



# Explanation of Layer Masks in GIMP

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## INTRODUCTION

There have been a few people who have stated that they don't really know or understand layer masks and thus never use them. I have to say, layer masks are an incredible technique to add to your mapping arsenal.

I hope with this short tutorial to provide at least one person with a new respect for layer masks. If you get something useful from this tutorial, please remember to rate the thread. Likewise, if anyone has any additional tips or tricks I did not include, please feel free to include them in this thread for others to learn from.

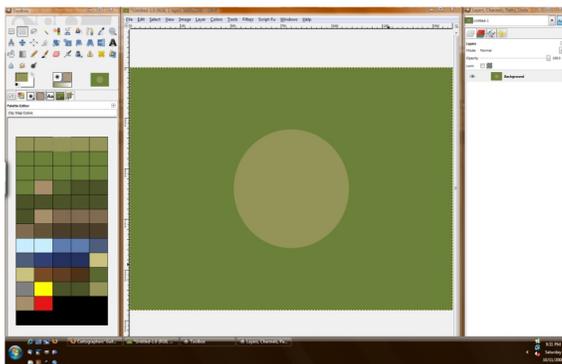
## FIRST PART

The first question is "what is a layer mask": Layer masks are adjustments which are attached to a layer that affect the visibility or the layer.

Second question is: "why would I use a layer mask": To maintain flexibility!

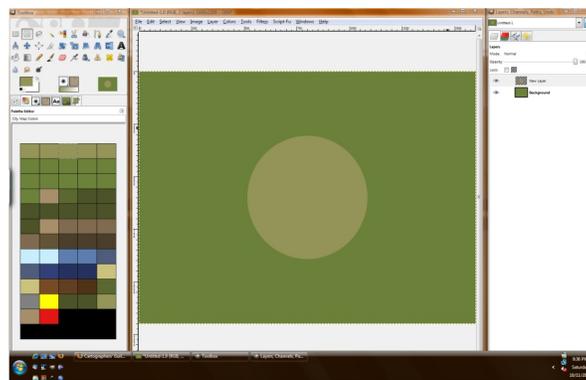
Third question is "how do layer masks work": A layer mask is a gray scale image in which white indicates 0% opacity and black indicates 100% opacity. Any shade of gray in between black and white is the amount of the image that will show through.

So, let's start with a few exercises. First, we will begin with the typical background image and use a layer mask to show a section of a different color.



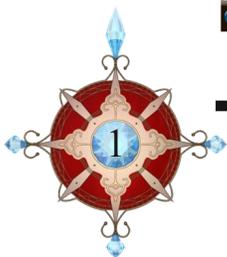
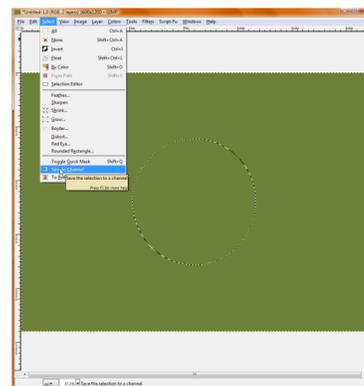
The typical way someone who does not use masks would do this would be to make a selection with the circle selection tool and fill with the secondary color. Now, this works, but, if you need to edit either color, you have a lot of extra work to do and unneeded extra work is bad.

So, what about using layers:



This is better as you have made a second layer transparent and then used the circle selection tool and filled the selection with the second color. This gets the job done and maintains more flexibility than the previous technique, so is much better. But, since this is a tutorial about layer masks, we will be going further AND providing ourselves with more flexibility if we need to change the second color in the future.

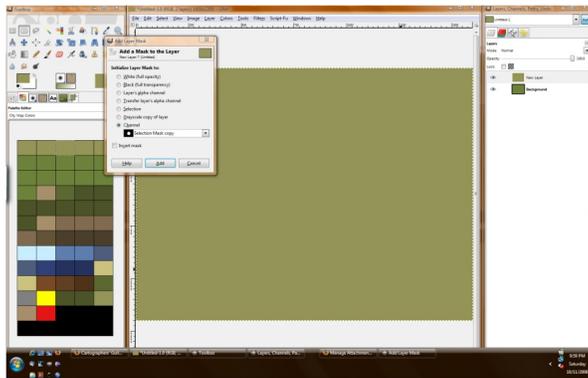
So, with the base layer, add a new layer. Now create your selection. In order to create our layer mask, we will first save your selection to a channel.



A channel is a special type of layer which is in grayscale that can be used to create a layer mask. Creating channels is a way to apply the exact same layer mask to multiple layers quickly. Once you have created the channel remove the selection, fill the new layer entirely with your secondary color. Now, in order to get our image to look like the original reference, we will add the layer mask by right clicking the top layer and selecting add layer mask from the menu.



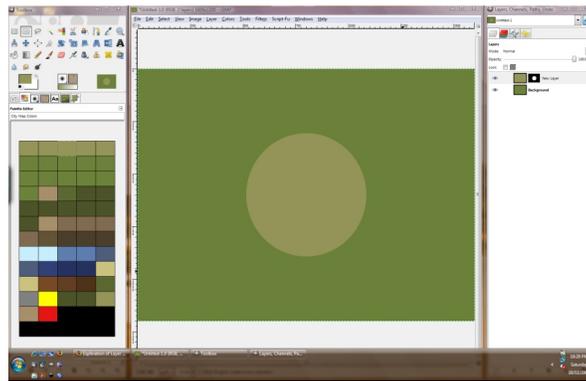
From the popup window, select the Channel radio button and select the channel you just created.



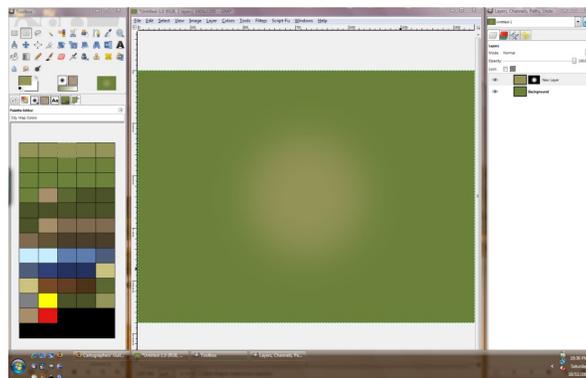
So why are we going to all this work? Because now, we can change either color simply by selecting the layer and using the paint bucket tool. Likewise, you could fill with a texture also. With the first technique(direct painting) you have TONS of work to do a simple color change. With the second technique(two layers) you would have to select the painted image on the second (top) layer and then fill with the new color. Not hard by any means, but not as flexible as if using masks, which you will see shortly.

I have reached the posting limit of 5 images, so I will briefly explain why using masks is better, before I explain how in the next post. Imagine using the above two layers but with some type of irregular selection, AND in addition to wanting to change the color, you want to expand or contract the size. Not hard if you want to maintain the exact same shape/dimensions, but what if you want to change the shape. Then you have some annoying tedious work to do. This is where layer masks will save the day, as we will see in the next post.

The final image result now looks like the first attached image(which looks like the first image in the original post).



Not that sexy eh? Rather boring right? True dat. Now, let's begin to play with our existing layer mask to see what we can do with it. The good thing about layer masks is that you can edit them by "painting" either white or black to edit how the underlying layer shows up. Remember white shows through and black does not with anything in between being partially shown. So... let's get some variable color to show through and get rid of the hard line transition between the two colors.



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In order to do this, Select the layer mask on the layer in question:



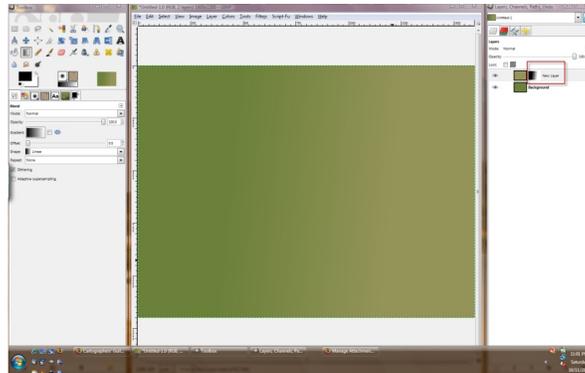
Note that when selected the thumbnail, either the layer OR the layer mask will have a slight white outline. In this case, we have the layer mask selected, so any operation we do will affect the mask, NOT the layer. What we now want to do here is apply some Gaussian Blur to get the two colors to blend. I used around 300 px blur to get to the final image.

Now, remember since we are not affecting the layer itself, this is a totally non destructive technique. Had we used the same technique as in the original post's second example, and blurred the color/alpha layer, then that layer would be permanently altered, and thus we would lose a lot of flexibility. However, since we just modified the layer mask and not the original layer, we have the blur but with no changes to the underlying layer. You could do all sorts of other things such as directly painting white onto the layer mask, which would allow the layer to show through.

**ONE THING THAT IS VERY IMPORTANT:** When you want to modify actual layer the make SURE you have clicked on the layer thumbnail icon, or you will be modifying the mask. Likewise when you want to modify the layer mask itself.

You could also use a layer mask to create a gradient, again, without using any destructive techniques. In order to do this, I am going to delete the existing layer mask and add a new one. However, this time, I will select the "Black" radio button. Now, select the layer mask and change the

foreground/background colors back to black/white. Click on the layer mask in the Layers dialog and select the Gradient tool. Now, apply the gradient to the layer mask.

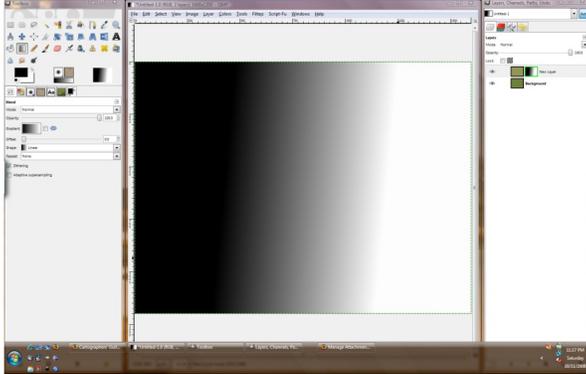


Note how the layer mask is not a gradient and how the base image follows that gradient to merge the two color layers? This is the effect we are after. Now, again, we can change either color layer directly and the gradient effect would remain exactly as it is now, just with different colors, and that is the power of layer masks.

Now, what if you want to get some more control over the actual layer mask? How can I see the actual layer mask? WE CAN DO THAT.



On the layer, right click and select show layer mask. This shows the actual layer mask as seen in image two. Now, any changes you make here will show up in the layers, just like before.



What if you want to see the image without the layer mask? You can temporarily disable a layer mask if you like.



Likewise, if for whatever reason, you no longer need the layer mask, you can delete it also from the right click menu. There is also a menu option called "Apply Layer Mask".



What this does is merges the layer mask directly into the layer.



See how the layer mask is gone, BUT the effect is blended into the underlying image on that layer?

I tend to NOT like this since it is a permanent change to the underlying layer and thus we lose our flexibility which is the reason for using the layer masks in the first place.

You can find a couple of practical videos here:

## VIDEO TUTORIALS

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