Gimp 2.0

New Brushes Paint Clean

After a development cycle lasting almost three years, Gimp, the premium Open Source image manipulation project, has made the transition to version 2.0. The changes not only affect the GUI, but also include improved tools, new functions, and an improved internal structure. BY ROMAN JOOST

Although Gimp is one of the most prestigious projects in the Open Source Community, as it competes quite successfully with many commercial image manipulation products, users have often complained about usability weaknesses and missing functions. Version 2.0 does not remove all of these deficiencies, but the latest release does provide a new platform that facilitates later extensions, while at the same time delivering some notable enhancements.

Installation

The major distributions, Suse, Mandrake, Red Hat, and Debian *unstable*, all install Gimp version 2 by default. Simply use your distro's package manager to install. Incidentally, installing Gimp 2 will not affect your existing Gimp 1 installation, if present.

If you would like to build Gimp yourself, check out [1] for the **source code**. Before you start, make sure that you have installed the required **libraries** on your system: *GTK*, *pkg-config*, *PangoFT2*, *Freetype*, *fontconfig*, *libart2*, and *libjpeg*. The compilation step requires the matching developer packages. These packages are easily identifiable as they have the same names with a *dev* or *devel* extension (see Box 1).

Unpack the tar archive as follows:

```
tar xjf gimp-2.0.1.tar.bz2
```

Change to the new directory and run the *configure* script to check if your system has all the required components:

```
cd gimp-2.0.1
./configure
```

Check the error messages, which tell you the components you need to add to compile successfully. Install the missing components and re-launch the script. After successfully completing the *configure* step, go on to compile and install Gimp 2 in the default directory */usr/local/*:

Box 1: Configure parameters

Gimp includes a wide range of features by default, although many users may not need them. You can use the *configure* script to disable some features, thus reducing the number of dependencies on external libraries. For example, to remove the printing functions, launch *configure* with the following parameters:

```
./configure --disable-print
```

./configure --help displays a list of parameters. You can change the target directory for the Gimp executable. This will default to */usr/local/*. Let's assume you want to install Gimp in the */tmp/* directory, for test purposes. You can call the *configure* script as follows to do so:

```
./configure --prefix=/tmp
```

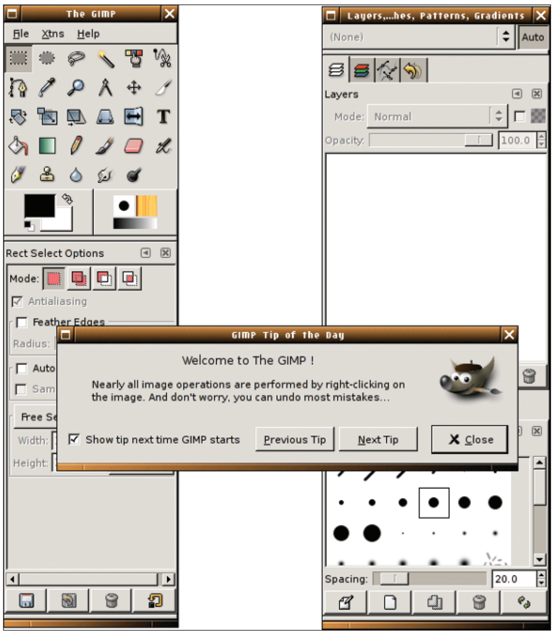
```
make
su (enter root password)
make install
```

Then launch the program in the command line by typing */usr/local/bin/gimp-2.0*.

The first time you launch the new Gimp, a wizard pops up to help you set up a personal directory below *~/.gimp-2.0/*. Tell the setup program the size and location of your swap file, the default size of new images, and your screen resolution. If you want to continue using brush formats and patterns from previous Gimp versions, you can select *Folder | Brush* in the preferences window to import them later.

New Interface

The biggest change is to the re-vamped GUI (see Figure 1). The numerous dialog boxes that the previous version scattered around the screen are now managed cen-



Mode: Normal

Opacity: 100.0

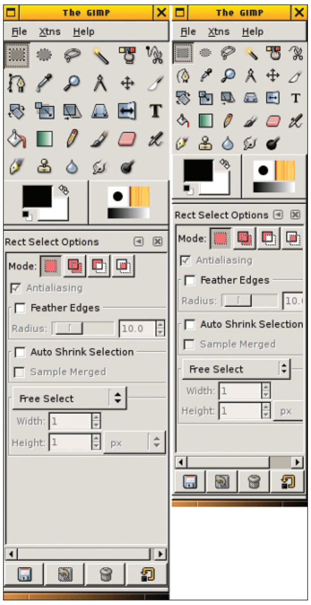
Spacing: 20.0

Welcome to The GIMP !

Nearly all image operations are performed by right-clicking on the image. And don't worry, you can undo most mistakes...

☑ Show tip next time GIMP starts

Figure 1: Gimp 2 showing off its tidy new interface.



☑ Antialiasing
□ Feather Edges
Radius: 10.0
□ Auto Shrink Selection
□ Sample Merged
Width: 1
Height: 1

Figure 2: The tool window with the Small (right) and Default themes.

trally. Select *File* | *Dialogs* to find them. Users can avoid the clutter of windows that afflicted previous Gimp versions if they needed to access multiple dialogs. Container windows, or so-called *docks*, collect multiple dialogs as tabs within a single window.

Users can move tabs within container windows, and between docks. To do so, hold down the left mouse button and drag the tab icon to the new location. This allows you to compile container windows with your favorite tools to reflect your needs. There are also three pre-configured docks below *File* | *Dialogs* | *Add Dock* with collections of popular tools.

If you use Gimp as a drawing application, you will appreciate the ability to display the outline of the selected brush for the mouse cursor. To enable this feature, select it in *Interface* | *Image Windows* in the preferences dialog below *File* | *Preferences*. Look for the section *Pointer movement*, and more specifically the *Display cursor updating* field.

GLOSSARY

Source code: *The human-readable and editable form of a program. To create an executable, a compiler translates the source code to machine-readable format.*

Library: *A library provides functions for other programs. For example, Gimp, and the Gnome desktop environment both use the GTK library to display graphical elements.*

Enabling this option allows you to estimate the effect that a brush stroke will have as regards stroke width and form.

The Gimp developers have introduced a full-screen mode to allow users the option of viewing images without distracting window frames or borders. Select *View* | *Full-screen mode*, or press [F11], to display only the active image on screen. This function depends on your current window manager, however. Users of some desktops, such as WindowMaker, will not be able to use it. You will not have this problem, if you have a window manager belonging to one of the major desktop environments, such as KDE or Gnome.

If you used accelerator keys in the previous version, you will notice that this does not work in Gimp 2. The reason for this is that the developers disable this option by default to prevent inadvertent modifications. To re-enable this function go to *File* | *Preferences*, click on the line that says *Interface*, and check the checkbox for *Use Dynamic Keyboard Shortcuts*. You can then go on to define new keyboard shortcuts, just like in Gimp 1, by selecting a menu entry with your mouse, but not clicking, and then pressing the key or keyboard combination you want to assign.

If you do not like the new interface, you can always opt for an alternative outfit (*Theme*), to change its appearance. Besides the *Default* theme, at present there is just one theme (*Small*) available in *Select a theme* below *Interface* (see Figure 2).

The so-called view filters in the *View* | *View filters*… dialog are also new. They do not affect the image file, and instead simply influence the screen display. This allows users with color deficient vision to set up the view to reflect their sight impairment. You can also use the gamma value to adjust the brightness to suit your screen.

The developers have added new transformation tools for manipulating selected areas and the *Select regions by color* function. The tool preferences are now located in a separate dialog, which is accessible via the tool window *File* | *Dialogs* | *Tool Options*.

Creating Text

One of the biggest weaknesses of the old text tool was its inability to modify existing text, although there was a *Dynamic text* extension that provided added text manipulation functions. The new Gimp version keeps all the advantages of the older text tool and the extension. The text tool can now handle special text layers which are freely editable.

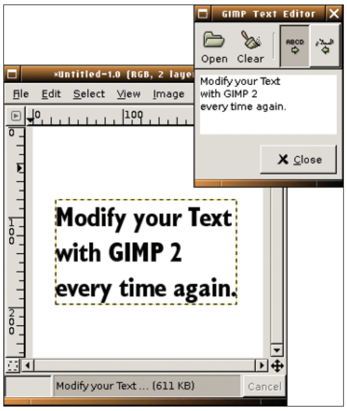
To add text to an image, select the text tool, and click on an empty space within the image. The text editor appears. You can now type your text, which appears on screen (see Figure 3). Use the text tool preferences to select another font or color, or change the orientation.

The text layer then appears in the layer window, where you can click to edit the

Box 2: Extensibility

Enabling the following extensions, which are still under development, adds functionality to Gimp:

- Gimp-Gap [2]: The "Gimp Animation Package" allows users to create animations with gimp.
- Gimp-Print [3]: Provides printer drivers and adds printer functions to the program.
- Gimp-Help-2 [4]: The user documentation for Gimp 2, which is still at an early stage of development, but it can help users to get started.
- Gimp-Perl [5]: This allows users to write plug-ins for Gimp in the Perl programming language.


GIMP Text Editor
Open
Clear
*Untitled-1.0 (RGB, 2 laye
File Edit Select View Image
Close
Cancel
Modify your Text ... (611 KB)

Modify your Text with GIMP 2 every time again.

Figure 3: Gimp 2 can edit existing text.

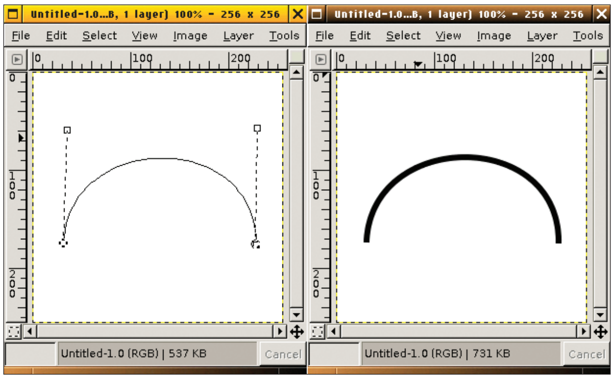

Untitled-1.0...B, 1 layer) 100% - 256 x 256
File Edit Select View Image Layer Tools
Untitled-1.0 (RGB) | 537 KB
Cancel
Untitled-1.0...B, 1 layer) 100% - 256 x 256
File Edit Select View Image Layer Tools
Untitled-1.0 (RGB) | 731 KB
Cancel

Figure 5: Using the path tool to create a curve (left) and after tracing the path (right).

text independently of the underlying image.

Working with Paths

Paths allow you to create curves made up of anchor and control points. This method was derived from shipbuilding. Shipbuilders used flexible slats which they weighted down at specific points. The anchor points are like virtual weights that bend the paths. Control points specify start, end, and intermediary points on the curve.

The developers completely reworked the path tool for Gimp 2. It now has three operating modes which are configurable via the tool preferences. *Design* allows you to create paths and add control points. *Edit* allows you to add or delete the control points in an existing path. In *Move* mode, you can hold down the left mouse button and relocate points (see Figure 4).

The [Shift] and [Ctrl] keys add more functionality. You can hold down the [Shift] key in *Edit* mode to remove control points. In the other modes, holding down the [Ctrl] key takes you straight to *Edit* mode.

To create a path, select the path tool in the tool window, and draw a zigzag line by clicking to create anchor points.

To bend the path between two control points, hold down the mouse button and push the connecting line up. The anchor points first appear on the control points that delimit the path sector, and then move to reflect the mouse movements.

After creating a path, you can trace the path to create a visible graphical element in the current image (see Figure 5). To do so, select *Trace path* in the tool window. In the dialog that then appears you can select both the stroke width and pattern that you want to apply to the path. The initial selection includes normal lines, dashes, and dots.

You can import and export paths as **SVG** formatted vector images. This function is slightly hidden. Open the path dialog by selecting *File | Dialogs | Paths*. You should see a list of the paths in the current image. Right click on an entry to pop up a context menu where the first item is called *Export path...*. If you select this entry, you are prompted to enter a filename for the SVG vector graphic from the path.

GLOSSARY

SVG: *A graphics format that uses a simple programming language to describe geometric figures.*

Future

The protracted development period to version 2.0, despite an apparently small number of new features, can be put down to modifications to the internal structure. These modifications will take effect gradually, as they provide a basis for new features. Besides maintaining the existing functions, the developers are also working on an improved image manipulation system called GEGL ("Generic Graphical Library ") [6]. Just recently, the Shuttleworth Foundation [7] promised financial support for the project as soon as it comes up with the first usable components. ■

INFO

[1] Gimp: *http://www.gimp.org/*

[2] Gimp Gap: *ftp://ftp.gimp.org/pub/gimp/plug-ins/v2.0/gap/*

[3] Gimp Print: *http://sourceforge.net/projects/gimp-print/*

[4] Gimp User Manual: *http://wiki.gimp.org/gimp/GimpDocs/*

[5] Gimp Perl: *ftp://ftp.gimp.org/pub/gimp/plug-ins/v2.0/perl/*

[6] GEGL project: *http://www.gegl.org/*

[7] Shuttleworth Foundation: *http://www.shuttleworthfoundation.org/*

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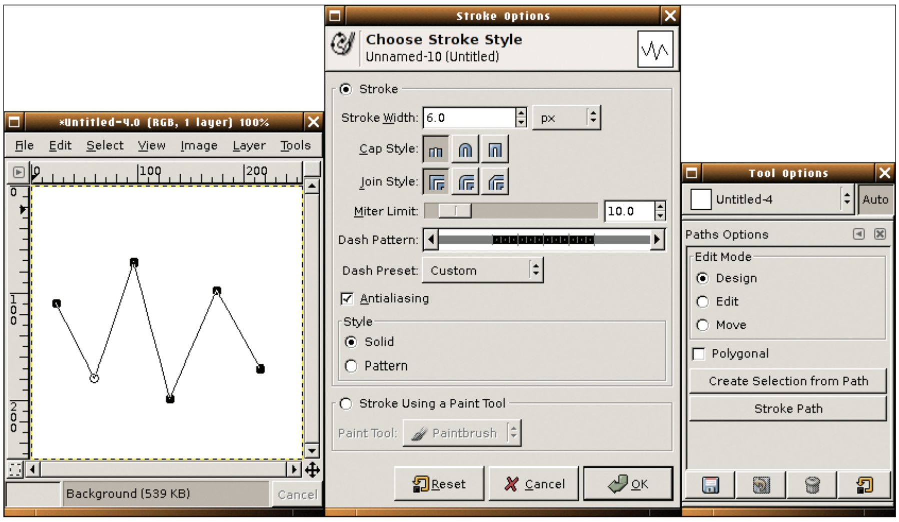

● Stroke
Stroke Width: 6.0 px
Miter Limit: 10.0
Dash Preset: Custom
☑ Antialiasing
Style
● Solid
○ Pattern
○ Stroke Using a Paint Tool

Edit Mode
● Design
○ Edit
○ Move
□ Polygonal

Figure 4: Paths can be edited before adding a brush stroke.

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Mandrakelinux
PowerPack+
PowerPack+
The Linux Solution for Desktops and Servers
10.0