ILLUSTRATION & IMAGE EDITING

Gimp Reflections in glass

In the last of his long-running series, a glassy-eyed Michael J Hammel gets reflective with some effect.

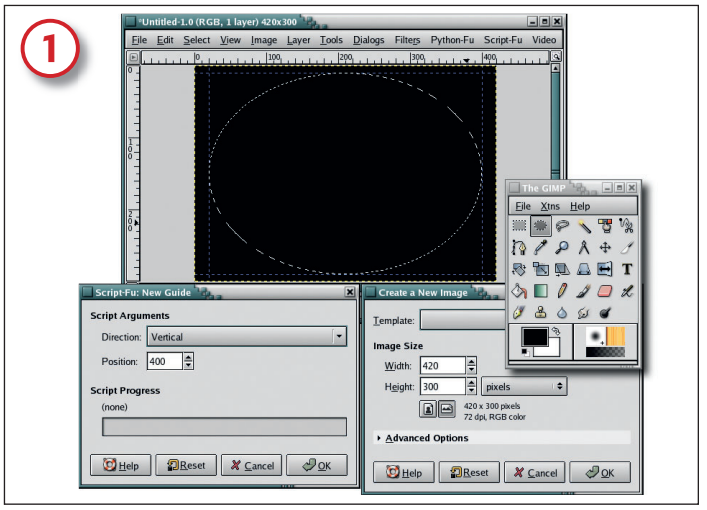
In *LXF77*'s tutorial, I showed you how to bring in the audience with an Oscar-winning movie poster – with directional light and shadow, courtesy of the *Gimp*. If you missed the issue, call 0870 837 4773 or +44 1858 438795 for overseas orders.

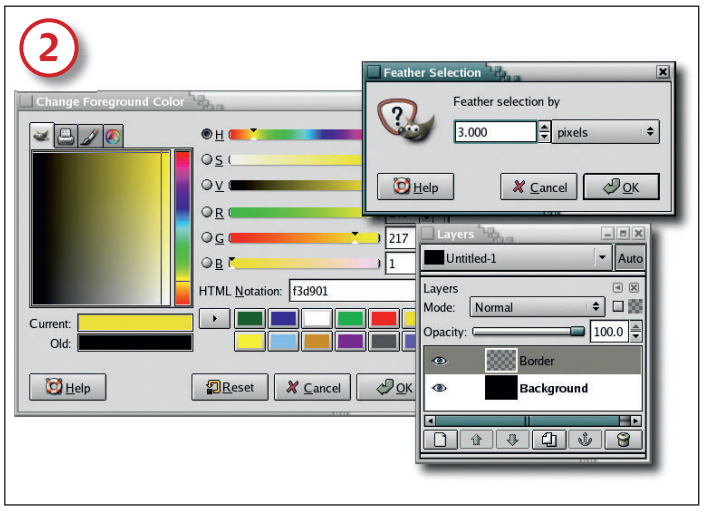
Lighting effects are pretty useful for simulating three dimensions in an image. Reflected light implies a solid surface, and shadows behind that surface imply an ordering: light, object and background. You can also get reflected light to imply depth without adding shadows simply by adding shape to the reflection. In this tutorial, I'll look at using pure light reflections to simulate a rounded glass surface atop an oval logo for a fictional company.

As glass is smooth, our shaped reflections will have hard edges. But shaped reflections on other surfaces should take on the surface's texture – sharp-edged and jagged on scratched metal, for example. We'll assume a single light source from the front, giving it a solid white reflection. It doesn't have to be white – you could use desaturated images (imagine a window frame or someone's face below the white reflections). Equally, you could add extra light sources by adding brighter, thinner reflections along the left and right sides; or add coloured lighting from above with a yellow reflection across the top of the glass.

The technique is easy to learn, but requires some patience and experimentation. The trick is in finding just the right shape for the reflection and finding the right way to create a cutout from a selection – the cutout is what gives the reflection its shape. Pay careful attention to the use of paths here. Two end points of a path will be connected when the path is converted to a selection, and in this tutorial it is important to note where the line between those two endpoints is placed.

Before we start out, I must prepare you for some sad news: yes, readers, after three years of fun and games (and 10-plus years of following *Gimp*), this is the last in my series of *Gimp* tutorials for *LXF*. It's been fun – I've enjoyed every minute of it, and the *LXF* crew have been incredibly supportive in helping me bring you every ounce of *Gimp* knowledge I could muster. I'll still be writing for *LXF* in the coming months, but it's time for me to look to other topics. Fret not though – I have one more *Gimp* book coming! Keep an eye on No Starch Press for *The Artists' Guide to Gimp Effects*. See ya soon!



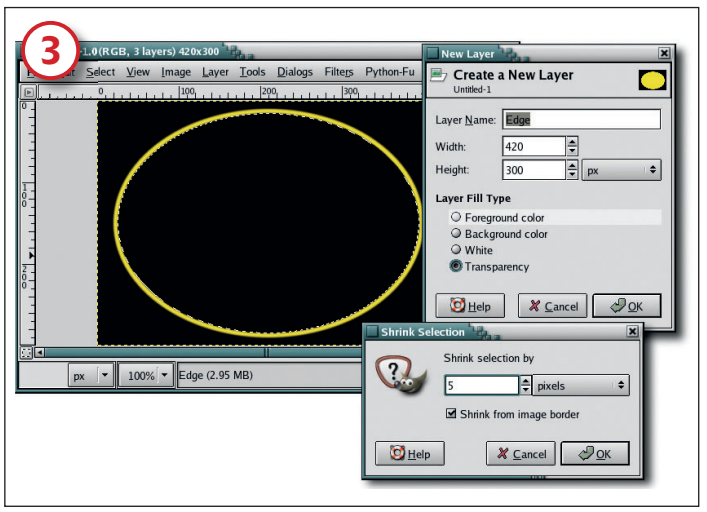


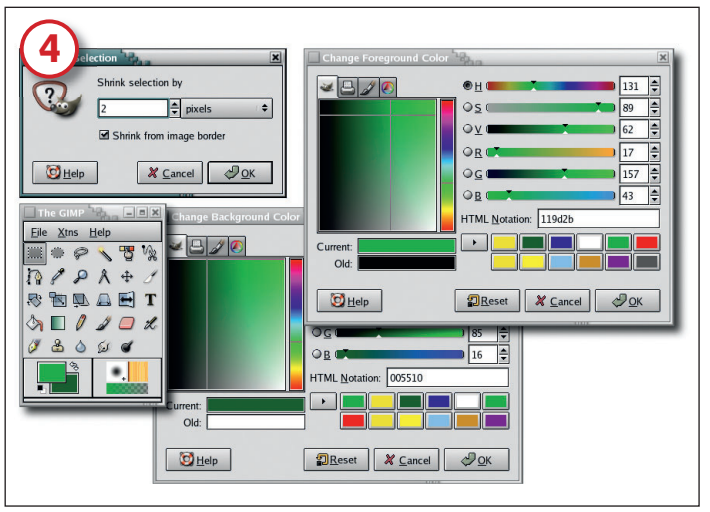
Prepare your oval

Before you do anything else, make sure that you're using the default colours: type 'D' in the toolbox to reset the foreground and background colour boxes to black and white respectively. Start with default-sized black canvas (File > New – use the foreground colour in the Advanced Options). This tutorial scales up easily enough, so working with a default canvas of 420x300 at 72dpi makes it easier to experiment. You can repeat the process later using a larger canvas at a higher resolution if you need a print version of the project. Now add vertical guides (Image > Guides > New Guide) at 20 and 400 pixels and horizontal guides at 10 and 290 pixels. Choose the elliptical selection tool from the toolbox, and drag from the upper-left intersection of the guides to the lower-right intersection, so the selection just touches the guides.

Add some colour

Feather the oval selection by three pixels (Select > Feather). Add a transparent layer (Layer > New). Click on the layer name in the Layers dialog, and change the name to 'Border'. Open the Change Foreground Color dialog by clicking on the Foreground box in the toolbox. In the HTML field, type F3D901 and click on the OK button to set the foreground colour to an egg-yolk yellow. Drag the Foreground Colour box from the toolbox into the selection. (You don't need the guides anymore, so get rid of them with Image > Guides > Remove All Guides.)



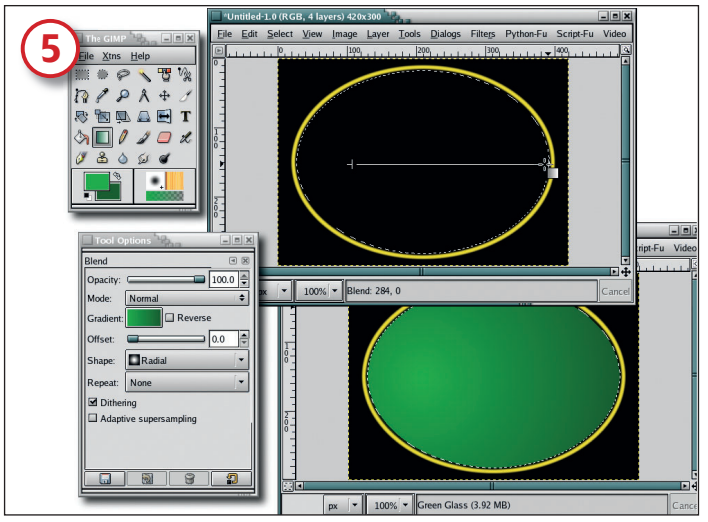


Finish the outline

Now you've got your yellow-edged oval. Add another transparent layer to the image, and name this one 'Edge'. Shrink the selection by five pixels (Select > Shrink). Reset the foreground colour to black by typing 'D' in the canvas window. Drag the foreground colour – black – into the selection.

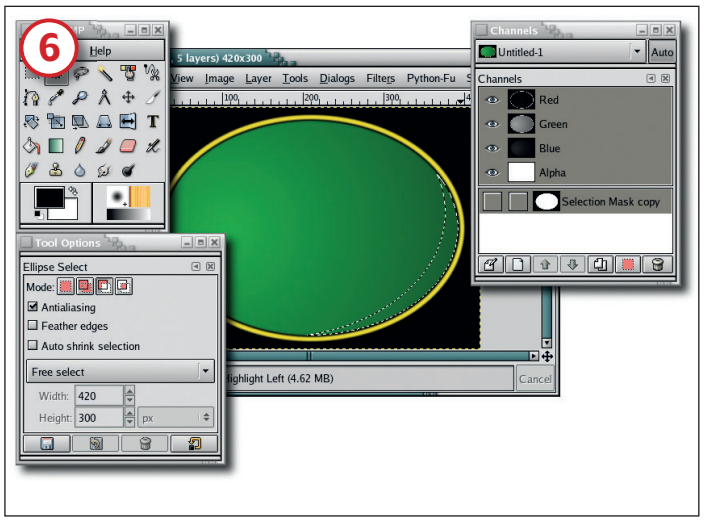
The green rounded glass centre

Add another transparent layer to the image (I hope by now you've come to realise that layers are the key to professional *Gimp* work). Name this new layer 'Green Glass'. Shrink the selection by two more pixels, and open the Change Foreground Color dialog again. This time, type 119D2B into the HTML field, then click OK to apply this change. Click on the Background box in the toolbox to open the Change Background Color dialog, and type 005510 in the HTML field and click on OK. These colour settings will provide a nice range of greens for use in a gradient blend in the next step.



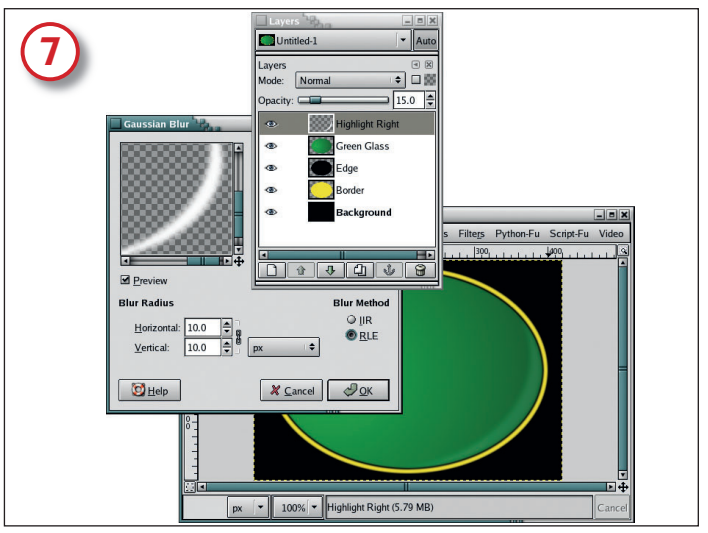
Give the green centre some shape

The gradient will start to give the green glass a sense of solidity. Choose the Blend tool from the toolbox. In the Tool Options dialog, set the Gradient to FG To BG (RGB) (be sure to set the blend shape to radial). The Opacity should be at 100% and the Mode set to Normal. You'll only need to do this blend once. In the canvas window, drag inside the selection from the left focus of the oval (ie left of centre) to the right edge of the oval, as shown here. The result will be a light green to dark green surface. The slight change in lightness already simulates a rounded surface, but a few more shaped reflections will enhance the effect.



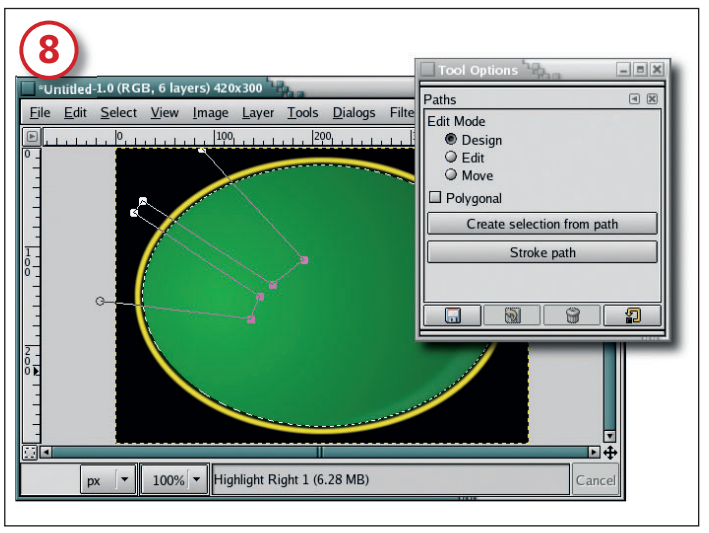
Begin the first reflection

Save the selection to a channel (Select > Save To Channel). Saving a selection to a channel deactivates all layers in the Layers dialog, so you'll have to click the Green Glass layer in the Layers dialog to make it the active layer once again. Add a transparent layer named 'Highlight Right,' and reset the Foreground and Background colours by typing 'D' in the canvas. Choose the Elliptical selection tool from the toolbox. In the Tool Options dialog, click on the Subtract mode (it's the third button from the left in this image, next to Mode). Drag a new oval over the existing selection to subtract all but the lower and right edges of the selection, as shown here.



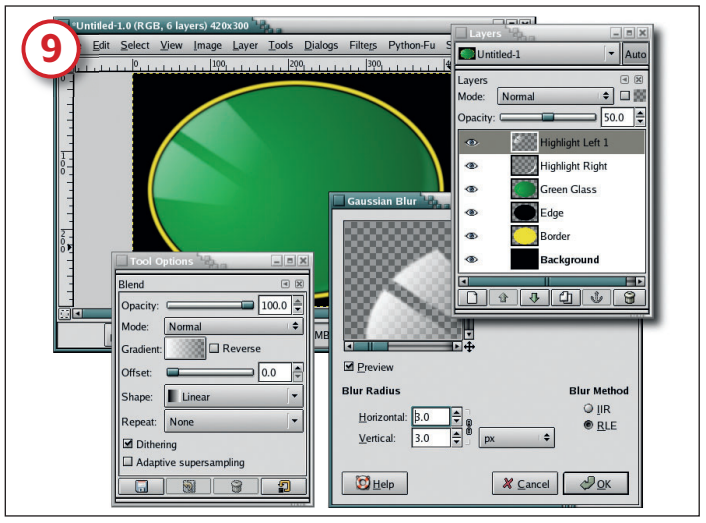
Blur it to look real

Drag the background box (which should be white) from the toolbox into the selection. Remove the selection (Ctrl+Shift+A), open the Gaussian Blur dialog (Filters > Blur > Gaussian) and set the blur radius to 10 pixels for both the Horizontal and Vertical directions. Reduce the opacity of the Highlight Right layer to 15%. If the reflection looks too sharp, you can always blur it again, but it's best to err on the side of having a slightly sharp reflection.



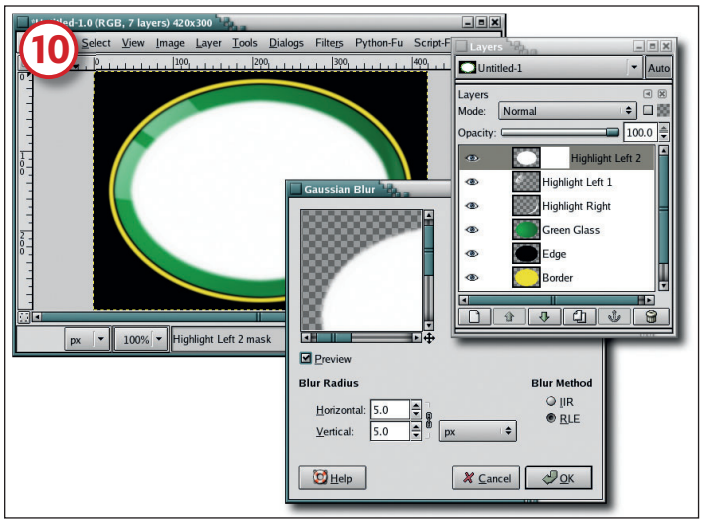
Create two more reflections

Add a transparent layer and name it 'Highlight Left 1'. Next, open the Channels dialog (Dialogs > Channels) and click on the saved channel – the last one in the list. Click on the Channel To Selection button, then return to the Layers dialog and click on the new Highlight Right 1 layer to make it active. The oval selection will act as an outer limit for two more shaped reflections. To create those, start by choosing the Path tool in the Toolbox. Click outside the oval selection, then trace a path similar to the one shown here. Make sure that the first and last grab points in the path make a straight line outside of the existing selection. Then, while holding down the Ctrl and Shift keys, click on Create Selection From Path in the Tool Options dialog. This will form a selection that intersects the oval selection and the area enclosed by the path.



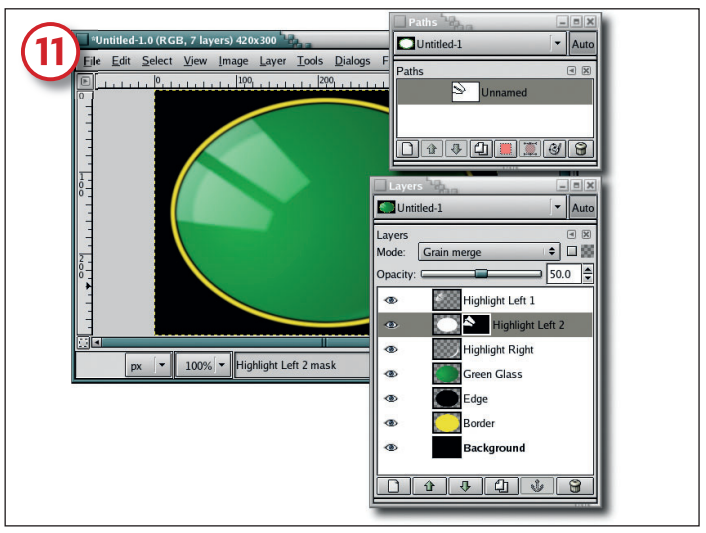
Set the blur level and opacity

Type 'X' in the canvas to swap the foreground and background colours – this should set the foreground to white. Choose the Blend tool from the Toolbox, and in the Tool Options dialog, change the gradient to FG to Transparent and the shape to Linear. Drag from the upper-left of the selections to the lower right of the selections. Clear the selection (Ctrl+Shift+A), open the Gaussian Blur filter again and apply a three-pixel blur. Reduce this layer's opacity to 50%.



Add highlights to the reflection

Now to make the reflections whiter and brighter towards the centre: add another transparent layer and name it 'Highlight Left 2'. Retrieve the saved selection (just like we did with the Highlight Left 1 layer), and shrink the selection by 20 pixels (Select > Shrink). Click on the new layer in the Layers dialog to make it active again. Type 'D' and 'X' in the canvas window to set the Foreground Color box to white, then drag the box into the selection to fill the selection. Clear the selection (Ctrl+Shift+A), use the Gaussian Blur filter to blur the layer by five pixels and add a white layer mask (Layer > Mask > Add Layer Mask).



Paint it black

Open the Paths dialog (Dialogs > Paths). There should be an unnamed path still in there from when we used the Path tool earlier on. Click on this path in the dialog to make it active, then click on the Path To Selection button at the bottom of the dialog. Invert the selection (Select > Invert). Click on the mask in the Highlight Left 2 layer to make it active, then fill the selection with black and clear the selection. Blur the mask by five pixels with the Gaussian Blur filter. Set the layer mode to Grain Merge and the opacity to 50%. In the Layers dialog, drag the Highlight Left Layer 2 down one spot to below the Highlight Left 1 layer.

Enter your text

Now let's add the company logo to complete the effect. Type 'D' and 'X' in the canvas window to set the foreground to white. Choose the Text tool from the toolbox, and in the tool options, choose the font and the font size that you'd like in your logo. Click in the canvas to open the Text Editor window, enter your text and close the editor window. Centre the text in the canvas using the Move tool. Add a drop shadow (Script-Fu > Shadow > Drop Shadow) offset by 2 pixels in X and Y and using a blur radius of 2 (make sure you haven't ticked the Allow Resizing button). Now apply the shadow by clicking OK. Move the text layer below both of the Highlight Left layers in the Layers dialog. There you have it – a coloured, oval, raised-glass logo. Pretty smooth, hey? LXF