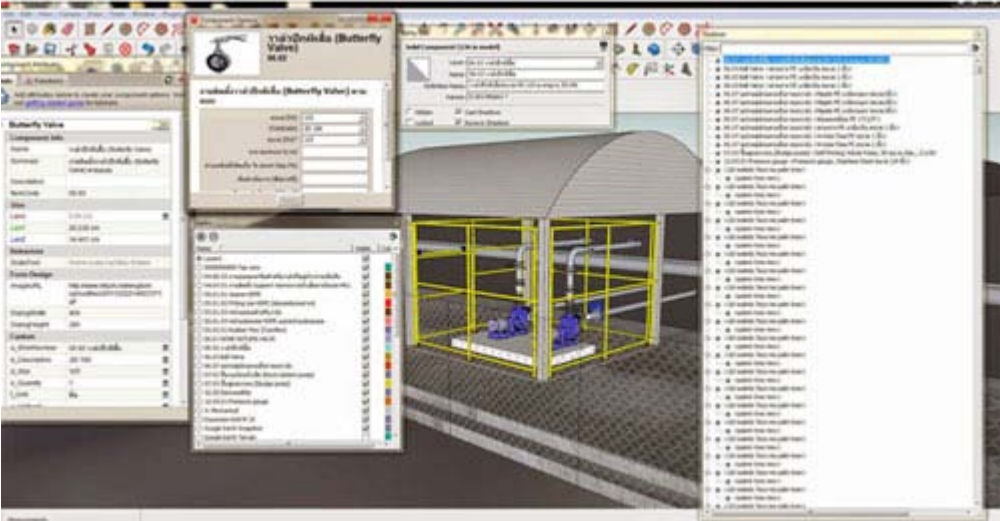
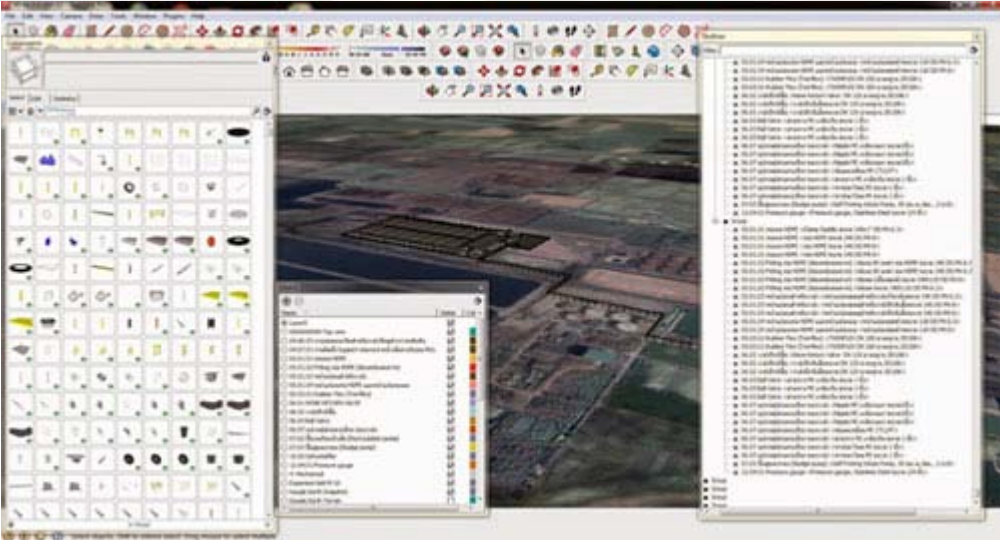


## PART 02- Assembly the database to make a construction prototype

By the collaboration between owners, construction management teams and contractors, I can assembly, move, rotate and scale all components in the model in the way that all people want to. The objective of this collaboration via the sketchUp model is to get the project prototype in which when it goes to the construction phase it will not change!. To do this is easy, firstly show the everyone the prototype and walk them through the model as if they are playing game. Everyone can change whatever they want to.

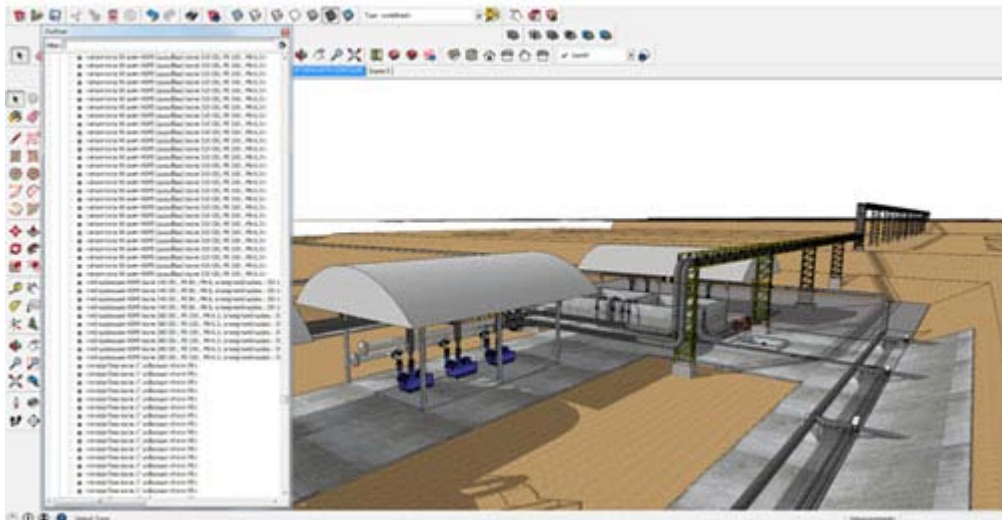
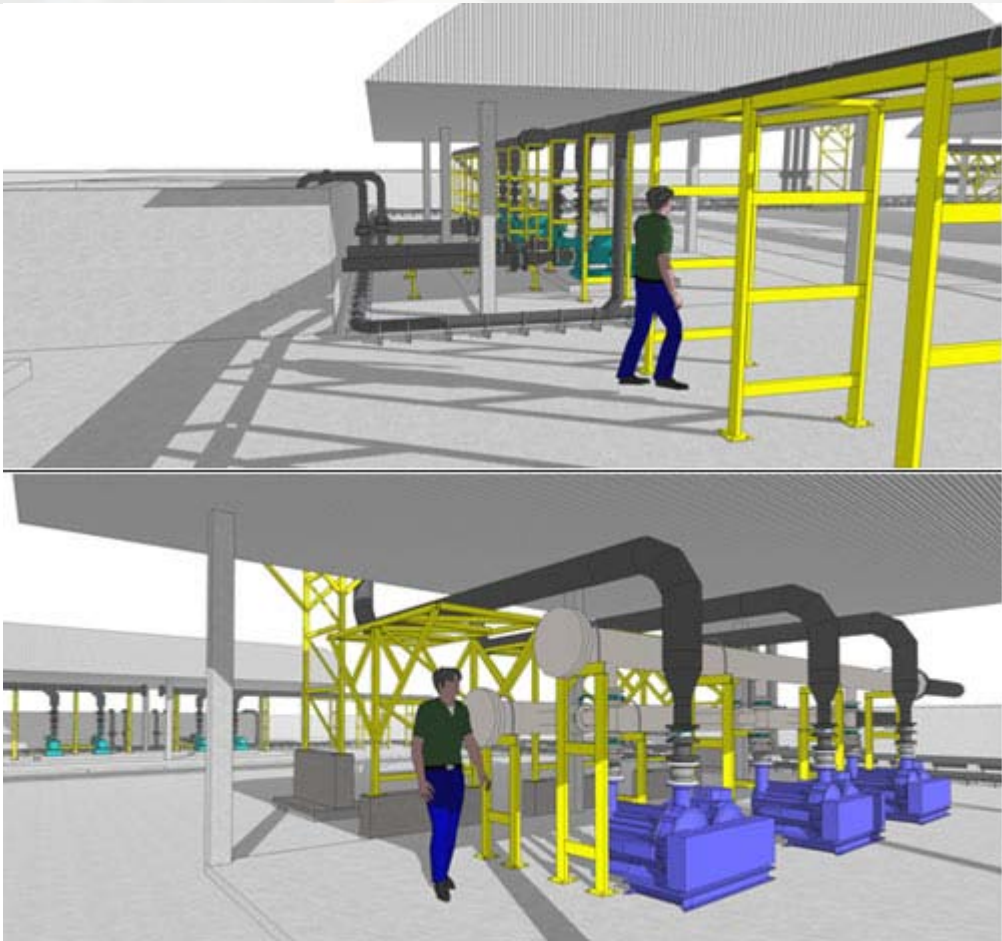
Examples of my works







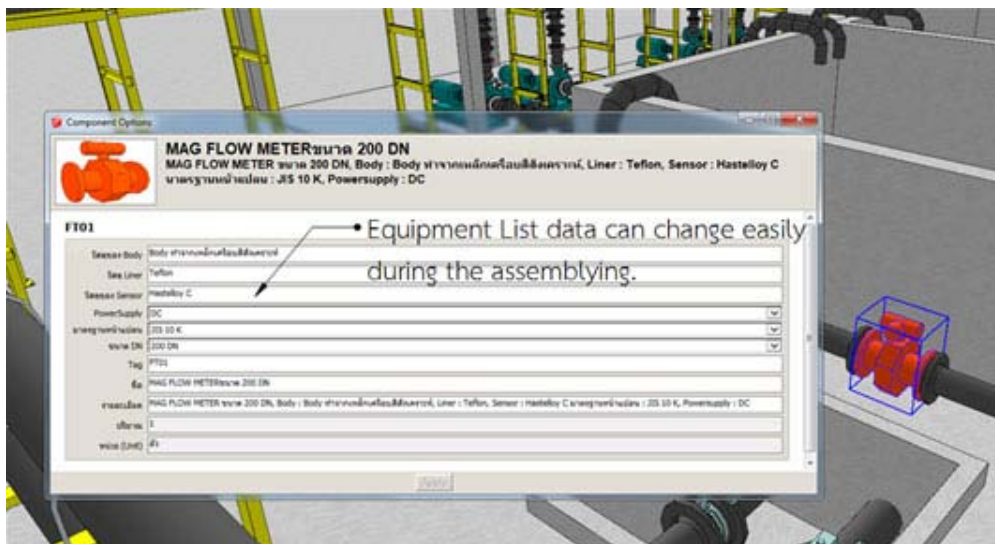




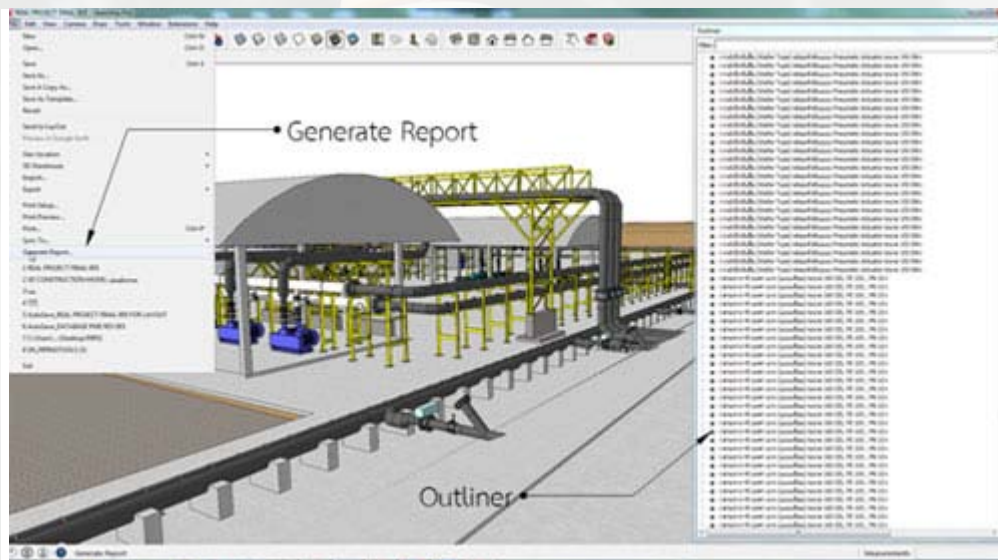


### PART 03- Bill of Materials, Bill of Quantity and Construction Documents

By using generate reports along with the dynamic component database I can make a Bill of Materials very quickly and more precise than ever before







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LENY	LENZ	MATERIAL	SCALETOOL	DIALOGWIDTH	DIALOGHEIGHT	AAPE	ABPN	SIZE	XXA_TAG	XXB_NAME	XXC_DETAIL	XXD_QUANTITY	XXE_UNIT	
1	8.856268	8.856268	0135_DarkGray	126	750	480	PE 100	PN 6.3	225 OD	L01	Waste HDPE (waste) 225 OD, PE 100, PN 6.3	Waste HDPE (waste) 225 OD, PE 100, PN 6.3	11.039841	unit
45	6.299213	6.299213	0135_DarkGray	126	750	480	PE 100	PN 6.3	160 OD	L05	Waste HDPE (waste) 160 OD, PE 100, PN 6.3	Waste HDPE (waste) 160 OD, PE 100, PN 6.3	113.567356	unit
11	11.023622	11.023622	0135_DarkGray	126	750	480	PE 100	PN 6.3	280 OD	L03	Waste HDPE (waste) 280 OD, PE 100, PN 6.3	Waste HDPE (waste) 280 OD, PE 100, PN 6.3	2.345243	unit
16	11.023622	11.023622	0135_DarkGray	126	750	480	PE 100	PN 6.3	280 OD	L03	Waste HDPE (waste) 280 OD, PE 100, PN 6.3	Waste HDPE (waste) 280 OD, PE 100, PN 6.3	112.279532	unit
6	6.299213	6.299213	0135_DarkGray	126	750	480	PE 100	PN 6.3	160 OD	L05	Waste HDPE (waste) 160 OD, PE 100, PN 6.3	Waste HDPE (waste) 160 OD, PE 100, PN 6.3	0.543963	unit

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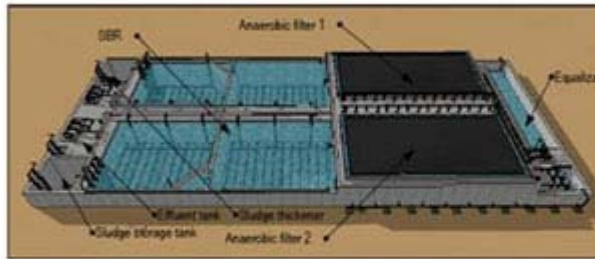
LayOut is the program I have been using for making construction drawing. It links the plans, elevation and sections of the finished model to the 2d drawings within the 2D CAD environment. Updating and changing the construction drawings can be done more easy than conventional 2d CAD like AutoCAD, because the 2d construction document in LayOut can update automatically when the sketchUp model is changed or updated.

WASTEWATER TREATMENT PLANT

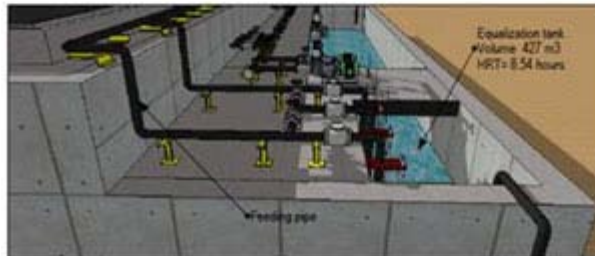
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IOTA  
Warunyoo Songkran  
PROJECT ENGINEER

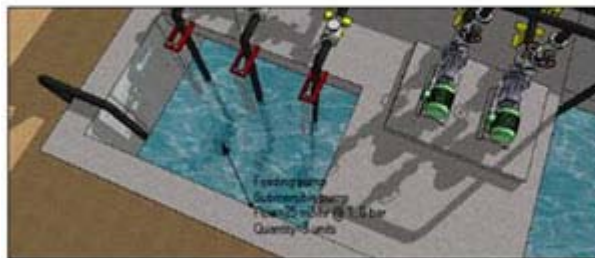
1



LAYOUT VIEW



EQUALIZATION TANK



FEEDING PUMP

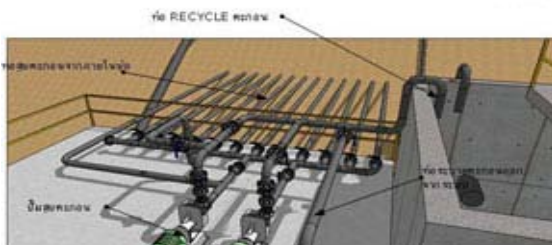
29-06-2011

Drawn by : Warunyoo

Project Elam Heng

MODIFIED COVERED LAGOON  
CONCEPTUAL DESIGN

2



มีระบบรีไซเคิลน้ำในระบบบำบัดน้ำเสีย โดยนำน้ำที่ผ่านการบำบัดแล้วมาใช้ในการรดน้ำต้นไม้และพื้นที่รอบๆ



ใช้ระบบหมุนเวียนน้ำในระบบบำบัดน้ำเสีย โดยนำน้ำที่ผ่านการบำบัดแล้วมาใช้ในการรดน้ำต้นไม้และพื้นที่รอบๆ

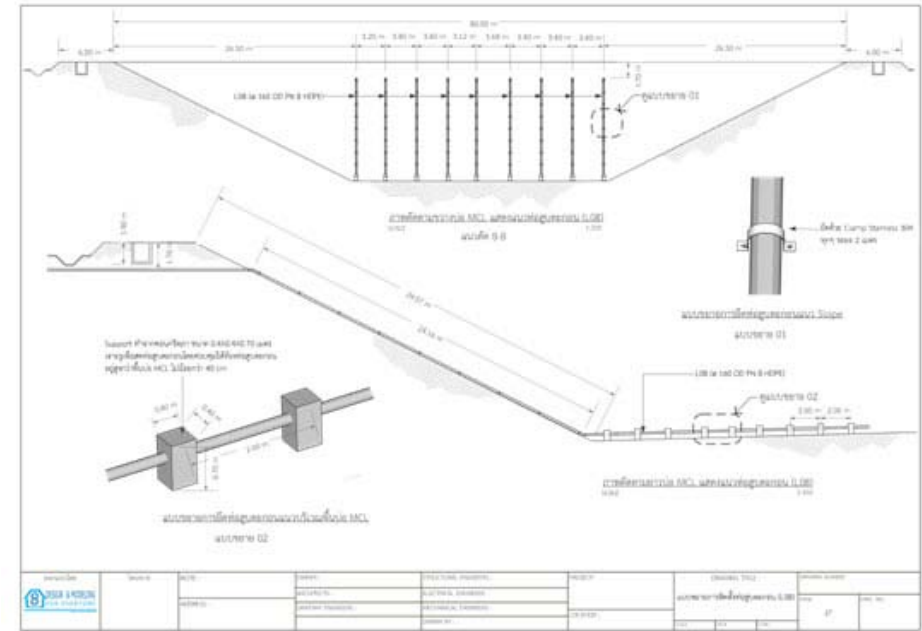
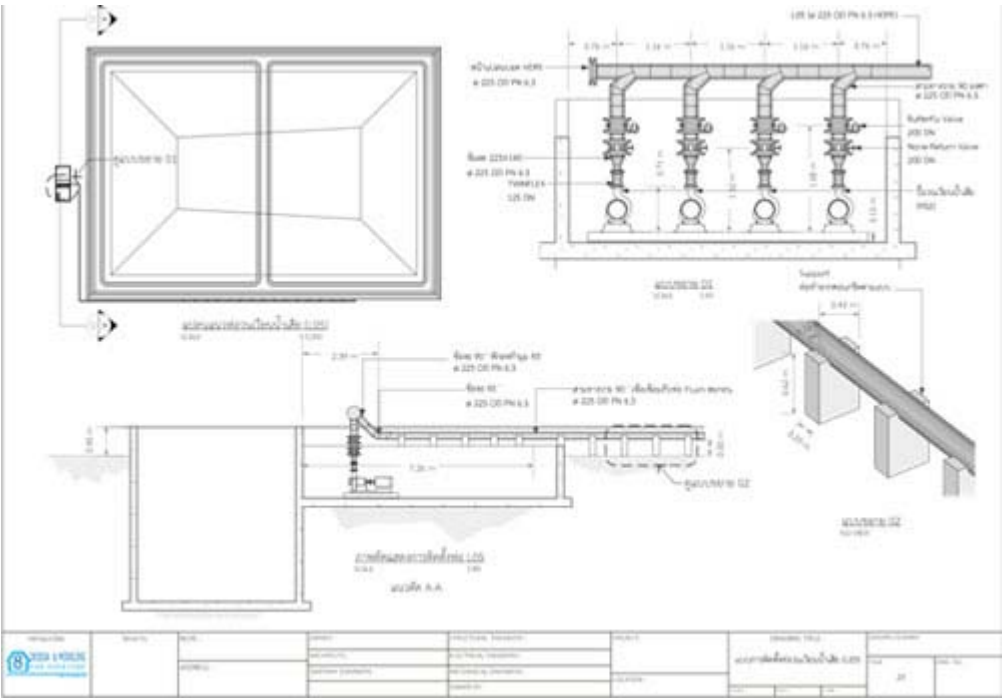
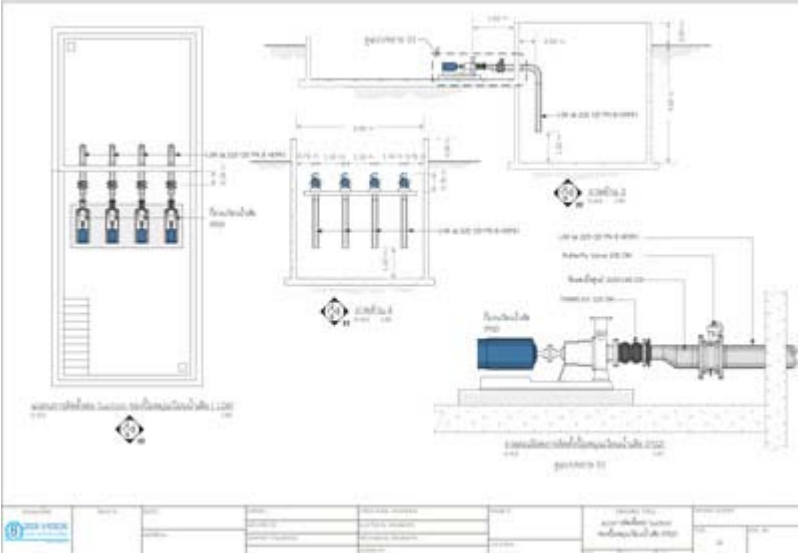


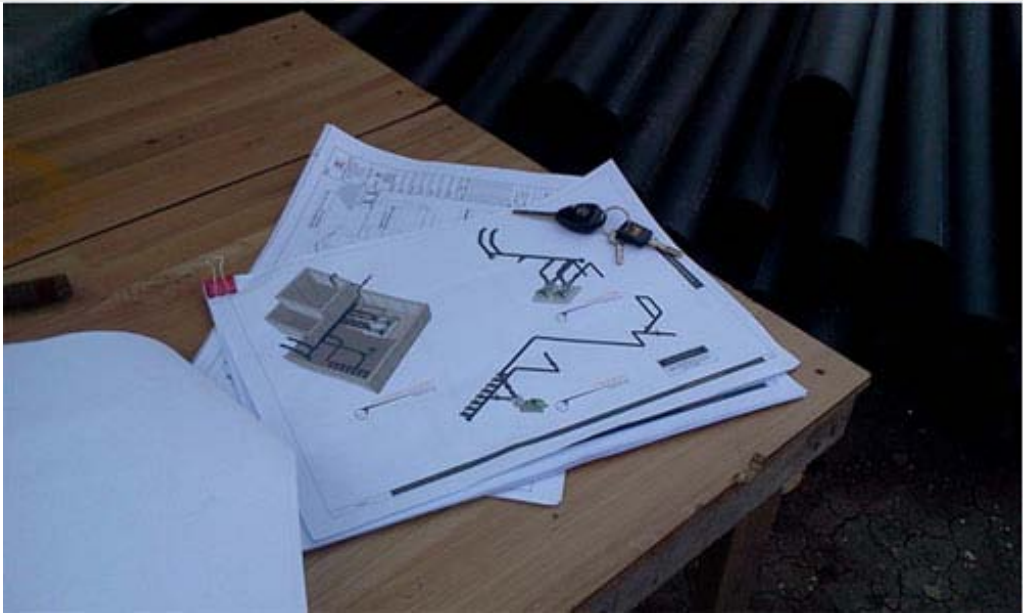
มีระบบรีไซเคิลน้ำในระบบบำบัดน้ำเสีย โดยนำน้ำที่ผ่านการบำบัดแล้วมาใช้ในการรดน้ำต้นไม้และพื้นที่รอบๆ

26/10/2554

W SONGKRAH









## 3D Printed Jewellery Collection for Men only

Debamoy Ghosh

You can find it in the market now. Earlier we have heard about 3D printed jewellery. But those were all for women. This time it is for men have some of those collections with the attires.

The [Cafe Costume](#) and designer pair [DAMN](#) and [Twikit](#) has created 3D printed Jewellery. They were encouraged by Kunstwerkstede De Coene's work.

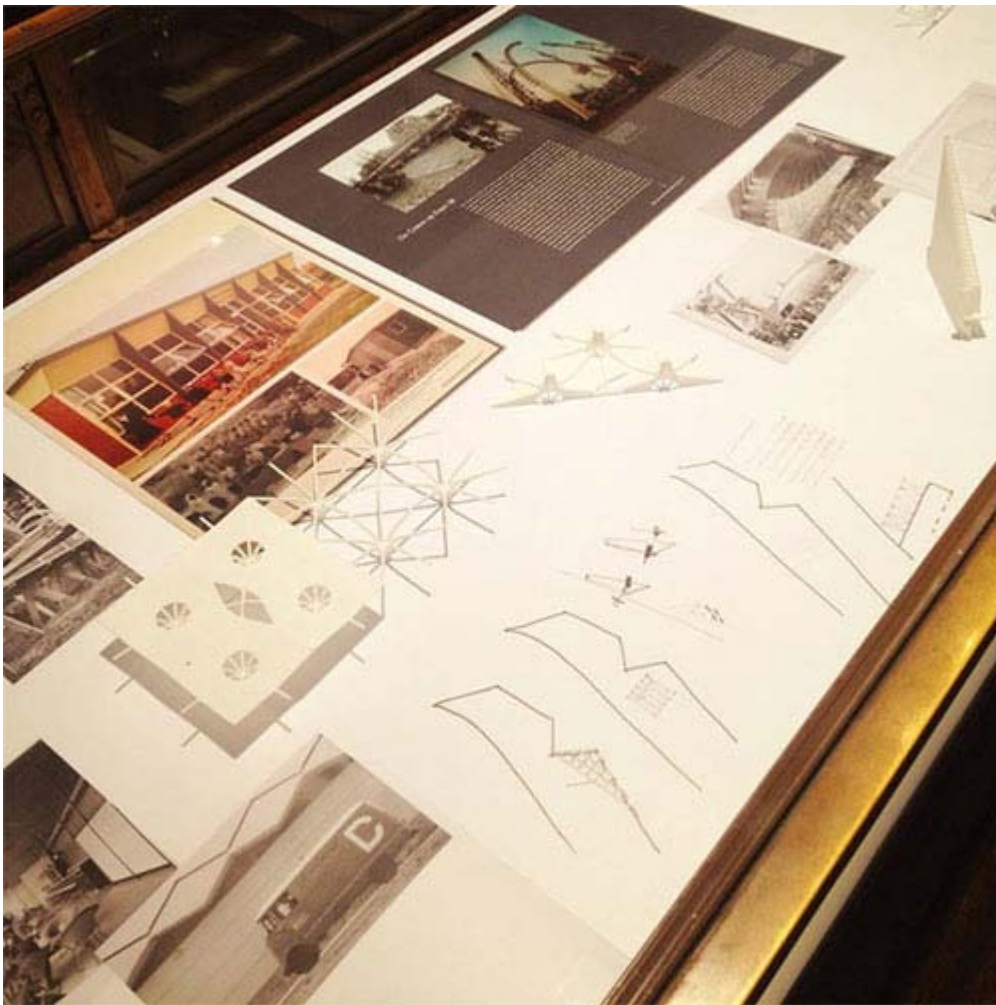
'De Coene' is famous for making the 3D printed cufflinks.

The artists - Caroline and Kim, from DAMN were enthralled to witness the work of De Coene. He has conventional nature work on wood.

Here the Business World Fair was the ultimate place for getting the out-of-the-box concept for those designers. The expo was the platform for many budding designers.

The design procedure and the result were come fourth during the Courtrai Interior Biennale 2014 at both Ventura and in the Café Costume shop on the Leiestraat.

A high-quality co-operation needed between DAMN and Café Costume for execution those jointly doing this assignment. Twikit here provides the technology of 3D customization. There is an easy to use option to place the choice of the designer's material likings such as silver or brass. Hit to the [cafecostume.twikit.com](http://cafecostume.twikit.com) for your best options.



Information and Reference:- [i.materialise.com](http://i.materialise.com) and the correspondent is Franky.

# Fast style of SketchUp 2015 and its working talent

Debamoy Ghosh

In the hand-drawn visualization, it is not for all time, looked like it is completed. Here, the designers have to styling the SketchUp control show and the settings which changes the way the model appears. The SketchUp team member -- Josh Reilly has made a blog on this topic, from which we are made an excerpt.

The style area is as follows: Applying, editing, Alignment of axes to axes, sharing, and watermark to be added to the drawing.

There are some more style, those are: Control of Browser, Browser Face panel, Browser Background panel, Browser Watermark panel, Browser details menu, Browser Edge panel, Browser Modeling panel.

The users can connect with the pre-defined style along with mixed attributing the elite exclusivity style. It is a practical and helpful access. Some of the style render faster, the others are sloth.

The designers' may desire to use Style settings in definite situations during modeling and appearance work.

## How to assign style scene:

The designer can assign styles to individual scenes in your SketchUp file.

- First of all, the designers have to select the Window > Styles menu item. Then the Styles Manager is displayed.
- The next step is to select a styles compilation from the drop list, please consider the 'Assorted Styles.'
- Then click on a style in the collection. The style is selected and applied to the current model.
- Then select the Window > Scenes. The Scenes Manager will be displayed.
- Click the Add Scene button (LOGO). A scene is added with the current style.
- Do again steps 2 to 5 for extra styles and scenes.
- Modifying a style assigned to a scene.

## The modification:

- First of all select Window > Styles. The Styles Manger is displayed.
- The select the In Model styles from the drop. The model styles are present there.
- The click on one of the In Model styles for modification.
- The select the Edit tab. The Edit panel is being exhibited.
- Now you can regulate the style as essential.
- Then click the update style in the changes button.

## What is the style render faster than other?

If you are working on the big model, the style that you are using is to be noted. The age setting panel is looking like those ages that you can get from this [link](#).

**The idea of fast style:** It is a brand new feature of SketchUp 2015. It is available in both the version of SketchUp Pro and Make.

The style setting that we are talking about is very fast. In the latest version of the SketchUp, a small watch is being showcased know the exact time taken. This is actually the main decisive factor of fast style.

But the user here can get his or her, own fast style. Here the concept of style browser is very important.





Image Courtesy: [sketchupdate.blogspot.in](http://sketchupdate.blogspot.in)

[help.sketchup.com](http://help.sketchup.com) - please hit this link to get more information about styles.

The users should stay away from the style choice; otherwise there is a possibility to of fall of work. The sketchy edges, profile and watermark can be crushed.

Here the users need to check out the [knowledge centre](#).

And how it is save change: [help.sketchup.com](http://help.sketchup.com)

The fast style can be taken to the sketchup model. Here is the Link to be hit get the [more information](#).

This is the small flow chart to do it.

Window > Style>

And then simultaneously select>Edit>Mix.

A Style somewhat like Fast Blueprint is a fine option while presenting the SketchUp model in a stylized fashion. But the smooth navigation and scene transition is somewhat the things that the user also wants. Users can also make a use of style without badge.

But as the old proverb prevails, unity is strength; similarly it has a big advantage if style and scene work together.

Here is the detail that how it [works together](#).

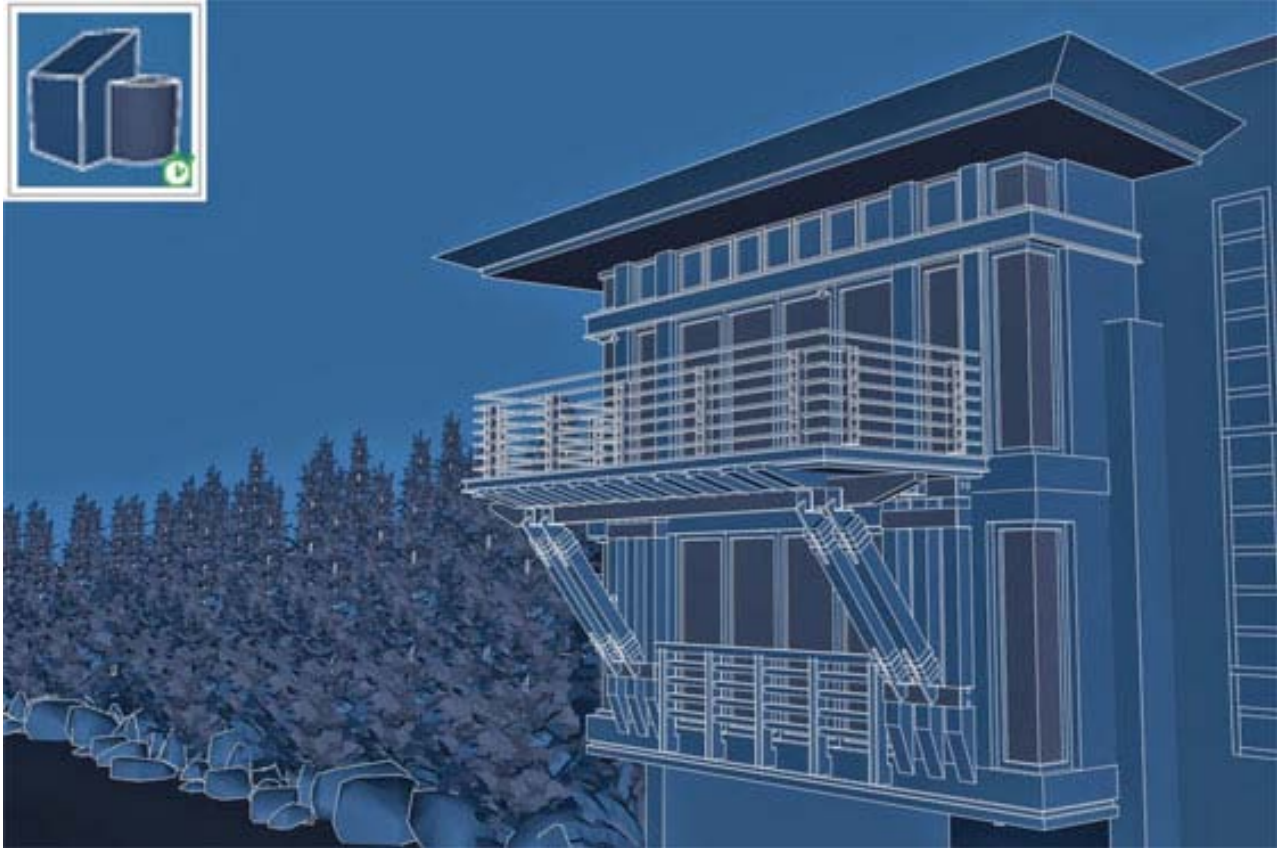


Image Courtesy: [sketchupdate.blogspot.in](http://sketchupdate.blogspot.in)

Ref: [sketchupdate.blogspot.in](http://sketchupdate.blogspot.in)



## 3D Model and Gadget that Matters

Debamoy Ghosh

Emirates 24/7 brings us some of the amazing gadgets some of which we cannot even visualize, a pen that recharge the cell phone or a wallet that alert you while lifting or it can even track the spot or a DVR recording TV programme. These are examples of 3D Modelling.

Joseph George, the correspondent of the publication recently brings us some examples:-

1. **This pen** not only writes well, but charges the phone. It also work as stylus. This product is called power pen. If your Smartphone possesses a 700mAh battery within, the pen can recharge it instantly. The tip of the stylus is prepared by rubber. It can be used by tab, phablet or any smart devices. But the power pen can write on the paper too like any usual ball pen. This device comes with black and gold in the market with approximately 15.5cm in length. The device will be a game changer in its market. It is at present selling at the price of 24.99 British pounds (Dh143).



Image Courtesy: emirates247.com

1. **The Smartphone sterilizers** are available in the market of UAE. It can remove 99 per cent of germ within some minute. It has double lamp disinfecting system and automatic cover. The Smartphone which that fit within the dimension of 125 x 225 x 40 mm are handy to it. The price tag is bit moderate: \$54 (Dh198).



Image Courtesy: emirates247.com

1. **KipstR** – Records TV when you sleep It is very common to many of us who fallen asleep and TV programme had gone off. This device can record TV programme. This is basically a TV recorder. It is a 3D printed device.



Image Courtesy: emirates247.com

1. **3D Pen**: - This pen can be used as charger too along with USB drive, stylus, spy cam as well as its core function of 3D modeling. It has the adjustable characteristic. It is called 3Doodler. This device is available on Kickstarter and then launched other parts of the world and then UAE.





Image Courtesy: emirates247.com

1. **GPS enable wallet:** - This wallet will come with GPS tracing ability and keep the police update the location if stolen. The device is priced at \$99 (Dh363).



Image Courtesy: emirates247.com

Information and image Reference:- [www.emirates247.com](http://www.emirates247.com) and Joseph George.

## 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](mailto: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](mailto: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](mailto: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...



**Debamoy Ghosh:** [debamoy@jobs2india.com](mailto:debamoy@jobs2india.com)

Pouring the confidence to budding 3D modelers is a challenge, which makes them believe that they can create a universe. I try to bring exciting stories that not only riveting read but put them the right technical path. After all, every right action needs believe and determination for fulfillment.