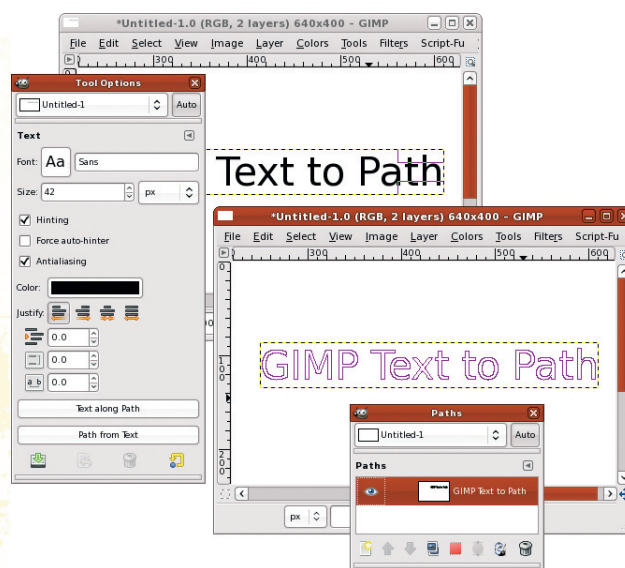


» **Gimp** Open source image-editing software you can get your teeth into

Gimp: use other

Mixing raster, vector and text is easier than you think. **Michael J Hammel** explains how to integrate Gimp with Inkscape, Scribus and OpenOffice.org.



» **Gimp's Text tool provides a button for converting a text layer to a path that can then be edited using the Path tool.**



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*.

While a vast number of desktop users are content to work with the *Gimp* to produce images for the web, many have more varied needs. Cartoonists need vector support to tweak drawings, office workers need images for presentations and desktop publishing requires both. *Gimp* can fill the needs of all these users. In fact, *Gimp* integrates easily with many desktop applications; the trick is to understand the requirements of each application and the reason we use them.

This month we're going to learn how to integrate *Gimp* with three popular Linux desktop tools: *Inkscape*, *Scribus* and *OpenOffice.org*. We'll learn how to use the exported output from any one application with the *Gimp* and how each can import *Gimp* images. Where applicable we'll also discuss use of drag and drop between applications.

A common thread in this discussion is file formats. *Gimp* works with many formats, including GIF, JPEG, PNG and TIFF and can import both PostScript and SVG vector formats. While JPEG and GIF suffice for the web, TIFF or PNG are better choices when working on print documents. PNG is also preferable for digital presentations, because its lossless format is better suited to dynamic scaling and it offers a range of transparency effects. Where EXIF data from digital cameras needs to be retained, the TIFF format is often the best choice. TIFF is also preferred for work that needs to use alternate colour spaces, such as CMYK. For vector formats,

SVG is the best option for export or import between multiple applications, though support for PostScript import might be of higher quality in some cases.

Another common issue is dpi settings. For the web and digital presentations 72dpi or 96dpi is fine. However, if you're printing, consider the quality of the output. A low 150dpi will do for a flyer for the local children's choir, while the high-end restaurant menu is better served by 300dpi.

Keep these common threads in mind as we explore the integration of the *Gimp* with *Inkscape*, a popular open source vector graphic illustration tool.

Gimp and Inkscape

Gimp does wonders with pixels, but working with text is often more than pixel editing. The latest version of *Gimp* enables you to transform a text layer into a path so that the text can be manipulated manually, but this isn't *Gimp's* forte. It's best to leave it to a vector tool such as *Inkscape*.

Inkscape's text management features are more extensive than *Gimp's* and enable easy creation of text along a curve with kerning adjustments. We'll now look at how to do this and how to adjust the the spacing of the letters, before we move the text into the *Gimp*.

Start up *Inkscape* and you'll see a blank page. Now choose the Text tool from the toolbar and type 'Integrating Gimp with Inkscape'. Use the Select tool to position the text in the centre

» **Last month** We drank a toast to the completion of the wine bottle tutorial.

tools

of the top half of the page. Next, choose the Bézier tool. Click in the canvas once, then click again but drag before releasing to create a curve. Release the mouse button, then click and drag in one more spot. Release the mouse button and hit Enter to complete the curve.

As a vector tool *Inkscape* creates objects, and selecting these is similar to selecting a path in *Gimp*. Use the Select tool and click on an object to select it. To place the text along the curve, first choose the Select tool from the Toolbox and then click on the text. Hold down the Shift key and click on the curve. Now both objects are selected. Under the Text menu at the top of the *Inkscape* window, choose 'Put on Path'. The text is aligned from left to right along the curve.

The text on the path is still in vector format, so it can be edited some more. First we must expand the space between letters to flow the entire distance of the curve. Choose the Text tool from the toolbar and then click anywhere in the text object. Hold down the Alt key and use the < and > keys (and possibly the Shift key, depending on your keyboard layout) to proportionally decrease or increase the space between letters. Adjusting space in this way is known as kerning. Note that the space between letters is not exactly the same. The space is adjusted based on the two letters that bound it. This produces a more natural flow for the letters.

A leading question

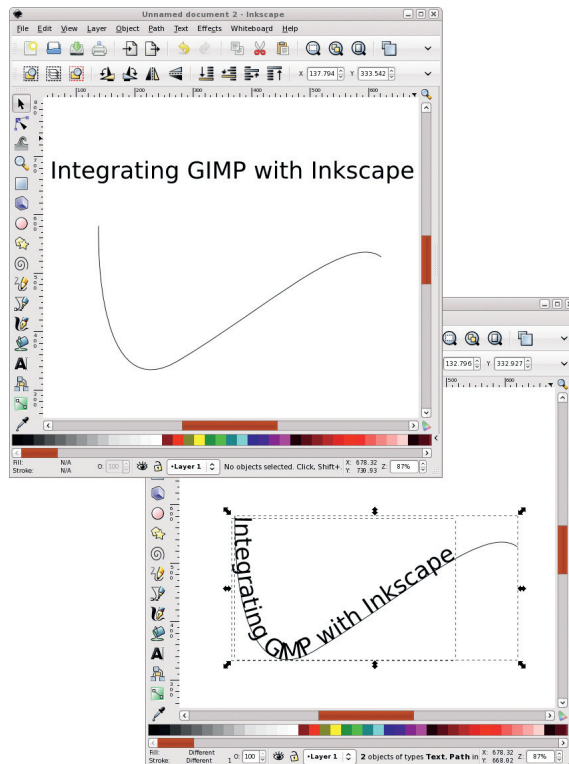
While both *Gimp* and *Inkscape* can adjust letter spacing, only *Inkscape* makes it easy to adjust the vertical positioning of letters. Use the arrow keys to move the text cursor in front of the 'l' in 'Inkscape'. Hold down Shift and use the Right arrow to select the letters 'lnk'. Hold down the Alt key and then tap the Up arrow 24 times. Still holding Alt, tap the Right arrow 15 times. The letters move vertically and to the right, positioned above the remaining letters.

If no letters had been selected then all characters after the text cursor would have been moved (try this to see what happens to the 'e' in 'Inkscape!'). Similarly, if there had been multiple lines of text, the spacing between the lines could have been edited using Ctrl+Alt and the < and > keys.

To move this curved text to *Gimp*, save it in *Inkscape* and load the file into *Gimp* manually. We have to do this because drag and drop between the two doesn't work with a vector text object, and the *Inkscape* project can't be saved to file and opened in *Gimp* as the text isn't yet in a path format.

Ideally text should be in path format for use in *Gimp*. To do this, select the text object in *Inkscape* then click on the Path > Object To Path menu option. Now save the project to a file. The default format for *Inkscape* project files is SVG, which is what's required for importing into *Gimp*.

Open the file in *Gimp*. Don't worry about the Page Size dialog that appears, as *Inkscape*'s default page size will import to 744x1052 pixels at 90dpi. Note that once you become more familiar with *Inkscape* you may want to make



> In *Inkscape*, the text can be edited in place and the letter positions can be edited further either independently or as a group.

changes to the size of the image when opening it. More important here is to make sure that the Import Paths option in this dialog is set, but not the Merge Imported Paths option. The former allows for the text to be imported as a path in the *Gimp*, and having it in a path allows us to scale it without losing the quality of the rendered text.

We can convert the path to a selection to fill it later on, or it can be stroked after scaling. Don't merge the paths from *Inkscape*, because the curve itself (the curved line around which the text is formed) is included with the curved text.

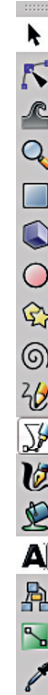
Half the job of migrating vector images from *Inkscape* to *Gimp* is integrating these desktop tools. *Inkscape* can load raster images created with *Gimp*. Since the images are linked rather than embedded into an *Inkscape* project, changes made to the *Gimp* image will cause the *Inkscape* project to be updated the next time it's reopened. It's also possible to drag *Gimp* layers directly into *Inkscape*, although doing so embeds the image in the project file, with the consequence that later updates to the layer won't show up in the *Inkscape* file.

Vector artwork, such as cartoons, are often drawn using tools such as *Inkscape* and painted in *Gimp*. The process for migrating this from *Inkscape* to *Gimp* is similar to working with text along a curve, without needing to convert the text an object before saving the *Inkscape* project. Once imported, the vector paths can be stroked or converted to a selection and filled with solid colours, gradients and patterns. Making the selection and filling it with a gradient is easier in the *Gimp* because there's no need to mask objects, as there would be if the process were done in *Inkscape*.

Gimp and Scribus

Scribus is a page layout tool, meaning it's useful for creating posters and flyers, among many other types of print media. It benefits *Gimp* users in its support for duotone, tritone and quadtone images – these are halftone images printed with

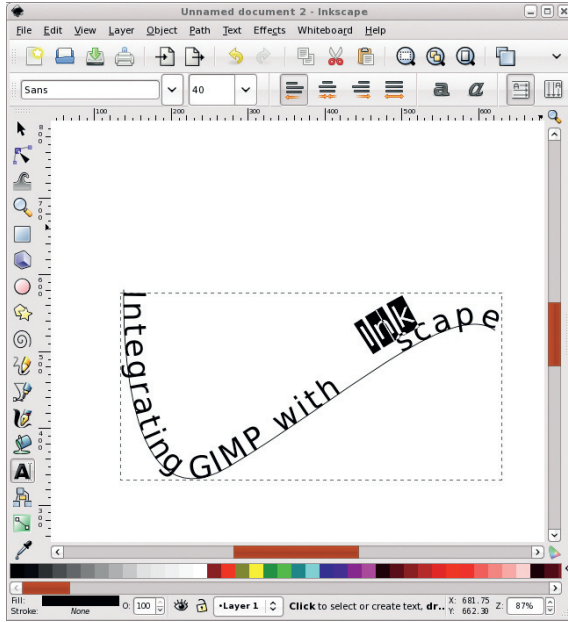
> The default *Inkscape* toolbar is a single vertical row on the left of the main window. The tools highlighted are, from top to bottom, the Select, Bézier and Text tools.



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Tutorial Gimp

› This sort of positioning of individual or subgroups of letters cannot be done in *Gimp* without fine-tuned path editing. After you've kerned them, the letters spread across the length of the curve.



two, three or four inks. A halftone image is a single-colour image created with collections of dots. The primary purpose of a duotone is to bring out midtone and highlights in an image. Tritone and quadtone processes increase depth, effect and quality. Duotone images are less expensive to produce in large-quantity, high-quality print runs.

Scribus enables you to easily create this type of image and can convert existing *Gimp* images likewise. *Scribus* starts with a blank page, much like *Inkscape*. Click Insert > Insert Image Frame to add a frame then drag through the page with the mouse to size it. The initial size doesn't matter, we'll resize it to fit the image in a moment.

Right-click in the image frame to open a menu. Select Get Image, then choose an image saved from *Gimp*. *Scribus* supports many raster formats including JPEG, PNG and TIFF. For the purposes of this tutorial, the image shown is 237x238

pixels. The image will be placed in the image frame but may not fit exactly. Right-click on the image and select Adjust Frame to Image to shrink or grow the frame as is appropriate to fit the image.

Scribus provides a limited but powerful set of image effects. In the same right-click menu, select Image Effects to open the Image Effects dialog. Select Duotone and click on the '>>' button to add it as an effect. The Options area of the dialog enables you to choose the two colours to use for the duotone. To achieve good midtone and highlights, choose a high-contrast set of colours, including one that's black. To reduce printing costs, pick pure Cyan, Magenta, Yellow or Black. Tritone and Quadtone can be created in the same way.

Scribus makes integration with *Gimp* easy, however it's a one-way integration. By default, the *Scribus* external tool for editing raster images is *Gimp*, but this can be changed in the Preferences dialog. With the image converted to duotone, it can be edited directly in the *Gimp*. In the right-click menu choose Edit Image. Because the image is linked to the *Scribus* document and not embedded in it, the image that's opened is the one saved to disk, so the duotone effect is not directly editable in the *Gimp*. Instead, export the page to an image file by clicking File > Export > Save As Image. While there's a method of exporting just the image object, it requires the use of the Crop tool in the *Gimp* Toolbox to clip the duotone image out of the exported image from *Scribus*.

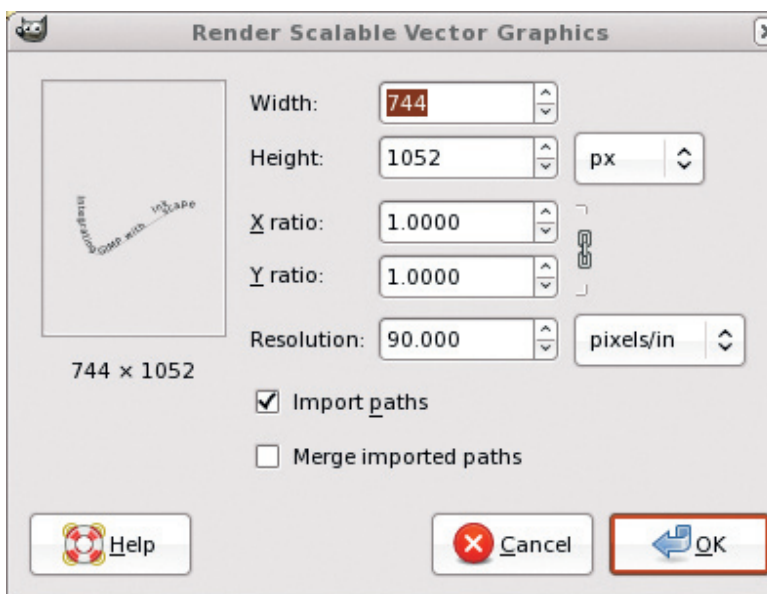
Gimp and OpenOffice.org

OpenOffice.org is a collection of office applications for word processing, basic drawing, presentations and spreadsheets. Each one supports the use of raster image files in various formats and with varying amounts of image editing features.

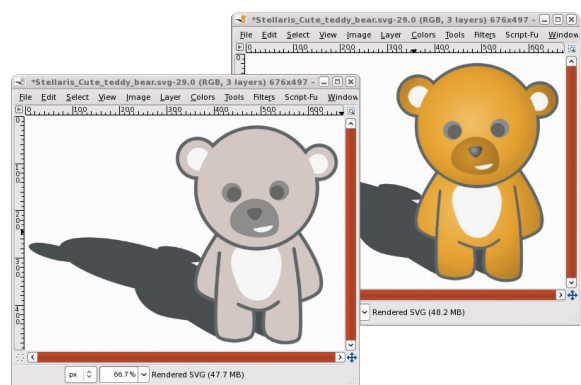
Layers from *Gimp* images can be dragged directly into all of these applications. Dragging a layer embeds the graphic in the *OpenOffice.org* application file. Alternatively, save a *Gimp* image to any common raster file format, then manually open it in an *OpenOffice.org* application. This process links the file so that changes to the *Gimp* image are picked up the next time *OpenOffice.org* is started.

If you drag layers into an *OpenOffice.org* application, the dpi settings from the *Gimp* image aren't imported. If you want the dpi settings to be honoured by *OpenOffice.org*, save the *Gimp* file to disk first.

There are no special tricks to using *Gimp* images in *OpenOffice.org* applications, but a little imagination can make using *Gimp* with *OpenOffice.org* more creative. For example,

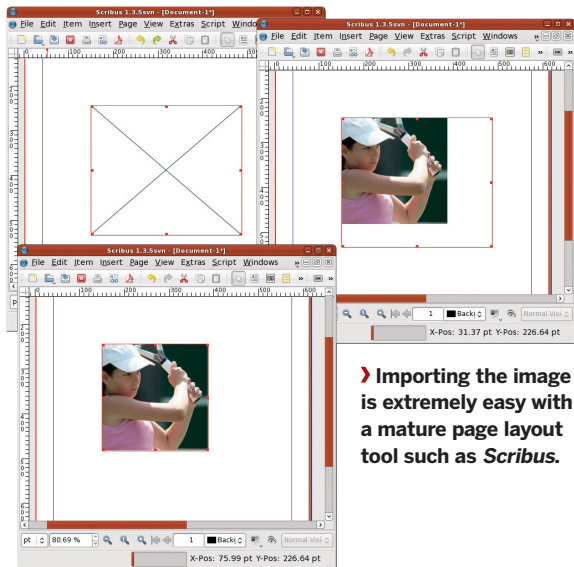


› When opening an SVG, choose to import paths but don't merge them. This allows scaling and rendering of the text without rendering the curve itself.

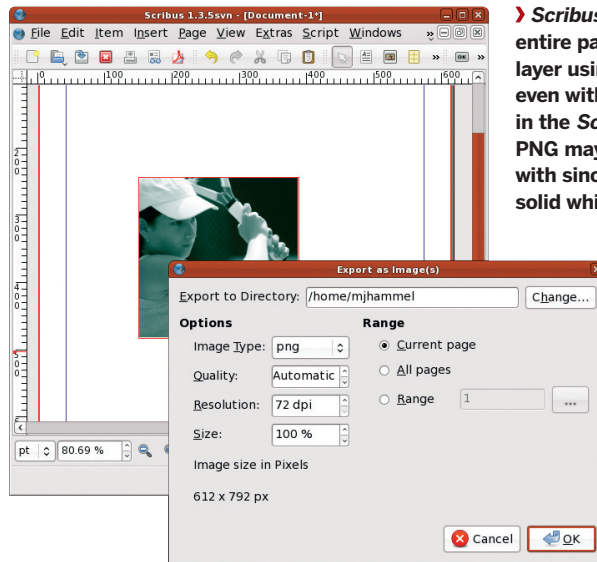


› This vector art from OpenClipart.org was imported from SVG into *Gimp*. Selections and bi-linear gradients add depth.

›› **Never miss another issue** Subscribe to the #1 source for Linux on page 6.



› Importing the image is extremely easy with a mature page layout tool such as Scribus.



› Scribus exports the entire page as a single layer using PNG or SVG, even with multiple layers in the Scribus document. PNG may be easier to work with since it provides a solid white background.

you can create various types of backgrounds with gradients, outlines and patterns in *Gimp* and dragged into *Impress* presentations on a slide-by-slide basis. Creative banners can be added to *Calc* spreadsheets, and you can size to fit cascading screenshots of desktop application windows for print documentation using dpi settings in *Gimp*.

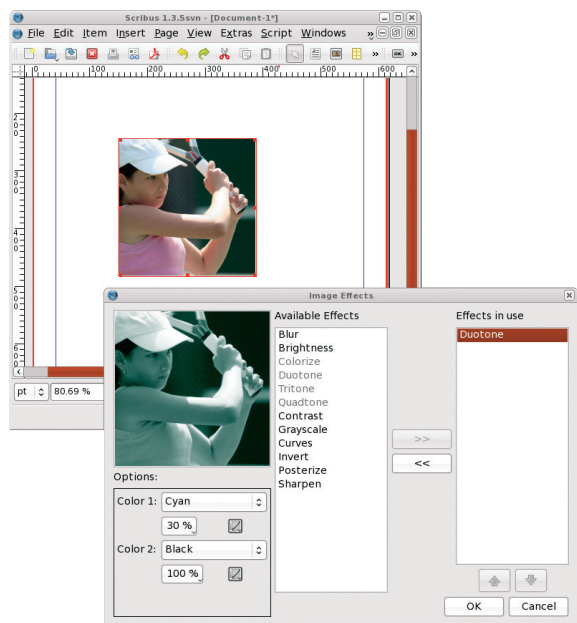
The *Gimp*'s editing features are far more extensive than any of the *OpenOffice.org* applications alone provide – it's a matter of using the right tool for the job.

Draw is a less sophisticated graphics tool than *Gimp*, but it does offer some interesting features. Any 2D graphic can be quickly mapped to 3D in *Draw*, though the result is not always ideal. *Gimp*'s Map Object filter is much slower and a bit less interactive, but offers much higher-quality mapping on a variety of shapes. But *Draw* is really useful to *Gimp* users thanks to its predefined shapes. In *Draw* these shapes are in vector format, which makes them easy to scale and modify.

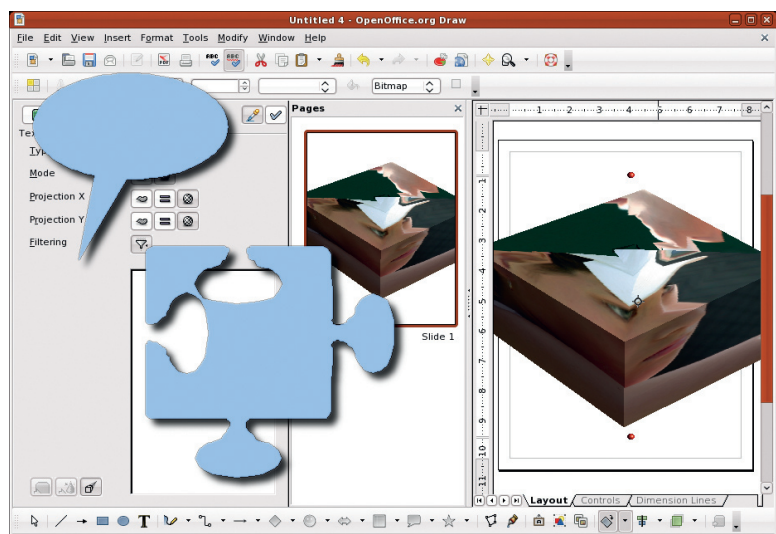
For example, *Draw* provides us with multiple types of callout shapes – the small bubbles that are associated with characters speaking in a comic strip. These shapes can be sized without losing quality in *Draw*. To get them into *Gimp* simply copy them in *Draw* by clicking Edit > Copy or pressing Ctrl+C. Then paste them in a *Gimp* image window. This is a much easier process than trying to hand-draw the somewhat odd shapes provided by the callouts.

Summary

This month's tutorial could be viewed as a laundry list of things the *Gimp* can't do, but this isn't about missing features. Instead it's about using the right tool for the job. No single tool does everything and in truth, no one really wants such an application. Such a program would be unwieldy to use, with so many buttons, toolbars, and windows. Instead, it's better to define a workflow into a series of tasks that can be accomplished with a variety of tools, then merge it all together at the end. Use *OpenOffice.org* and *Scribus* for document layout and management and leave the graphic design to tools like the *Gimp* and *Inkscape*. **LXF**



› Once the duotone effect is applied to the image frame, it can be edited directly in the *Gimp*.



› 3D mapping is fast in *Draw* but its predefined shapes, like the callout and puzzle piece shown here, are what attract *Gimp* users to the application.

› **Next month** We're turning simple effects into a classy advertising poster.