



How to create Faux Depth of Field using Photoshop.



In optics, particularly as it relates to film and photography, the depth of field (DOF) is the portion of a scene that appears acceptably sharp in the image. Although a lens can precisely focus at only one distance, the decrease in sharpness is gradual on each side of the focused distance, so that within the DOF, the unsharpness is imperceptible under normal viewing conditions. (WIKI) You can *fake* Depth of Field relatively easy. This tutorial will guide you through the steps to give your Terragen2™ renderings that special touch using Photoshop.

1. Create a scene in Terragen2™. For this tutorial I created a relatively simple scene using four tree and plant populations a rock and couple Butterflies. **Image 01**. Make sure you render your scene at a high quality resolution for better results. I will explain why as we move forward.



Image 01

2. This is where the fun starts as you began to set up the Distance Shader in Terragen2™ to create a depth image. Setting up the Distance Shader is pretty straightforward and will be attached to all objects in your scene. **Image 02** is a screen capture of my scene with all populations and object bounding boxes with Preview instances enabled.
3. Disable the Preview instances under the Objects Tab for all your objects and populations so all you see in the Render Preview Window is your Terrain. See **Image 03**. Your objects and populations will still render with the Preview instances unchecked. This will allow you to better see the Distance Shader values change how the gradient appears on the terrain. **NOTE:** For single objects you will uncheck the *Enable* toggle to hide the object. Make sure you toggle it back on when you begin to render your depth image or the object will not render.

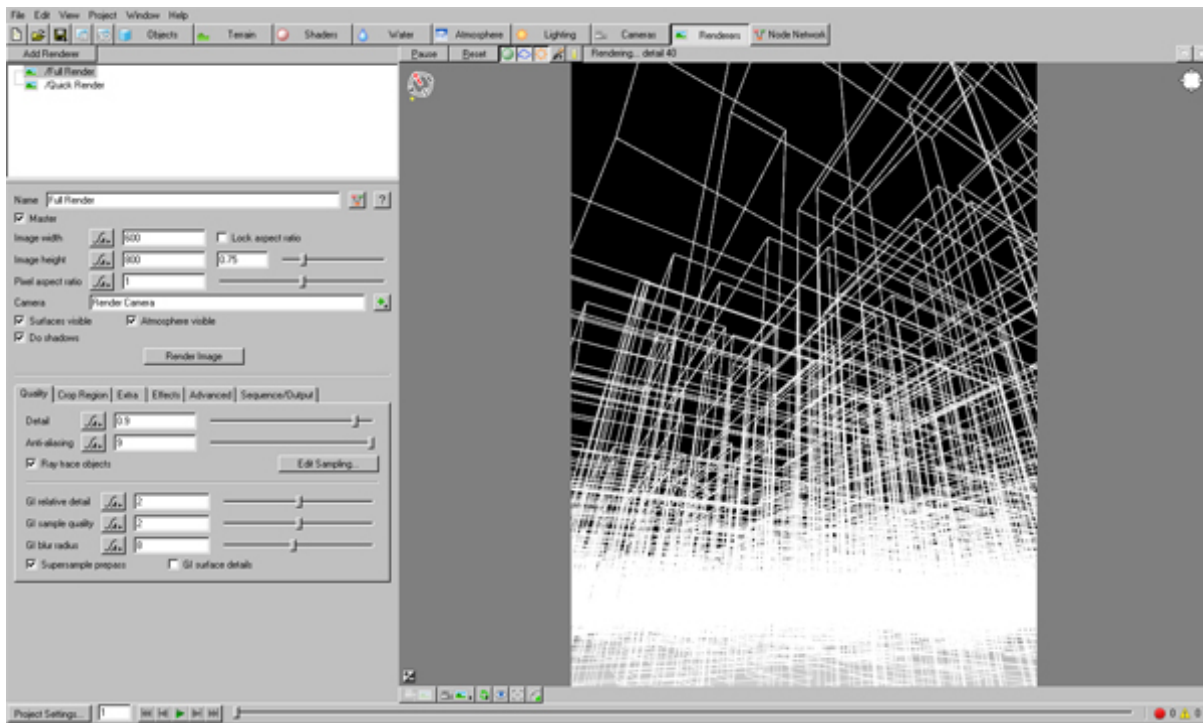


Image 02

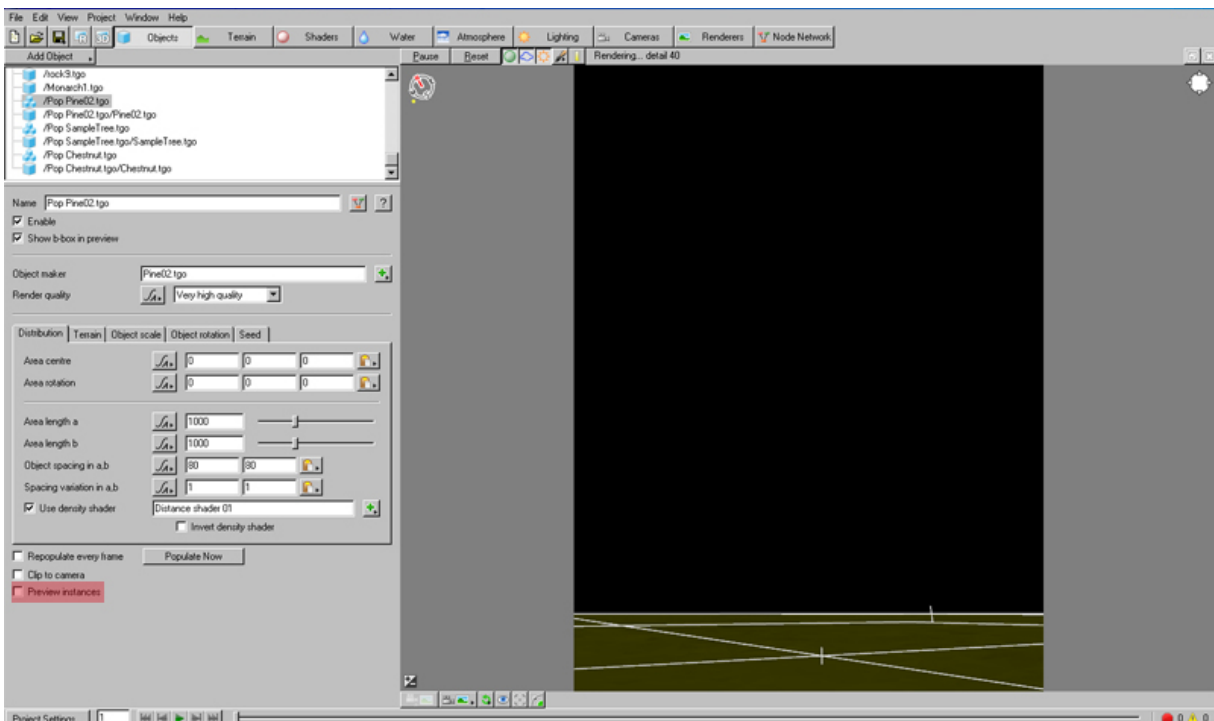


Image 03

4. Open the Shaders Tab and Click on the Shaders entry on the left side of the Node Network Window. Now, Right click in the Node Network window to create a Distance shader node. See **Image 04**.

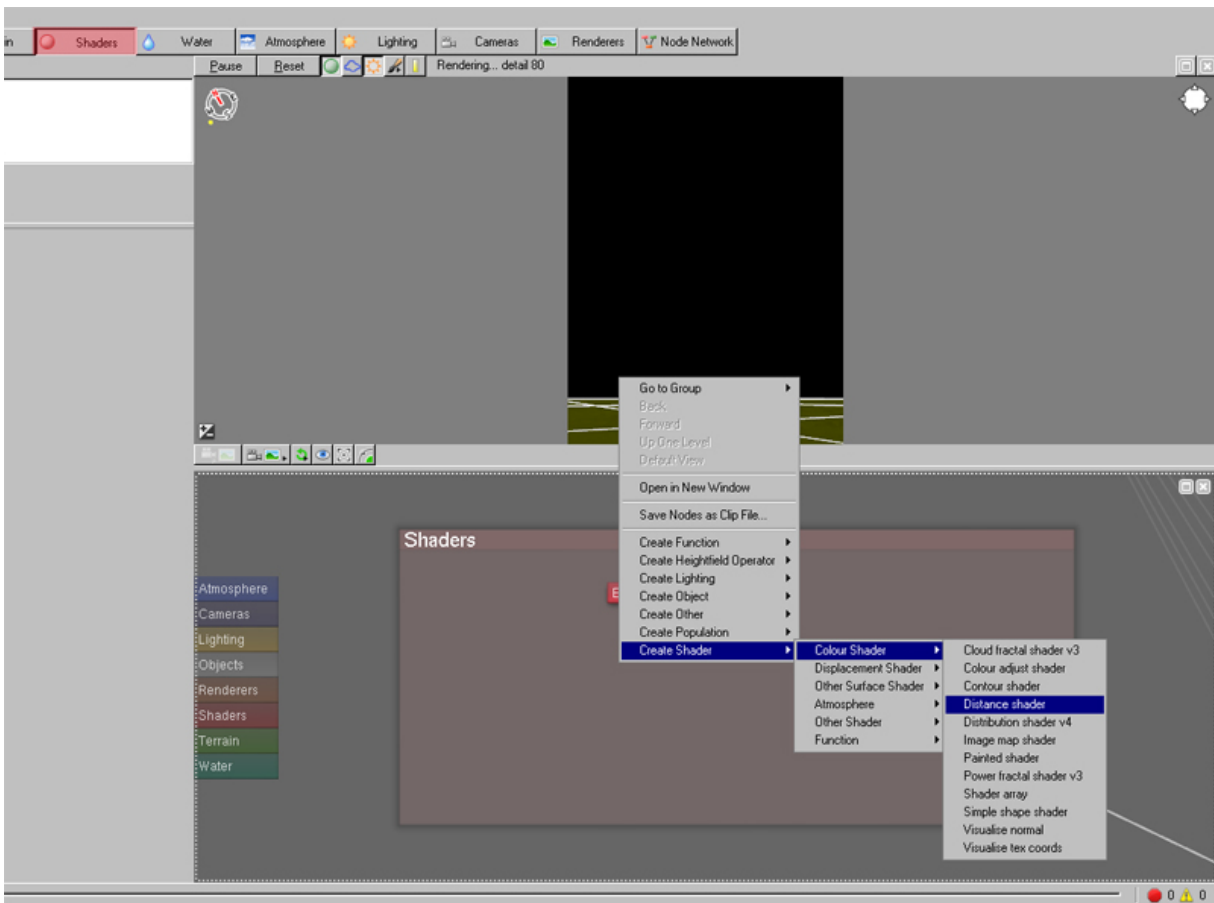


Image 04

You have just created a Distance shader node which we will use to create a depth image for use in Photoshop along with our rendered scene image. Now here comes the somewhat challenging part. The Distance Shader generates color based on a computation of distance into the scene from a specific camera. You can specify the "near" and "far" colors, and the distances within which the shading will be performed. The output of a Distance Shader can be used to control surface textures, populations, even clouds and other scene features by distance from the camera, allowing you to for example specify that there are no clouds near to the camera and that cloud coverage increases with distance. (Terragen 2™ Node Reference: <http://www.planetside.co.uk/docs/tg2/noderef/>)

5. Now we will make the necessary connections and value changes to get the Distance shader to work for us. Don't worry, I'll walk you through it.
6. If you study **Image 05** you will see the steps to connect the Distance shader to the current Render Camera, the last shader node in the Shader node entry and to the Planet Object. Also, the numerical values and color swap changes needed to get this to work right. Once you get the correct values the way you want them then it's easy to connect it to your objects and populations.

Let's get started.

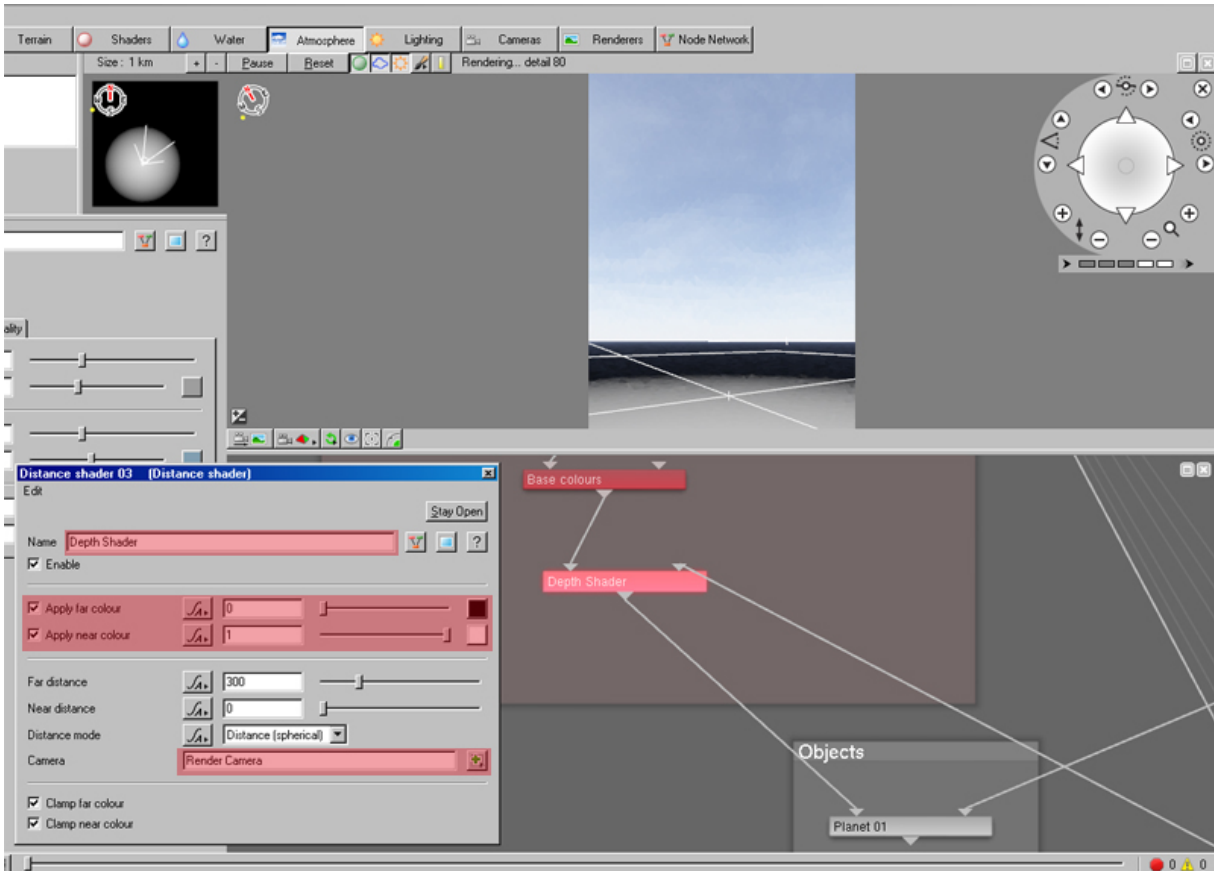


Image 05

7. Double click on the newly created Distance shader in the Node Network window to open it's configuration dialog box. We will make some changes and connect it to the Render Camera and Planet object then connect the last shader in the shader network to the Distance shader. In this case I connect the Base Colours to the input of the Distance shader. I have highlighted, in **red**, where all the changes take place in the Distance shader dialog box.
8. Rename the Distance shader to Depth Shader. You can rename it to what ever you want. Change the Apply far colour to black and the Apply near colour to white. In the Camera heading click on the green plus sign and assign the Render Camera. This will automatically connect the Distance shader to the Render camera node.
9. Drag the Distance shader Output **wire** and connect it to the Planet 01 Surface shader input. **See Image 05**. Now drag the last shader Output **wire** to the Distance shaders Input node. In this case the last shader in the shader network is the Base colours shader.
10. Now we will experiment with the Far and Near distance values to achieve the gradient distance we like, In my render I used 300 for the Far distance value and 0 for the Near distance, As these values change you will see the result of the white to black gradient in the preview window. It's important to note that all objects and populations within the white area will be in-focus and as the white gradually turns to black any objects and populations will gradually go out of focus. The numerical values you use will be different depending on the scale of your project. Experiment.

11. When you are happy with your results, make sure to enable your objects and populations. Now that you are confident with your Distance shader settings, it's time to attach them to your objects and populations. Depending on how many objects and populations you have in your scene will determine how long it will take to attach the Distance shader.
12. Select the Distance shader in the node network window so it highlights and do a Ctrl + C on your keyboard. This will copy the node to memory.
13. Navigate to your Objects heading in the Node Network window and select the first object under Planet 01. Right click and choose Internal Network. **See Image 06.**

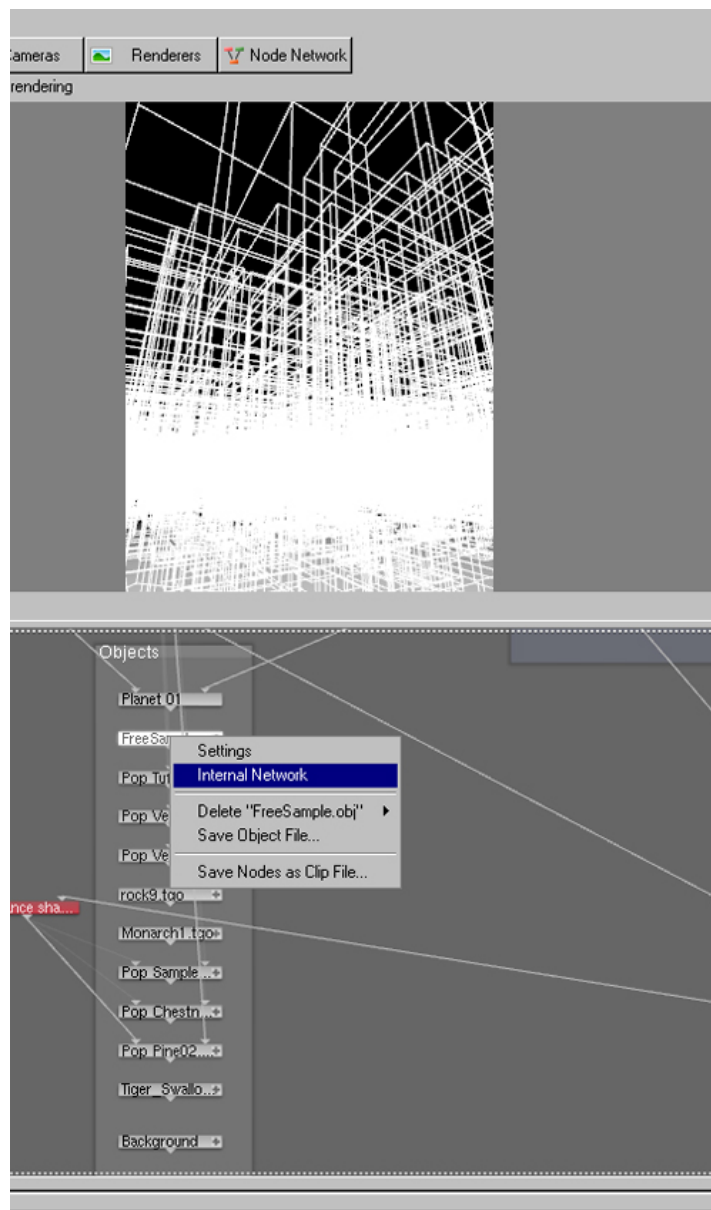


Image 06

14. This will take you to the Internal Parts shader node of the selected object. Ctrl + V to copy the Distance shader in the window and connect the node wires as shown in **Image 07**.

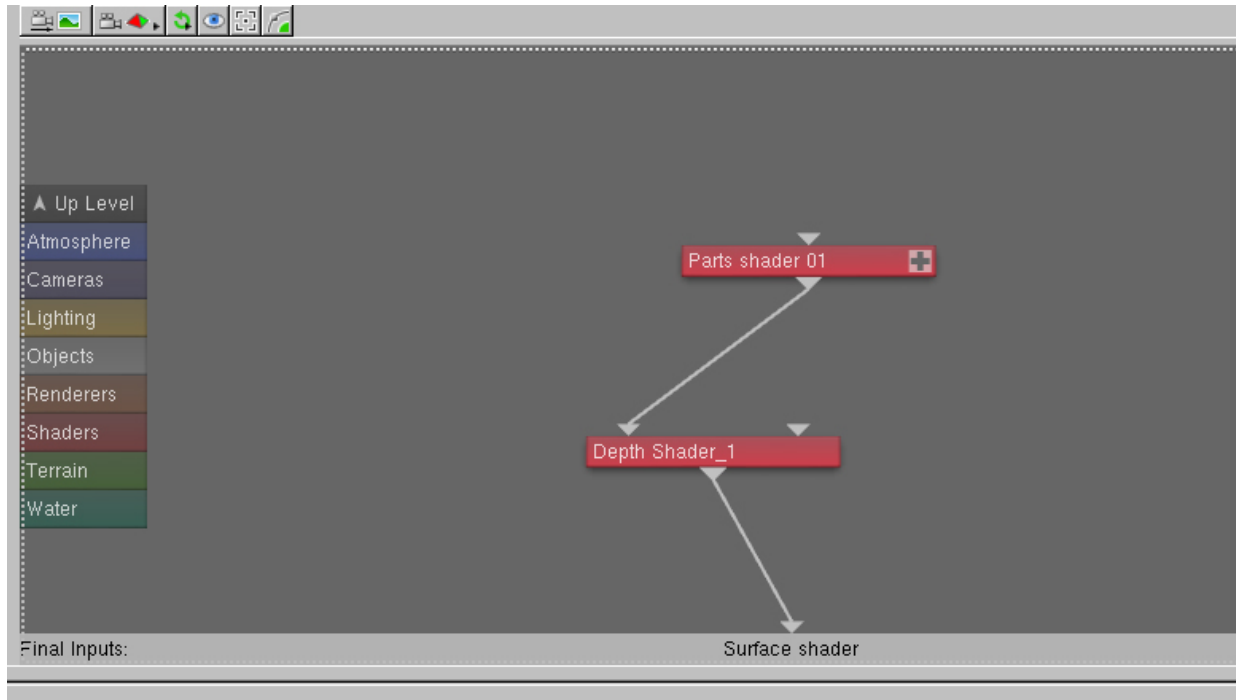


Image 07

15. Repeat the process for each remaining object and population.
16. Remember to save your work often during the process. You will get upset if you crash and lose all your hard work.
17. Now you will render the scene using the same settings you did for the final render, Remember I mentioned to use the same settings for the Depth render as you did for the final render. If you use lower quality settings for the Depth render it will look aliased when you finish the Photoshop section of this tutorial.
18. Your Depth render should look similar to **Image 08**.
19. Save your Depth Image with a name you understand. I named mine SummerDepthMap.jpg. My final image was named Summer.jpg.



Image 08

Photoshop Process

You will need to be using Photoshop CS3 or CS4. I'm sure it works with older versions that has the Lens Blur Filter. I will be using CS4.

1. Open the Final and Depth renders into Photoshop and go to the Depth image tab. See **Image 01**. From the Photoshop pull-down menu choose Select All. Then Edit Copy. Now go to your Final render image. See **Image 02**.
2. In the Layers Pallet, open the Channels tab and Create New Channel. Make sure the new channel is selected and paste the Depth image into the channel. See **Image 03**. On your Keyboard do a Ctrl + D to turn off the marching ants. Now click on the Load Channel as Selection Button. See **Image 04**. You should see a ton of marching ants on the Depth image. We are getting closer.
3. Now return to the Layer Tab that holds your Final render image, From the Photoshop pull-down menu select Blur, Lens Blur. You will now be introduced to the Lens Blur configuration window. See **Image 05**.

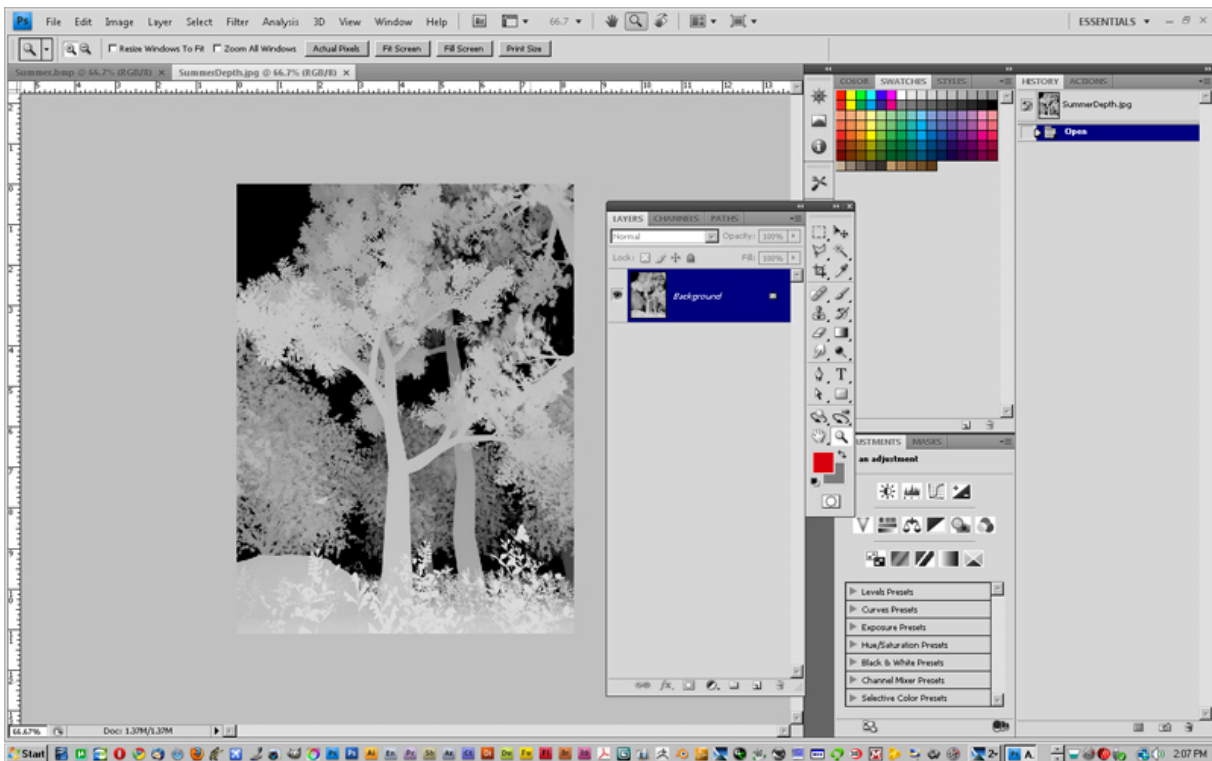


Image 01

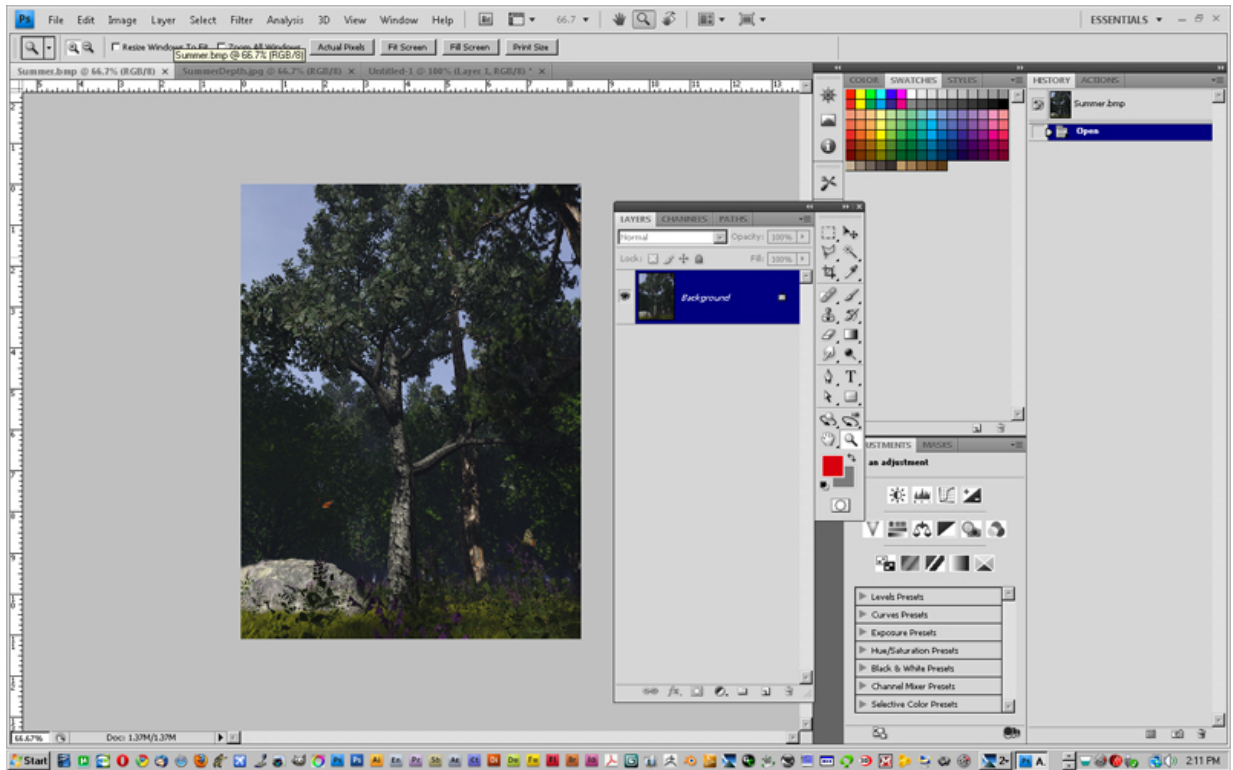


Image 02

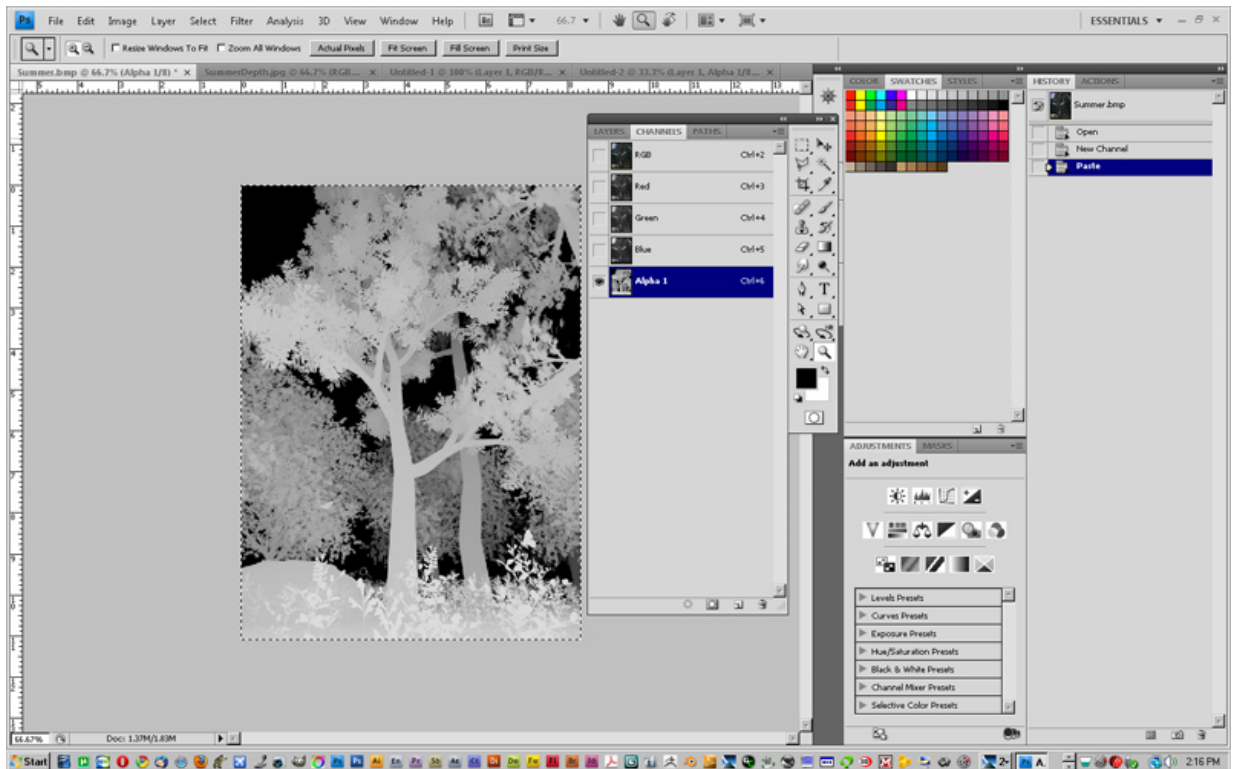


Image 03

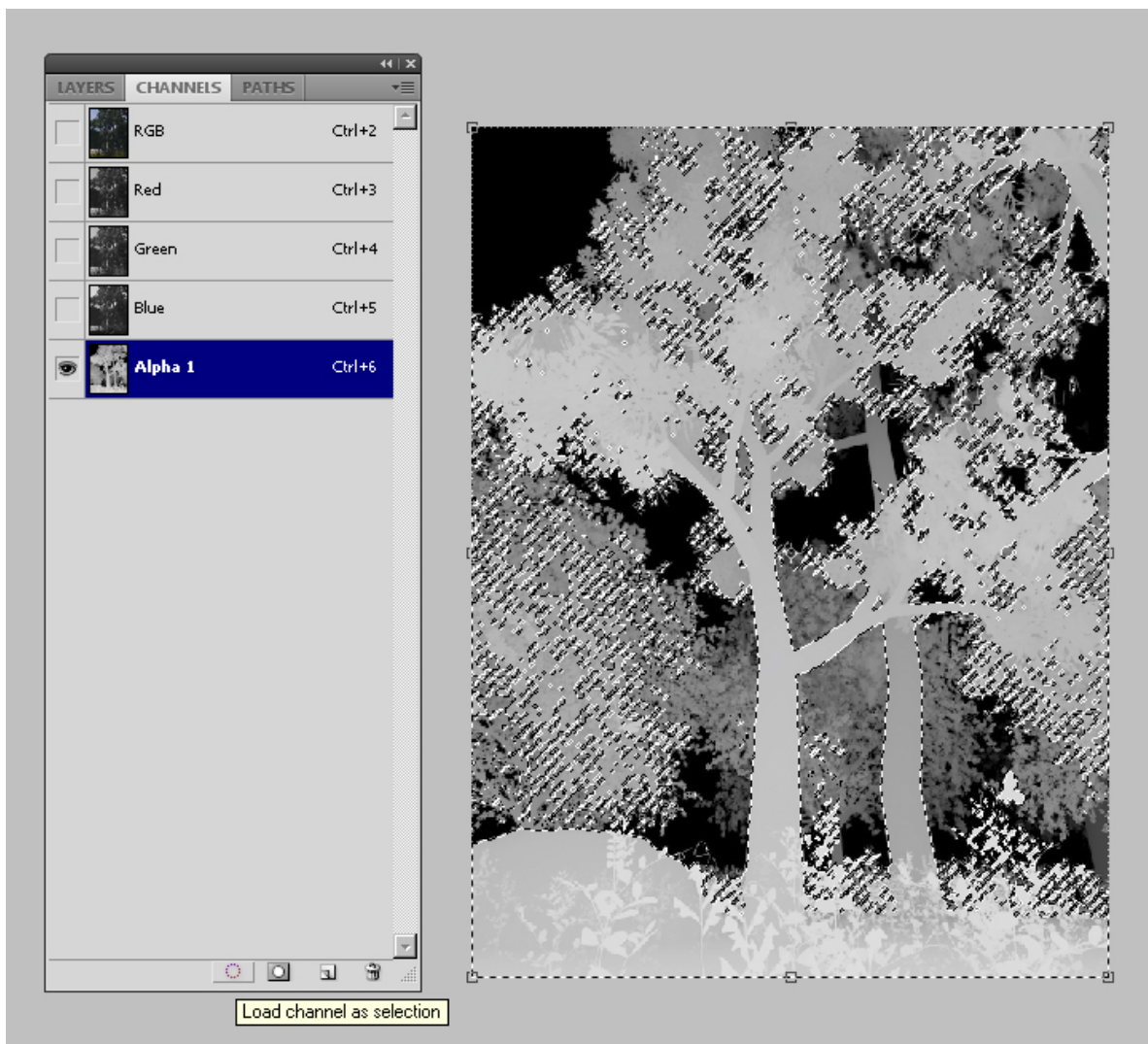


Image 04

4, In the Lens Blur configuration Window make sure you have all the red highlighted items set the way they are in **Image 05**. Now all you need to do is adjust the Radius Slider to get the preview image to a point it looks good to you. My setting was 5. When you are done select OK the Ctrl + D to clear the selection. That's it.

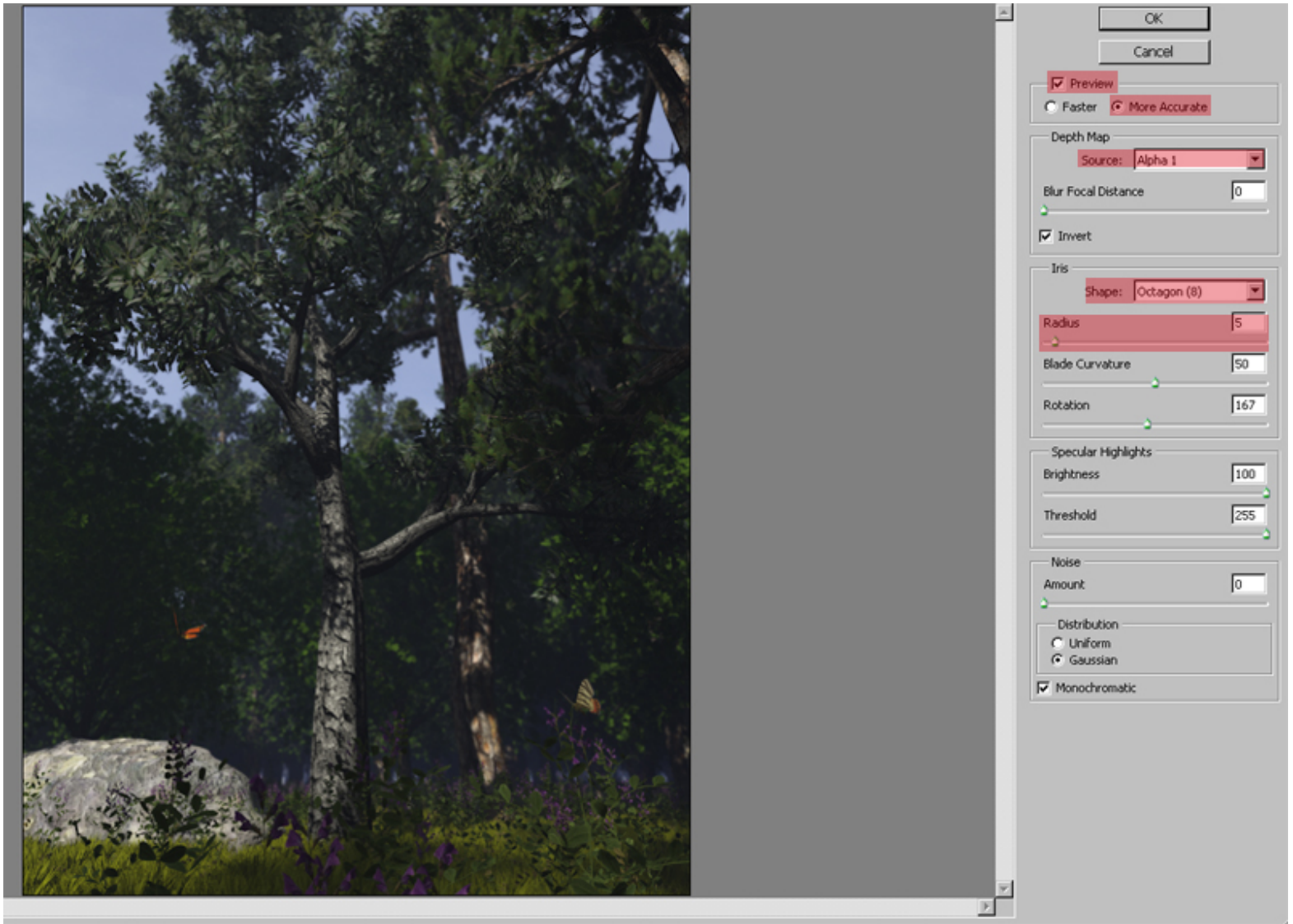


Image 05

Well, it's just that easy.

I hope this document was helpful and easy to understand.

Thank you for downloading it.

Marc Gebhart



I made other adjustments to the image like adjusting Brightness and Contrast also, added a little sharpness.

If you have questions or see glaring errors in this document please, contact MGebhart.
ProTrees@me.com

Copyright © 2010 ProTrees™