

From GIMP 1.2 to GIMP 2.0

# Picture – the Future

GIMP is still the reference application for image processing on Linux.

December sees the release of the new stable 2.0 version. We take a look at what you can expect from the developers. **BY ROMAN JOOST**



The developers of *GIMP* [1], the “GNU Image Manipulation Program”, have worked for almost three years on version 2.0, focusing mainly on the internal structure. The program is still under development and will be referred to as version 1.3 until completed. The new version looks set to remove past weaknesses with regard to the user interface and documentation, but also aims to enhance functionality and the program structure.

## First Impressions...

After launching GIMP 2.0, users will notice the most obvious change. The icons and fonts displayed in the main window are more colorful and better organized; this is due to the **GTK + 2.0** graphics library, on which GIMP is based. The program also keeps to **freedesktop.org** [2] guidelines.

You can open images by dragging them from *Nautilus* or *Konqueror*.

GIMP 2.0 provides a selection of templates with preset dimensions for new images. Users can add their own customized templates.

## Appearances

GIMP 2.0 provides new orientation tools that help the user not to lose control of the various active windows on the desktop. Users can group other windows in a

container window, or dock. The windows can then be accessed via tabs (see Figure 1).

Many users want a layout that puts all the windows in a single main window. However, users with multi-screen setups would lose the ability of being able to spread functions across screens. And so we have the compromise. The *regimp* project [3] con-

tinues to work on an approach that uses only a single main window.

In future it will be much easier to locate dialog windows, as they will be centrally accessible using the *File* menu in the *Tools* window. GIMP 1.2 hid the clipboard dialog in *Edit / Buffer*, and the Undo-History was accessible only via the Dialogs menu.

Layer-specific functions are available at a different location than image-specific functions. Color operations, such as invert, histogram, and contrast are accessed via *Layers / Channels*, rather than the *Dialogs* menu. In future, it will be possible to attach the *Dialogs* to the top border of a window as a menu bar to provide quicker access.

A new tool that can assign an arbitrary color to the border around the drawing provides a clearer view. Even a gray background is distinguishable from the image (see Figure 2).

Also, display filters for brightness and contrast manipulation help color-blind users to improve the readability of an image without actually having to modify the image. The changes are applied to the screen image, but not stored in the image file. In future, the zoom function will allow continuous scaling up to full-screen

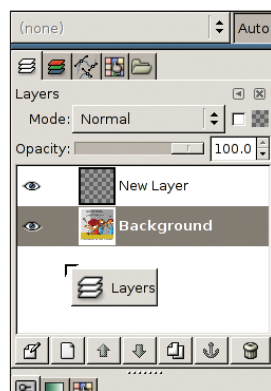


Figure 1: You can group windows in so-called docks

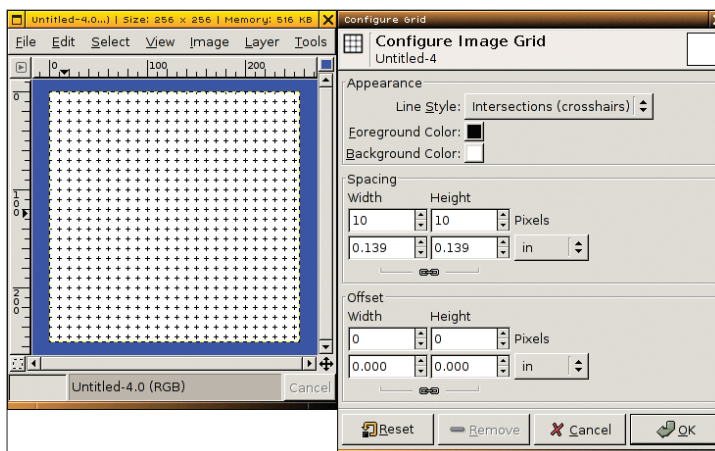


Figure 3: The grid is configurable and you can assign an arbitrary color to the inactive border, if required

mode.

New tools facilitate positioning and adjusting of image components. A grid now complements the rulers; the grid co-ordinates or lines are user-definable and you can allow objects to snap to the grid (see Figure 2).

Most people are aware that GIMP is at home both on Linux and Windows, but there are also versions for other Unix systems, OS/2, and Mac OS X. BeOS developers have recently cancelled attempts to port GIMP to BeOS due to lack of interest. Users of systems that GIMP does not support should not give up hope, however, as the effort required to port GIMP has been reduced considerably thanks to the re-work. And GIMP 2.0 has no problem whatsoever with 64 bit processors.

## New Tools

At first glance, the tool window in the new version has a lot more to offer than GIMP 1.2. But layer transformations and

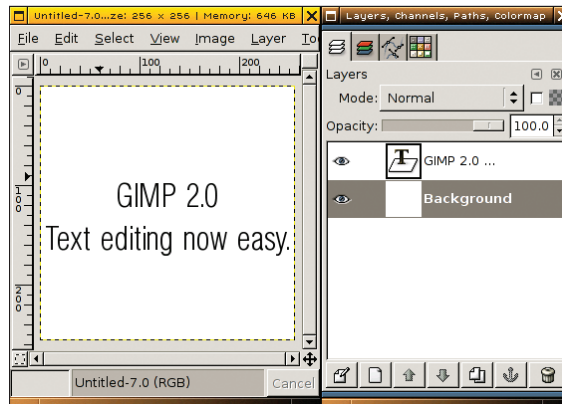


Figure 3: The text tool creates its own text layer

channel selections are not new; they were simply distributed across a number of menus in the previous version. A dock within the tool window now groups the options for each tool, displaying them in the same window, when the tool is selected.

The brush tool now displays the selected brush in the mouse cursor.

The *Bezier curves* are now known as *Path tools*. If required, you can move individual nodes while creating a path. Previously, you had to change tool to do so. There is also a new function that allows you to trace paths with different brushes and styles. And the new SVG export format allows you to export GIMP paths to other vector graphics programs, such as *Sodipodi* [4].

## Text and Colors

The text tool provides enhanced support for TrueType fonts (see Box 1).

Besides the font and color, you can also select the justification mode. In addition to aligning left or right, or centering, GIMP now provides a justified mode. Unfortunately, the unstable version does not provide hyphenation, and

that impacts the usefulness of the function for practical applications. On the upside, you can import longer text passages from external files, if required. Also, GIMP creates a text layer for texts, allowing them to be edited independently of other layers (see Figure 3).

The developers have also put some thought into downward compatibility. Version 1.2 will read a text layer as a normal layer, and of course it will handle any other layers without complaint.

The predecessor to GIMP 2.0 used two color models: **HSV** and **RGB**. Neither is particularly useful in professional printing, as printshops prefer **CMYK** images. Although the unstable version does not have a CMYK mode, it is planned for version 2.0.

GIMP 2.0 will not support the **Pantone** and **HKS** color profiles, as they are subject to copyright; instead, the “Free Color Management” project [5], is working on implementing **ICC color profiles**.

This is where the complete re-work of the program structure starts to pay off. Adding these new color models to GIMP 1.2 would have been extremely complex.

## Keyboard Shortcuts in Menus

The developers have tried to avoid mapping functions to the [Alt] key. As window managers typically map the [Alt] key, many users had to find workarounds for their window managers with version 1.2, or completely do without shortcuts that used the [Alt] key.

The [Alt] key only calls the *Accelerators*, which let you navigate the menu structure without a mouse. Although they do not call functions, they do provide access to menu items. For example,

### Box 1: Fonts on Linux

The question of fonts on Linux has caused many a GIMP user headaches in the past. It is difficult to understand why the program uses X Server fonts without providing a solution of its own, although this would have simplified both installing and using GIMP.

The reason for this is historic, and you need to look at the X11 graphic Server or its free Linux counterpart XFree86 to understand it. Just like Unix, X11 was designed for network use, and not exclusively for standalone machines. This is why it uses a font server to support fonts on the local network.

In the past, people tended to use only PostScript or Type 1 fonts. The latter was a proprietary Adobe format, and Adobe charged for its use. Due to the development and distribution of the TrueType standard by Apple and Microsoft, Adobe was forced to disclose the specification for Type 1. And it has been possible to develop and use free Type 1 fonts for Linux ever since.

The FreeType project [8] has developed a library that allows arbitrary applications to use TrueType fonts. Embedding the FreeType library within desktop environments offloaded font management from the X Server, and thus removed most font management issues.

## GLOSSARY

**GTK+:** The “GIMP Toolkit” was originally programmed specifically for GIMP and provides graphics capabilities. In addition to GIMP, the GNOME desktop environment also uses the GTK graphics library.

**freedesktop.org:** Improved interoperability of various desktop environments and programs, such as *Open Office*, is the aim of this project.

**CMYK:** The Cyan Magenta Yellow Black model is used in commercial printing, as it can reproduce realistic colors.

**RGB:** The Red Green Blue color model composes each color from these three colors. Today’s displays also use this method.

**HSV:** The Hue, Saturation, Value method provides a useful overview of the shading of a color.

**Pantone:** This color system has seven basic colors and provides mixing formulae for some 4000 color tones, that CMYK cannot reproduce – mainly so-called spot colors.

**HKS:** A Pantone variant common in Europe.

**ICC color profile:** A standard by the “International Color Committee” that defines the color characteristics of devices such as displays or printers, independently of platforms and applications.

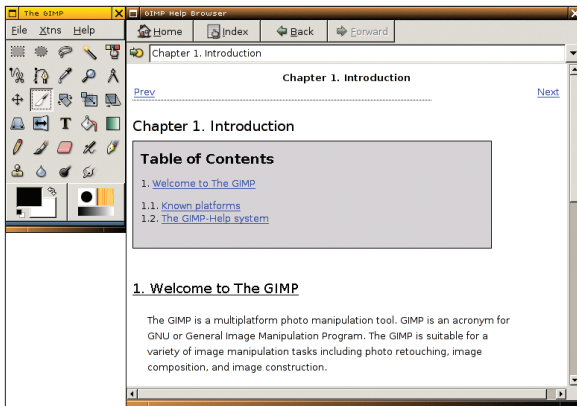


Figure 4: The GIMP help browser

using [Alt-T] [C] [H] takes you to the histogram. A new help system is available. Unreadable code led to invalid references between HTML documents and the browser (see Figure 4) and prompted the developers to re-write the help system. The new documentation will provide multiple language support [6].

The developers also launched the *gegl* [7] project to allow other Open Source projects to leverage GIMP's enhancements. The *General Graphic Library* will

change the color information in other layers.

## Future

The GIMP team has not only re-worked the appearance and functionality of the program, but also provide a far cleaner program structure. These changes will benefit future development work, when new functions need to be added. Despite the re-structuring that has gone on, users of older GIMP versions will not need to

be responsible for imaging operations in future.

Currently, GIMP manages functions in a database, to which all developers have access. The *gegl* library will be replacing this system, the aim being to provide envelope layers – such as the ones used by Adobe Photoshop for example. These do not contain images, but are used to apply filters that can

adjust to a new interface. And the new documentation will definitely help newcomers and upgraders to move to the new generation GIMP 2.0.

All this progress would have been impossible without the assistance that numerous users and developers provide to the GIMP project. The project still welcomes your help. Surf to the homepage or join a mailing list or IRC channel, to find out the details. ■

## INFO

- [1] Gimp: <http://www.gimp.org/>
- [2] Freedesktop.org: <http://www.freedesktop.org/>
- [3] regimp: <http://www.kde-look.org/content/show.php?content=6255>
- [4] Sodipodi: <http://sodipodi.sourceforge.net/>
- [5] Free Color Management: <http://www.khk.net/color/>
- [6] GIMP User Manual: <http://wiki.gimp.org/gimp/GimpDocs/>
- [7] gegl project: <http://www.gegl.org/>
- [8] FreeType: <http://www.freetype.org/>

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