

Optimizing GIF Files

Download image (pipe.png) from Exercises page

Filters

Artistic filter

This is an effect that will turn a photographic bit of artwork into something that looks painted or drawn. We will use one that reduces the numbers of colors used, so that our image will look okay when we save it as a gif.

Go to Filter ..>Artistic..>Paint Daubs

Lens flare

This will give an effect that makes it look like light is shining on part of the pipe.

Go to Filter..>Render..>Lens Flare

Distort filter

Go to Filter..>Distort..>Ripple

As you can see, there are lots of different kinds of Filters that will allow you to achieve quite a wide variety of effects. They are also cumulative, so you have lots of variety to play with as well.

Go to File ..>Save

Background Layer

First thing we'll do is to create a background color to put behind the pipe. Go to the Layers Palette and click on the little arrow on the right of the palette. Choose "new layer" from the menu. You will also find the same command under the Layer Menu.

Go to Layer ..>New..>Layer

In the dialog, call this layer bg.

Okay, now go to the Layer Palette and click on the bg layer. Then grab the paint bucket tool (remember it is underneath the gradient fill tool). Click on the foreground color, and when you get the color picker, choose

a background color to use by moving the mouse over to the pipe in the document window. You'll notice that as you do this, the cursor turns into the eyedropper tool. This will allow you to sample a color from the document window. Pick a light color in the pipe, so that there is lots of contrast.

Gradient Fill

With the bg layer highlighted, go to the little arrow, and choose "duplicate layer". Rename this to "gradient bg."

Use the gradient fill tool to create a gradient fill, based on the same color as your bg layer and white.

Make sure this layer is below the bg layer.

Go to File ..>Save

Text & Layer Effects

Text

Okay, let's add some text to this image now. Go to the toolbox, and click on the type tool. In the tool menu, pick a type font, and then make sure the font size is 36. Next, go to the justification buttons, and click the "left" justification. Next to the little "aa" button, use the pulldown to ensure the anti-aliasing is "smooth". Finally, click on the color picker in the type tool and make the color black.

Then type the words "This is not a pipe." As you do so, you'll see that you have a new layer with a "T" in the layer palette. With the layer still highlighted, put the type tool between the words, "is" and "not" and hit the return key. This will put "not a pipe" on a second line.

Go to File ..>Save

Change the leading

The "leading" should be set automatically. However, we are going to change it so the lines of type are slightly closer together.

Go to Window..>Characters to show the Character Palette. (You can also show this palette by double-clicking the type tool.)

In the characters palette, you will see that there is a pulldown on the top right part of the palette next to two "As" one, on top of the other. This controls the leading, or amount of space between lines.

Within the pipe layer, and the type tool still chosen, highlight your text so that it is black. Now go to the leading pulldown and choose 36.

Layer Effects

Similar to Filters, there are a large number of Layer Effects that you can apply to specific layers. We will use just use one, but I encourage you to experiment with them.

First of all, go to the pipe layer and ensure that it is highlighted.

Go to Layer ..>Layer Style..>Drop Shadow

In the dialog box, use the defaults, except under Quality, go to the "Contour" pulldown and choose the wave that looks like two really steep mountain peaks. This will knock out the shadow, and leave just an outline of the drop shadow. Funky effect.

If you decide you don't like that effect, you can go to the Layers Palette and change it (double-click on the little "f" in the circle, and the dialog box will return. Or, you can delete the effect (click on the effect and drag it into the trash can).

Okay now we're ready to turn this into web artwork.

Optimizing GIF files

First of all, make the bg layer disappear, so that the gradient fill shows underneath.

Go to File..>Save for Web

In this dialog, first of all make sure you have the "4-up" tab selected so that you can see four views. It will probably default to showing us JPG files, as that was the

last thing we were doing. This time, however, we want to create GIF files.

Click on the top right view and then go to the "preset" pulldown, and choose..>GIF 128 Dithered

Click on the bottom left view, go to the present menu and choose..>32 Dithered

Click on the bottom right view, go the preset and choose 32 No Dither

Grab the zoom tool and click once on the stem of the pipe, so that we can compare these optimizations. You'll see that in the files with "dithering" there is a pattern appearing. Dithering essentially emulates more colors than we actually have available in the palette. Generally, the best bet is to avoid dithering when you can, but in some cases its inevitable. In this particular case, the top file looks the best and the one with fewer colors and dithering looks the worst in terms of the pipe, and the bottom right looks worst in terms of the gradient fill. (That pattern you see is called banding, and is commonly what happens when you try to turn tonal artwork or photographs into a gif. However, you'll notice that the dithered file with lots of colors is a huge file.

So we'll go back to the drawing board.

Hit cancel.

Back in the layers palette, make the gradient fill layer disappear, and make the solid background reappear.

Go to File..>Save for web.

Choose the same presets for these. Okay, these look much better.

You will notice that in addition to the dither pulldown, there are several other options. One is color palette. Perceptual, selective and adaptive are all color palettes that are based the colors that are already within the image. Web color is a palette based on web-safe colors only. With the top right view selected, play with these different color models to see how they change the image. You'll notice that as you do so, the color table underneath the pulldowns changes. I usually use the one that results

in the smaller file size. You will almost never use the web palette, unless you've created the file with web-safe colors only. In this case, it looks like Perceptual is best.

Reducing the number of colors

Okay, with the 128 color view still showing, let's go to the color table and further reduce the size of the image.

Changing colors to web-safe

The first thing we are going to do is to ensure that the background color is web-safe, so that it blends seamlessly with our web pages. To do that, grab the eyedropper tool and sample the color. You'll notice that a little white box appears around one color in the color table. Now, at the bottom of the color table, you'll see a number of little icons. Click on the one that looks like a cube -- this will shift the color to a web-safe color. You'll see a little white diamond appears in the middle of the color box.

Locking colors in

Now, we are going to "lock in" that color. Next to the cube is a little icon that looks like a padlock. Click on that. Now the color is web-safe and locked in.

Reducing number of colors

We have 128 colors in this image, but the file size is still a bit big. Go to the colors drop down and change the number of colors from 128 to 64. Great, this gets the file size down to about 13k from 16k.

Finally, we're going to play around with getting rid of some more colors, and further compressing the file without ruining it. Click on a color in the color table and drag it into the little trash can at the bottom of the color table. Did that adversely affect your image? If no, then try another one, and see if you can get the file down to 13k.

Reducing the size of the output gif

If you're still not happy with the compression, the last thing that you can do is reduce the size of the image. Click on the little "image size" tab next to "color table". In that part of the dialog you can reduce the physical

size, without reducing the size of your original file.
I'll make it 300 pixels, which gets it down to about 11.5k.

When we're done that, we can hit the save button.