Welcome to the first part of the.. how shall we call it;   The SCF Guide to Post Processing. Yeah that sounds about right. The reason why I call it a guide is because of the fact that this is not always going to be a step by step tutorial where I hold your hand while we go through the steps of post processing (PP) a render.

I must warn you though, this will be an extensive guide meaning a lot of text... people who are here for a quick fix should turn back because I will wrap these guides around each other and you will perhaps not be able to follow what I am saying in later versions. For the people who are new to this. You have chosen an excellent place to start your journey into PP. Enjoy this guide!

So back to the guide, you can look at as if you were sitting in your (old) college classroom, I will expect you to understand some of the basics involved with handling a computer and it's programs and I will expect you to understand some basic principles about drawing in general. However you are here to learn so I will explain some things step by step, but this is more a guide to understand the principles behind PP than a tutorial.

Mind you I will be using several program's ranging from Sketchup to Photoshop and Illustrator if you don't have access to these, don't worry. Often a lot of other programs will have the same tools, but just a different interface.

Anyway before we kick off I would like to list the chapters I will be covering in Post Processing - Intermediate - Part 1.

1) Preparing your 3D model for rendering
2) Photoshop 101

Chapter 1 - Preparing your 3D model for rendering.

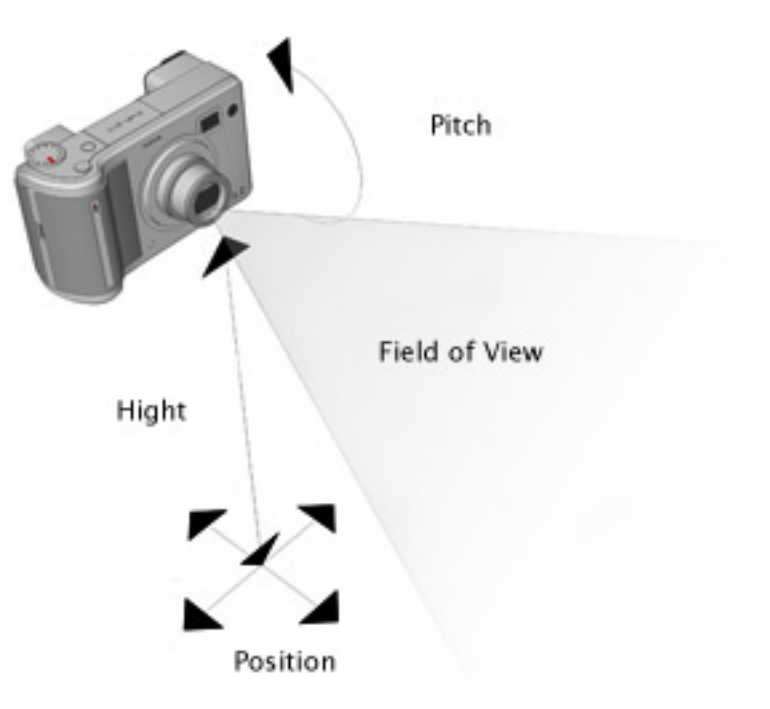
There are a couple of basic things you perhaps will want to PP on your render, everyone has to start somewhere so I will start with an example. Credit for the Sketchup model goes to jenujacob!

The first and most difficult thing perhaps is getting a nice camera position, you have to take several things into account here:

1) The height of your camera, if you want to make an overview render from a birds eye perspective you will have a lot less work when PP because a lot of the details will be lost. Often these renders are made for general overviews of the location. But the more interesting renders are the ones from eye level, say 165 - 175 cm above the ground. These often require a lot of post processing and are more fun to do because they give a real life impression of the model. So I recommend using these as your main means of communication for impressions of the model.

2) The angle of view of your camera, usually the standard with SU is 60 degrees, a nice setting and one we are used to, though our own field of view is a little larger than that. However our own field of view fades toward the edges. We can create the same effect using photoshop, so I would recommend a field of view of anything ranging from 65 - 80 degrees. You can also trick the viewer this way by creating the impression that the room, or model is bigger than it actually is. Remember: Anything pointed towards the perspective point get's optically enlarged when you play with the field of view settings. So rectangular tables should always be pointing away from you to create a deeper room, if you put it perpendicular to your line of view it will make the room less deep but more wider. Although that these are basic interior design rules, when you adjust your field of view these optical illusions will get amplified.

3) The pitch and location of your camera, a lot of the times you will want to get a lot of stuff crammed into one render. My advice don't put your camera too close to your model, it will create a crammed feeling of your render while often you want to create the impression of big rooms and a big space. So choose your camera position and pitch wisely.



The next thing you will want to do is fixing your camera position in the 3D model, you might be needing that exact same view but in wireframe or in a different style later on. So add pages lock your camera but make sure you can return to that exact view.

Now that those basics are covered we will move on to the actual exporting of the image. There are several means to which you can export from a 3D program. The one I miss most in Sketchup is the .tga format short for Truevision Graphics Adapter, but more often refered to as the Targa files. Though these images experience a small form of quality loss they do however contain the vital Alpha Channel. A better format is perhaps the .tif or more well known as the TIFF format, TIFF files also support the Alpha channel, however SU doesn't export the Alpha Channel with the TIFF format.

There are ways around this, though be it difficult you can assign a certain colour as your indication of transparency in photoshop, though you would have to play around with styles and such to achieve this effect. Something I will cover later on in the advanced guides.

But in general the good old .jpg or JPEG format will work more than fine. Remember to export as big as you can on high quality. Unfortunately I am limited to a 4000 px wide export but try to export as big as you can. This will make PP a lot easier because of the simple fact that everything is better to see and click and you can swipe your small mistakes under the carpet by resizing. If you didn't resize those mistakes would be a lot more visible.

Next thing that is more than just important, it defines everything about your render, without it there would not even be a render. In sketchup when you are just exporting as a 2D jpeg you don't have to worry too much about this, but in almost any other 3D program this is a very big deal and often a skill on its own. We are off course talking about light.

Because this is the first part of the series intermediate I will leave out the aspect of creating your own lights and the effects that that will have. The main thing you will have to know when setting up your lighting in SU is that you will have to balance between beauty and visibility. In my opinion nicely cast shadows can improve a model and will enhance the mood, however you don't want to darken the model too much because you will lose a lot of detail that way. So balance between these two.

Chapter 2 - Photoshop 101.

Why are we using Photoshop (PS) might be the first question that comes to mind here, why not a program almost everyone has access to such as MSpaint and MSword. Well the answer to this is quite simple; MSpaint and word, how brilliant these programs are in their own field PP goes beyond that and you need a decent program for that. So if you haven't got PS I recommend you get it fast.

The basic reason why we use Photoshop is because of the following three:

Number one: it allows us to use transparency and active selection
Number two: it allows us to work in layers
Number three: it remembers the stuff you do

In this guide I will also be mentioning several shortcuts which are PS own, use these; they will make your life a whole lot easier.
Again explaining by example I will teach you about the power of several tools in PS and how you can get the most out of them to PP your render.

To give you an impression of what we will be achieving in this brief introduction to photoshop look at the image right next to here, we will go from a plain SU render to a customized PP render as seen on the right of this image.

So we start off by exporting the basic image from Sketchup; shadows and such included. Over here you see the nice eye level perspective shot I shot.

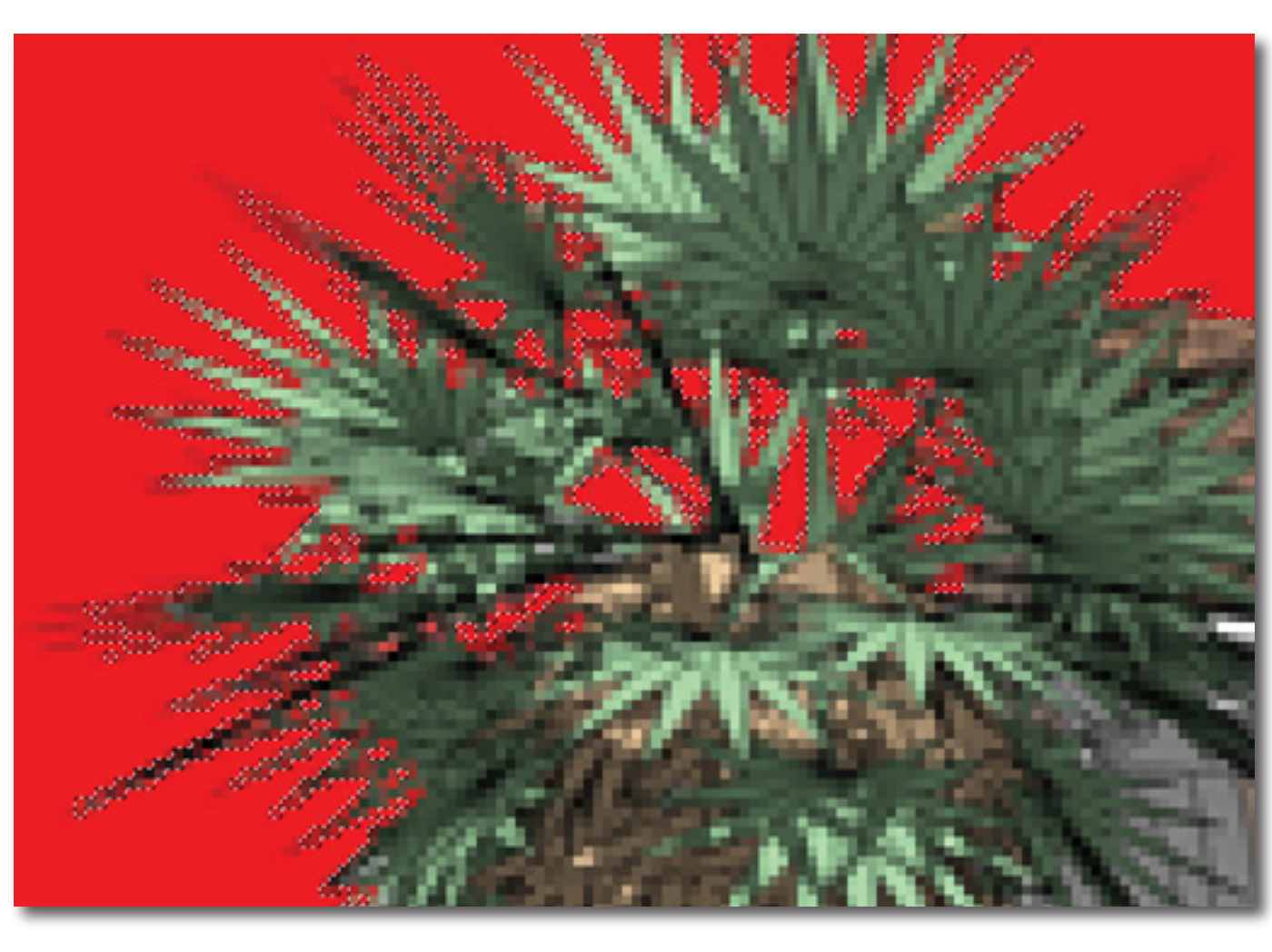
The first thing you will want to do is delete the background because we will be replacing this with a nice sky. One more fitting to this image. The easiest way was to select the Alpha Channel but seeing we don't have access to this we will have to work around this manually there are two ways to erase this. One with a layer mask, two with simple selection. We will use the latter for now.

So what we do is we duplicate the background layer (Control J to duplicate active layer) next we delete the original background layer then we pick up the magic wand tool, what this tool does is it will select any colour you click on and all of the same colour connected to that. So if we click on the white background that will delete all the other white connected to it. As you can see on the right over there, I deleted a lot of the background including some of the spots between the pillars.

However when I create a red layer behind the render (control N to create a new layer) set your background colour to red and fill that layer (Control Backspace) now when we look more closely we will still see several white spots. In the next image you will see what I mean.

Over here you will see the white spots I am referring to, the white spots between the leaves.
Now to also delete these will take forever if you use the magic want tool, so we will take a shortcut here. We will use the colour selection tool. And we will select the colour white. Now what this will do is it will select ALL white in the image. Meaning that you can now easily use the eraser tool to delete the remaining white between the leaves.

Here you see the active selection I made using the colour selection tool. and it's also after I deleted several white edges from this. Now you will have to play with the slider of the colour selection tool to get a decent selection that will not select too much of the image and not too little so that you will still see the white edges of the image.



So after that we will go on adding a sky to the image, now going by the shadows this will be a late evening shot.
So I went online to stockexchange http://www.sxc.hu/ a great site for this kind of thing, large images and great quality register there and you will suited up with stock photo's for the rest of your life. Other great sites (be it for textures or for stock photo's) are:

http://www.imageafter.com/

http://www.mayang.com/textures/

http://www.morguefile.com/

http://browse.deviantart.com/resources/stockart/?order=9&alltime=yes

http://local.wasp.uwa.edu.au/~pbourke/texture_colour/

As you can see I pasted the sky on a separate layer behind the original render. You might have to resize that layer (Control T).

In the image to the right over here you will see that I made several adjustments to the render to make the colour of the render more fitting to the backdrop we just put in. You can achieve this effect in three different ways:

- Colour balance (Control B)
- Hue/Saturation (Control U)
- Curves (Control M)

My favorite for this kind of editing has to be colour balance though because you can adjust the colour of the highlights, midrange and shadows separately. Again just play with the sliders and find out what suits the situation you just laid down best. In this case it was a red/yellow tint that I added to the render. One more thing not to forget is to duplicate the render layer (Control J on active layer) and hide that so that you will always have a backup in case you make too many mistakes and want to start over. (You can also save the file under different names (V1.01, V1.02 etc..)

However I still wasn't satisfied with the entire look of the render, it was still too bright. So I decided to play around with the brightness and darkness and levels to give the render that "dusk" feel.

Levels (Control L)
Brightness Contrast (Image -> Adjustments -> Brightness/Contrast)

Levels I will be covering in other versions of this guide seeing that these are simply a merge between colour and light adjustment.

Unfortunately I didn't get the effect I was hoping for with this. But there is another way, what I did was I duplicated the render layer (Control J) and I put the blend mode of the layer on overlay. what this basically does is it intensifies the colours already there and that was exactly what I was looking for.

The next thing we will look at is the grass, off course the grass we have here is a little boring, so we are going to spice things up. But how are we going to select all that grass so that we can replace it? We have to return back to the 3D model, now you can see why we saved the camera position so that we can make a new render on the setting monochrome this time so that we can make a clean selection of the place where the grass is. So render monochrome with all shadows off and insert thins image in a separate layer above all other layers in PS now, select the places with the magic want tool (sensitivity should be around 12 to get a good sensitivity here) and while the selection is still active create a new layer (Control N) above the monochrome layer and fill the selection on that layer with the colour red (Red as background colour and Control Backspace), after that hide the monochrome layer.

As you may have noticed we use a lot of layers, it might be wise to name your layers while you are creating them so that you can keep track of which layer is what. Personally I find this a time consuming effort and in files with 5 layers or 10 this isn't necessary, however when you work with psd's with over 150 layers then I would recommend this.

So why did we create a new layer and filled it with red where the grass used to be? Simple to get a quick selection going, we also could have used masking but as said before I will cover that in later guides. For now this is the easiest way. Now when you Control click the Icon in front of the layer in the layers panel it will automatically select anything that is in that layer, in this case it will automatically select the grass.

So we go back to a stock site and find ourselves a nice patch of grass that fits our needs. Don't mind the colour of the grass, in PS colour is relative and can always be adapted. Focus on the perspective of the grass that is the thing we are looking for here. Again you might have to resize (transform) (Control T) the layer to fit your needs. There is a trick with this however, what you will have to is align the front of the grass with your "feet" so that the grass at your feet is not too big and not too small, after that you will have to make sure that the grass at the very end (in this case I focused on the left corner of the building) and make sure that it's not too big there. What might be helpful is to know that distorting the ratio x,y of the grass layer is actually recommended here to get a good result. Distorting this ratio will actually allow you to adapt the perspective of the grass.

Now that is done we are going to cut out the grass we need. This can be done with a clipping mask which will allow you to actively transform your grass but I will cover this in later parts of the guide. For now we are going to select the layer we just made with the red in it we will call it the red layer for now, by control clicking on the icon in front of that layer, now we got the grass selected. But we don't want to delete the grass, we want to delete the obsolete grass. So what we do is we will invert the selection (Control Shift I) and go to the grass layer and we will press delete.

And now your grass is perfectly trimmed between the borders. I will cover how you can make some of the grass stand out against the edges in later parts of the tutorial. But often this is done by clone stamping parts of the grass onto the borders.

The last thing we will have to do is transform the colour of the grass so that it will match the colour of the rest of the image. Again go ahead and play with the colour balance and levels and curves and such to achieve the proper effect.

As you can see however I might have overdone it with my grass and it looks kind of dead here, watch out for that :P.

Also another thing you might have noticed is that my grass might be a bit too large or small in the front or back. You can always adjust this by clone stamping some grass in place there.

So on the right we have our finished render for now. Looks a lot better than what we started off with doesn't it?

Anyway that is it for Part 1 of The SCF Guide to Post Processing - Intermediate. I hope you enjoyed it and more guides will follow soon. I will write these guides according to questions I receive so if you got more questions these are always welcome, no matter how small or big.

Written by Rob Moors, special thanks goes out to jenujacob for the 3D model!