Gimp: Product

Geek is Chic! Gimp author **Michael J Hammel** shows how a little penguin (and a little bit of Wilber) makes for fine fashionable wear.

› **The finished product: take some vector art, tart it up with Gimp, then get it ready for printing.**

Our expert

Michael J Hammel is a contributor to the *Gimp* project and the author of three books on the subject, including his latest, *The Artist's Guide to Gimp Effects*.

After nearly two years it is time to draw this latest incarnation of the *Gimp* tutorial series to a close. Over the years, *Gimp* has evolved from a college project to a hacker's toy to a full-fledged production graphics tool for the masses. Along the way we've celebrated the addition of plugins, the plethora of filters, the magic of layers and the power of the Toolbox. And even now, as I bring you one last dance with Wilber, *Gimp* continues to evolve. Soon we'll be able to frolic in the long promised advances of *Gegl*, the next generation soul of *Gimp*. But as *Gimp* has evolved so to has the rest of the world. What was once the purvey of mystical artisans with brick-oven kilns is now nothing more than a website with design templates. Yes, you too can print on just about anything. All it takes is a mouse click and a credit card.

Recently my daughter set off for college in the upper north-west of the United States. She got there with a lot of hard work on the tennis court and a fortunate scholarship opening – a little luck never hurts. As a gift for her taking a financial load off dear old Dad I made a poster of her team and a coffee mug with photos of the other incoming freshmen. They were quite the hit (or my daughter was just being nice, not that it matters either way to me).

So for this last installment of my *Gimp* tutorials I thought I'd walk readers through the process of creating a T-shirt design suitable for any lovable geek in the family. I'll show you how loading free vector art doesn't require you to keep it in vector format. I'll also show you how a parametric brush can be used to simulate a stitching job that only a nerd could love.

Vector art on the web

- Tux: **http://vector4free.com/vectors/id/360**
- Equations: **www.vectorjungle.com/2008/11/vector-art-equations-and-graphs**
- Dialog Bubble: **www.bazaardesigns.com/5415-dialog-bubbles**
- Wilber: See the *Gimp* sources, under the docs directory.

What's in store

This project will use three different vector images from free vector sites on the internet. It will also use brushes found in the Gimp Paint Studio (GPS) collection. I'll show how a really big brush doesn't have to stroked to be useful while illustrating just how much geeks love math. Along the way you'll find your favourite big-eyed mascot pulled right from the source. And in the end, you'll have a perfectly sized image ready for printing on to a T-shirt.

As with most of my tutorials you won't need much more than basic *Gimp* knowledge to complete this tutorial; a familiarity with layers is essential though, as is knowing your way around the Toolbox and the Tool Options dialog.

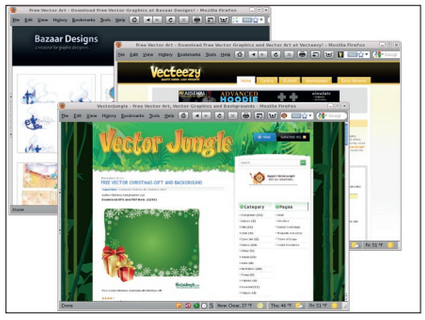
» **Last month** We made a face dissolve into hundreds of little squares.

design for geeks

Step by step: Create a T-shirt design

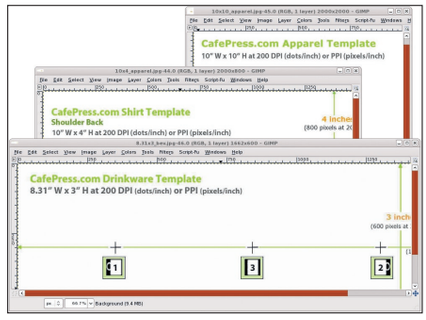
1 Designing for print

Many print-to-order sites, such as Zazzle and CafePress, offer both US and European sites to reduce shipping costs. Clothing is the most common type of product, but look for alternatives such as mugs, bottles and boxes. Choose a site that offers the type of product you want to print on and provides templates to assist in sizing your images. Zazzle and CafePress can be pricey, so look for discount cost sites like Printfection.com and speciality printers like DeckPeck.com.



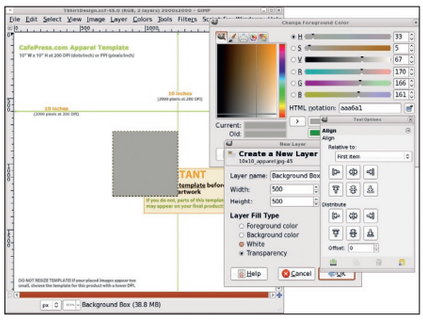
2 Vector art sources

Print designs don't have to be made completely from scratch. Use stock photos or integrate some of the free vector art available from sites like Vecteezy, Bazaar Designs and VectorJungle. Be certain to check licences of downloaded artwork if you plan to sell your products. *Gimp* will import SVG, EPS and AI formats without problem. More important: setting the resolution on import will generate an appropriate sized version of that artwork, perfectly suited to your design project.



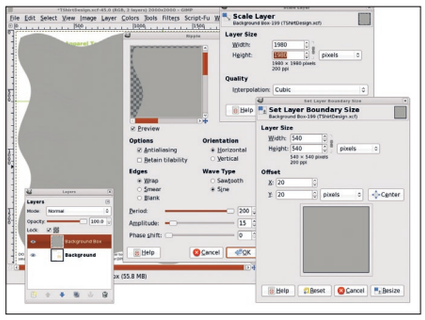
3 Open a template

Open a product template from the print-to-order site. This project uses the 10x10 T-shirt template from CafePress. Most templates will be JPEG images or PDF files sized at the correct resolution (usually 200dpi but this can vary) and dimensions. With a 200dpi JPEG, the 10x10 template is 2,000 pixels wide by 2,000 pixels tall. Fit the project to the template boundaries. Note that the mug template shows which part of the image will display on various parts of the mug.



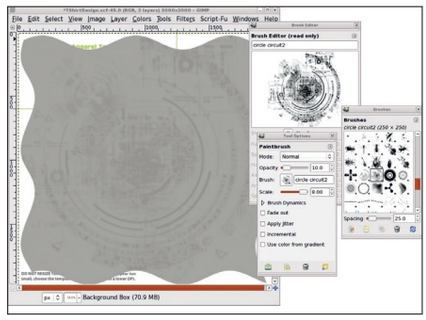
4 Background box layer

Create a new layer 500p wide by 500p tall. Click the Foreground Colour box in the Toolbox and create a light grey colour. Drag the Foreground Box into the image window to fill the new layer with the grey. Click the Align tool in the toolbox, click the white background in the image window, then hold down Shift and click on the new layer. Click the Align Centre and Align Middle buttons in the Tool Options to centre the new layer in the image window.



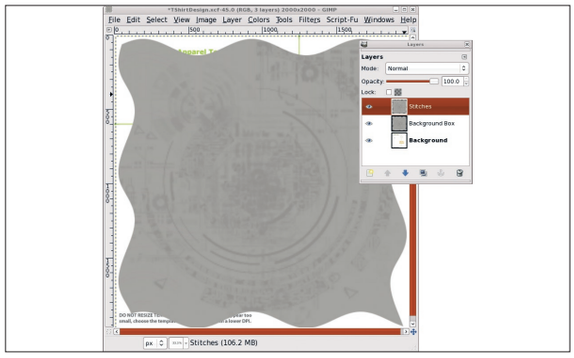
5 Add a ripple to the box

Increase the Layer Boundary (Layer > Layer Boundary Size) to 540 pixels square and centre the layer within the new bounds. Open the Ripple filter (Filters > Distorts > Ripple). Set the Period to 200 and the Amplitude to 15, then apply the filter horizontally. Repeat the ripple using the same settings vertically. Scale the layer (Layer > Scale) to 1980x1980. Set the Lock Transparency box in the Layers dialog for this layer.



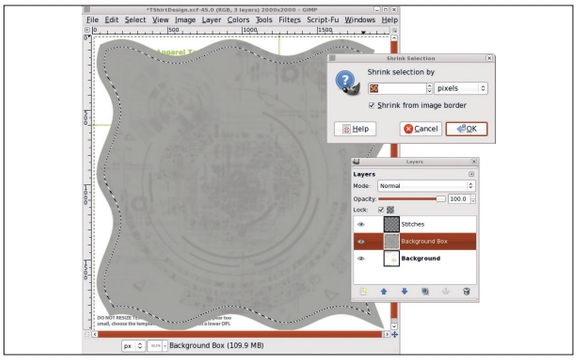
6 Stamp the background

Reset the Foreground colour to black by typing D in the image window. In the Brushes window (Windows > Dockable Dialogs > Brushes) choose the Circle Circuit 2 brush from the GPS package. Choose the Paintbrush from the Toolbox. In the Tool Options dialog set the Mode to Normal, Opacity to 10%, and the Scale to 8.00. Click once in the centre of the image window. This effect is intended to be very subtle against the background.



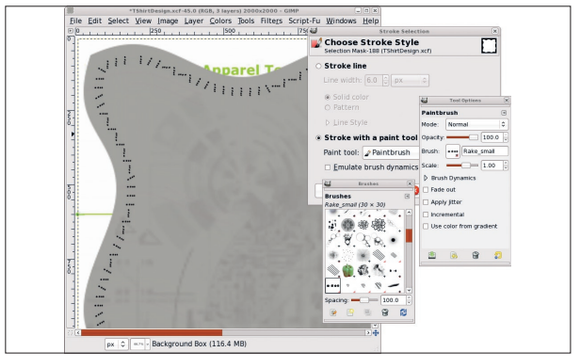
7 Prepare to stitch

The Paintbrush at such a large scale will become annoying, so type R in the image window to switch tools. Duplicate the Background Box layer (Layer > Duplicate). Name the duplicate layer Stitches and turn off the Transparency Lock for this layer. Select the entire layer (Ctrl+A) and cut the selection (Ctrl+X). Clear the selection (Select > None).



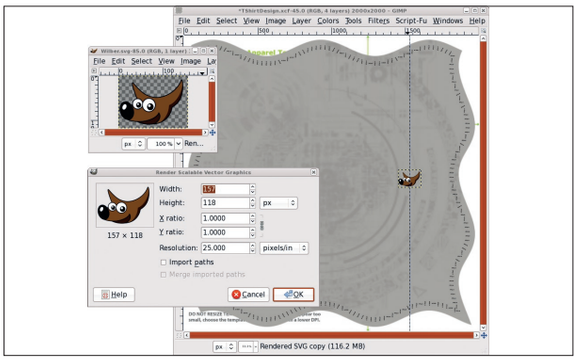
8 Outline the stitches

Click on the Background Box layer in the Layers dialog to make it the active layer. Select the opaque area of this layer (Layer > Transparency > Alpha To Selection). Shrink the selection by 50 pixels (Select > Shrink). Click on the Stitches layer in the Layers dialog to make it the active layer. The outline of the stitches is ready to be traced.



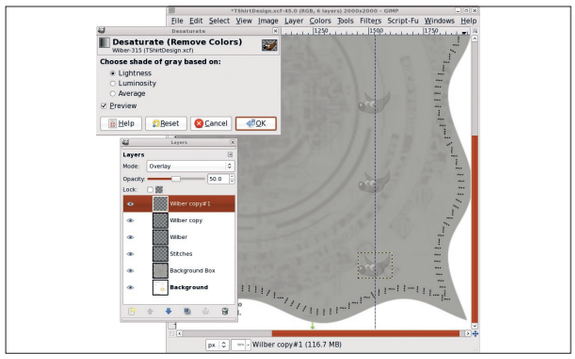
9 Apply stitches

Choose the Rake Small brush from the Brushes window. This is a parametric brush, which means the layout of the dots will depend on the motion of the brush. Set the Spacing to 100 at the bottom of the Brushes window. Stroke the selection (Edit > Stroke Selection) using the Paintbrush but do not emulate brush dynamics. Clear the selection.



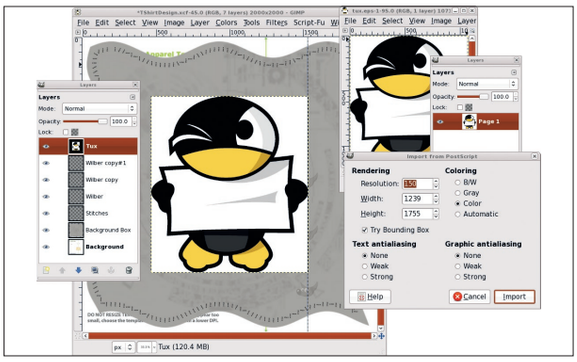
10 Add Wilber

Retrieve the *Gimp* source code and open **Wilber.svg**. When prompted, set the resolution to 25. Drag the layer for this window into the project image window to copy Wilber into the project. Set the layer mode to Overlay and the Opacity to 50%. Drag a guide from the left ruler out to 1530 pixels. Move Wilber to align with this guide.



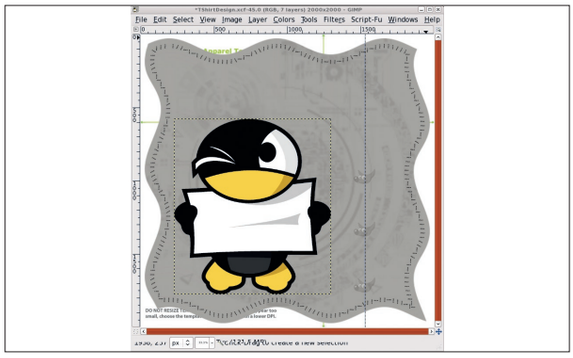
11 Multiple Wilbers

Desaturate the Wilber layer (Colours > Desaturate) using the Lightness setting, then duplicate this layer twice. Drag the first copy down along the guide line to just above the stitches along the bottom edge of the image window. Drag the second so it sits directly in the middle of the other two, also on the same guide line, and adjust the opacity to taste.



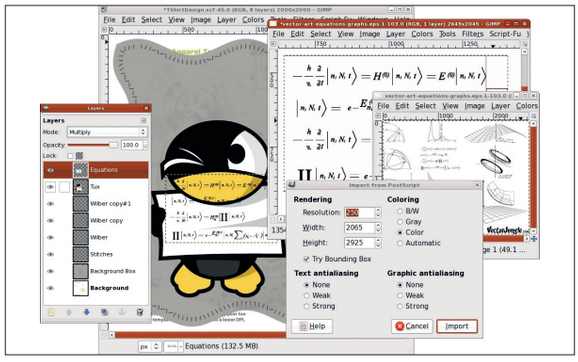
12 Bring in the penguin

Retrieve the Vector Tux files. The package contains both EPS and *Adobe Illustrator* formats. Choose the EPS format. In the import dialog, set the resolution to 150 and the colouring to Colour. No antialiasing is required for this image. Make the **tux.eps** image the active window and drag its only layer into the project image window. 2



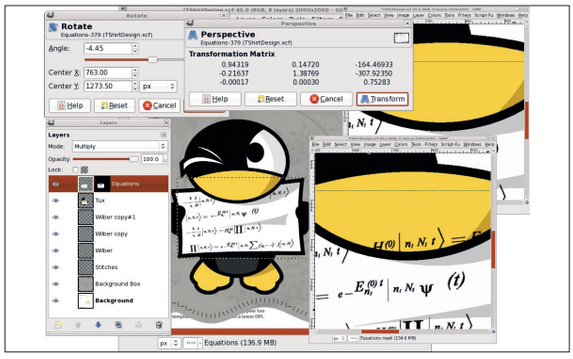
13 Tux clean up

Move the Tux layer to the left and down, roughly so the right foot and left hand nearly touch the stitches boundary. Add transparency to this layer (Layer > Transparency > Add Alpha Channel). Choose the Fuzzy Select tool from the Toolbox. Click on the white background of this layer to select it. Type Ctrl+X to cut this layer's background out of the layer. Clear the selection.



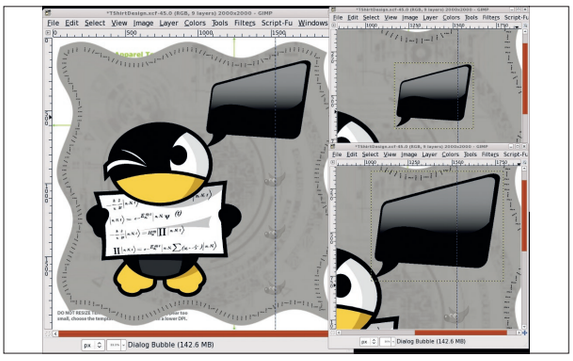
14 Insert equations

Open the EPS file from the vector equations package, this time setting the resolution to 250. Make a selection around the set of equations in the image. Copy the selection and then paste it into the project image window. Convert the floating layer this creates into a new layer (Layer > New). Name the new layer Equations. Set the layer mode to Multiple so that only the equations show in the image window.



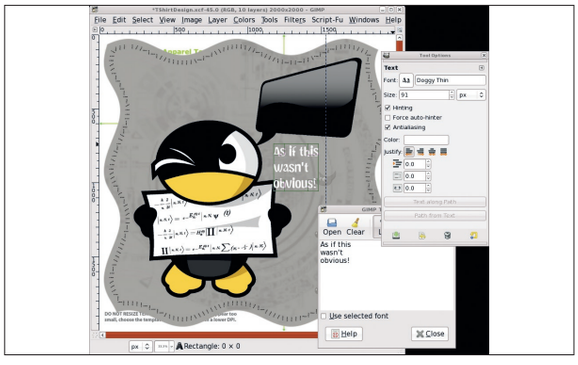
15 Adjust equations to fit

Use the Move tool to centre the equations over the sign the penguin is holding. Use the Rotate and Perspective tools to stretch the right side to better fit the sign. Add a white layer mask (Layer > Mask > Add Layer Mask) to the Equations layer. Set the Foreground to black by typing D in the image window. With the layer mask active in the Layers dialog, use the Paintbrush to paint out the equations over the penguin's beak.



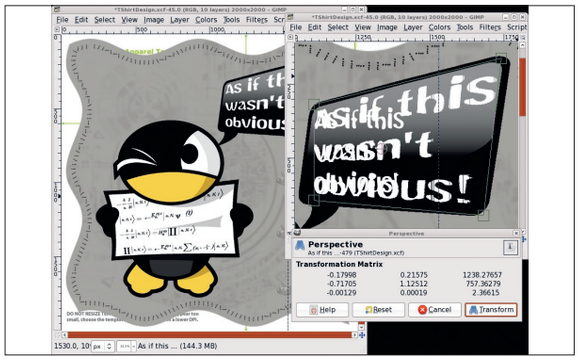
16 Add a speech bubble

Open an appropriate speech bubble from the last of our free vector packages. Make a selection around the bubble, then Copy the selection and paste it into the project image window. Convert the floating layer this creates into a new layer (Layer > New). Name the new layer Dialog Bubble. Select the white background in this layer and cut it out. Desaturate the layer. Flip, Rotate and Scale it to fit.



17 Add text to the balloon

Choose the Text tool, click in the image window and type some clever phrase in the Text Editor window. Use the Move tool to position the text inside the balloon, with the left-hand side of the text aligned with the left of the balloon. Choose the Perspective tool from the Toolbox, then click on the image window to allow editing of the text layer. Drag the control points so the text stretches to match the perspective of the dialog box.



18 Ready for print

The original template layer should have its visibility turned off so it doesn't end up in the printed product. Save the image in the right format for the print site, making sure that you use PNG, TIFF or another format that supports transparency for this image, as formats such as JPEG don't support transparency. Finally, upload the image to the print site. Now just wait for the box to arrive in the post! LXF