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# GIMP and the Web

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### **◆ What We Do On the Web**

The Web is a tool for distribution. Anything that can be digitized can be made available to the public: music, software, news, books, images, recorded speeches, recipes, grandma's last will and testament. Anything. The only difference between these items is how they are presented to an audience. Music comes in MP3 formats. Video news feeds are often in G2 format from Real, Inc. But the majority of information is presented in some form of markup language. The most common of these languages is HTML. And it is from HTML that most Web site designers derive their need for artwork.

HTML-based pages are often static, meaning they are created once and sit as a file on a Web server waiting for users to request them. Some pages are dynamic. These are pages that are gener-

ated right as the user requests them. Dynamic pages put a heavy load on a server with many visitors, so small companies and small Web sites often try to generate static pages on a scheduled basis instead of loading the server with dynamic requests. In either case, HTML pages are usually chock full of graphic images: logos, background images, navigation buttons, animations, and thumbnails. Each of these serve a different purpose and have different requirements for the designer. Fortunately, none of them is very difficult to produce with the GIMP.

Logos are used to identify a site, product, trademark, corporation, or individual. They are generally images which show up on just about every page of a site. Background images are placed behind text or other images. They provide a style or theme for a Web page. Although they provide no real functionality for a site (the site can usually exist without the background image), they are a key component for presenting a site's identity. Because they are so key to an identity, logos are often used as background images.

Animations are most useful in advertisements, however, I can't in good conscience encourage their use. Web-based inline animations are only available using the GIF file format, which supports animation in about the same way a "page flip" book supports it. Both work and both are extremely inefficient (would you rather watch page flip books or a movie?). Still, you can't avoid their use on the Web. Animations are a moderately complex topic and will be discussed briefly here in Part 3.

Navigation buttons include rectangular, oval, and randomly shaped images used to move around a Web site. An alternative to buttons are image maps, which are ordinary images with various regions linked to other areas at the site. You'll often see navigation buttons used when you move a mouse over some text and it changes color or shape—these are known as JavaScript rollovers. Each of these buttons is actually two different images: the one displayed when the mouse is over it and the one displayed when the mouse is somewhere else. Image maps do not change when you move the mouse over them, although the status bar at the bottom of the browser window may show the destination link depending on where the mouse is over the image. Most of these images are created before the Web page itself is created. The images are static. But for some situations a dynamically created image is more desirable. Stock price charts are an example of dynamically created images. The GIMP's scripting interface allows you the option of using it in *batch* mode, which means the user interface is not started. This allows programs to run unattended to generate images. We'll look at scripting with the GIMP in Part 4.

## ◆ What GIMP Does for the Web

The GIMP provides a means of creating images for use on the Web (it can also be used for print, but that topic is beyond the scope of this text). Images can be created from scratch, like logos or backgrounds, or manipulated from scanned or other digital images. You can create image maps, buttons, galleries of photos, or even cut up an image to fit into an HTML table.

What you can't do with the GIMP is generate programmatic interfaces to your pages. This is known as CGI (for server-side programs) or JavaScript and Java (for client-side programs). Such programs, even though they may generate images or automate the display of images, are usually created manually using a programming language like Perl. Perl can also be used with the GIMP, but the GIMP does not generate Perl code.

## ◆ The User Interface

If you've ever worked with Adobe Photoshop then the GIMP's user interface should be familiar to you. The initial window consists of a number of rows and columns of buttons with a menu bar at the top—this is the *Toolbox*. Each button enables a different tool for use in the *Canvas*. Figure 1-1 shows the Toolbox. Note that single-clicking on a button sets the tool mode to that tool. Double-clicking on the button sets the tool mode and also opens the Tool Options dialog. Most tools have configurable options. This dialog remains open when you change tools, and will display the options (if any) for the currently selected tool.

Canvases are where you do your drawing, painting, and so forth. Figure 1-4 shows a blank Canvas and some of its features. You can open a new, blank window using either the *File->New* menu option from the Toolbox, the *File->New* menu option in the Canvas menu, or by typing *Ctrl-N* in either the Toolbox or a Canvas window (*Ctrl-O* will open an existing image). You will be given an option as to what the window will display—either a transparent (i.e., empty) background, a white background, or the current foreground or background colors.

Each Canvas is made up of *rulers* along the left and top sides, scrollbars on the bottom and right sides, the display area (usually white in a new window), a *status bar* below the bottom scrollbar, a pop-up menu, *quick mask* buttons, and the *Navigation Preview* button. All of these are initially visible (the menu opens when you

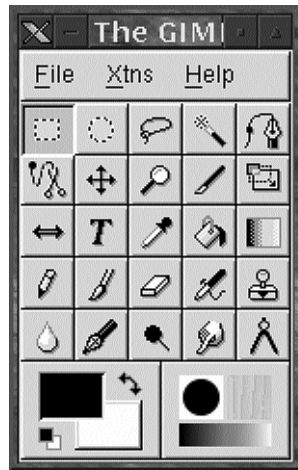


FIGURE 1-1 The GIMP Toolbox

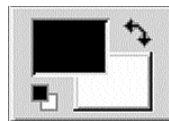


FIGURE 1-2 Foreground/background colors

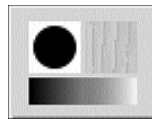
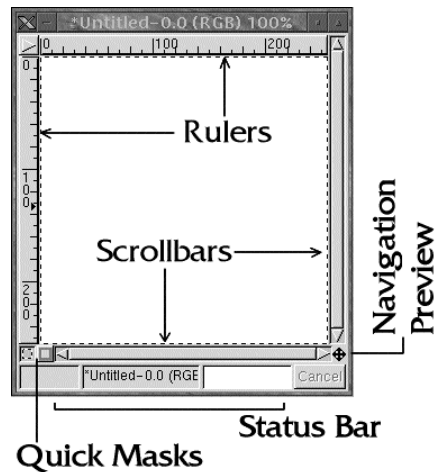


FIGURE 1-3 Brush, pattern, and gradient quick tools

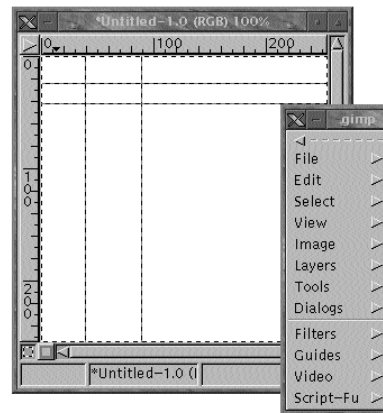
click on its arrow or when you press the right mouse button inside the display area) and most can be toggled off (invisible) using the *File->Preferences* option in the Toolbox. There are other features which are not visible: multiple layers (only the background layer is created initially, you'll create others later) and *guides*. Guides are created by clicking in one of the rulers and dragging it into the display area. A guide is just a straight line to which selection outlines and layer edges can be attached, making alignment much simpler. We'll see these in action in later chapters.

Closing the Canvas window is done by typing *Ctrl-W* in the display area. If changes have been made to the window you will be asked if you want to save them. Closing the Canvas window does not exit the GIMP. To exit, you select *File->Quit* from the Toolbox or Canvas window menus or just type *Ctrl-Q* in any window.

The GIMP understands most common image file formats, ranging from JPEG and GIF to TGA, TIFF, XPM, PCX, Postscript,



**FIGURE 1-4** The Canvas window and its features



**FIGURE 1-5** A Canvas window with guides and the Canvas window Menu displayed

PNG, and WMF. If you open an image and it's too large for the display, or if you resize the Canvas window, you can move around the image within the display area in three ways. First, moving the scrollbars will get you around. Second, the middle mouse button when clicked (or, if you only have two buttons, then both pressed at the same time) and dragged will do the same thing. Finally, a new feature to 1.2, the Navigation Preview, allows you to see a thumbnail version of the image with an outlined region showing the display area of the Canvas window. You can drag the outline around the thumbnail and the Canvas window's display area is updated accordingly.

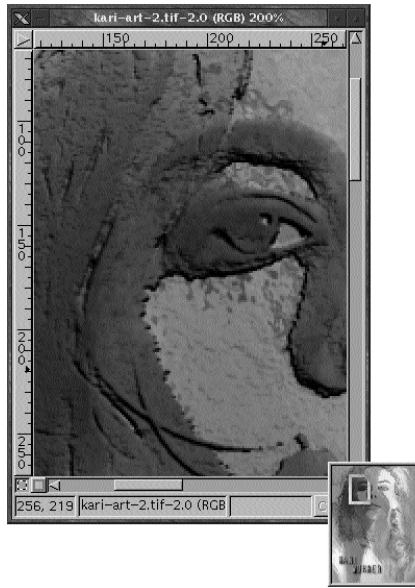


FIGURE 1-6 The Navigation Preview

Although you can change the resolution (number of dots per inch, for example) for the image, you won't need to do so for Web images. The default is 72DPI, and the rulers along the sides of the Canvas window will show units in pixels. You can change from pixels to inches for the units used in the rulers, although this probably won't be all that helpful. Such features are more important to artists working on images destined for print.

The Canvas window menu is an important part of the GIMP. If you're used to the Microsoft and Mac world of applications, you're probably expecting a menu bar to access features. The GIMP is designed for artists, who value screen space on their monitors like movie producers value summer blockbusters. Because of this, you'll find a number of features designed to save screen space. The Canvas window menu is one such feature. The menu can be accessed by clicking on the menu arrow in the upper left corner of any Canvas window or by pressing and holding the right mouse button in the display area of the window. The GIMP uses the notion of an *active window*, which means that the menu item you select is applicable to the window which is active. Which window is active depends on which window was last clicked in. Want to make a Canvas window active and not take the chance of accidentally making changes to it? Click in the status bar over the name of the window.

The *Canvas menu* gives you access to nearly all the features of the GIMP, including those found in the Toolbox (only a few options under the *Xtns* menu in the Toolbox are also not available here). This menu contains a number of submenus, including options for editing (cut and paste), selecting (feathering, growing, shrinking, and so forth), and the vast set of color and effects filters. If you want quick access to it, you can *tear off* the menu and it will then get its own window. This can be confusing if you have multiple Canvas windows open since the menu is Canvas-specific. Fortunately, the GIMP knows which window the menu belongs to. However, if you use tear-off menus you'll need to keep track of which ones they belong to on your own since visually it will not be obvious. The key: don't use tear-off menus.

## ◆ Saving Your Work

We've already talked about opening existing image files and starting with a blank Canvas window. Once you've completed your work (and if you're smart, periodically while you're working), you'll want to save the image. The GIMP has its own file format called XCF (an acronym for the Experimental Computing Facility at Berkeley where the GIMP was born). If your image has more than one layer and you specify to use filename extensions to identify the file and also specify ".xcf" as the suffix to the filename, then your image will be saved in an XCF formatted file. This is good—all the information that the GIMP knows about while running will be saved here. If you choose another suffix, say .jpg or .gif, then GIMP will try to save the image using these formats. This can be troublesome if you have more than one layer since JPEG images, for example, don't understand layers or multiframe images. The key here is to use the right format for the job. Save your work in a XCF format at all times until you're ready to flatten the layers (which means to combine them into a final, single layer). At that time, with a single layer, you can save it to some other file format. We'll talk more about the differences between GIF and JPEG in Part 3, where we get into the meat of imaging for the Web.

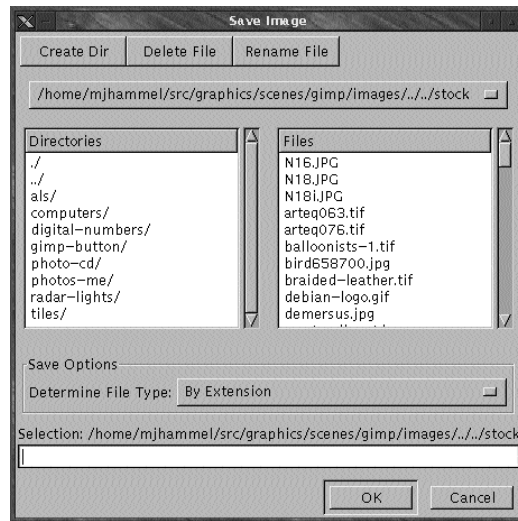


FIGURE 1-7 The Save As dialog

## ◆ Terminology—You Say Potato, I Say Option Menu

One of the problems with working on multiple computer platforms is terminology. There are standards for terms, and the geeks among us are used to them, but the average person needs a little primer every now and then. Well, here's yet another primer.

The GIMP uses terminology which is similar to, but slightly different than, PC and Mac systems. Mac users may be familiar with the term “palette” when describing a window that pops open in response to selecting a menu item, for example. In the GIMP (and on LINUX and UNIX systems in general), these are referred to as “dialog boxes.” We'll refer to just about every window that opens in the GIMP that isn't either the Toolbox or a Canvas as a dialog box of some sort.

Dialog boxes contain buttons, scrolled lists, and other things. One of the less familiar items can be found in the Layers and Channels dialog (type *Ctrl-L* in a Canvas window to open this dialog). Here you'll find a *notebook* with three tabs labeled “Layers,” “Channels,” and “Paths.” Clicking on the Layers tab puts you on the Layers *page* of the notebook. Clicking on the Paths tab puts you on the Paths page. Easy enough once you know the terms we'll be using.

Menus are also a little confusing since they come in various forms. The traditional menu is called a *pull-down menu*, like the

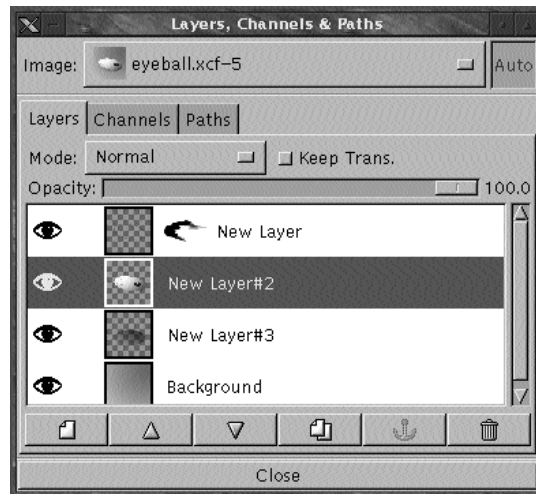


FIGURE 1-8 Layers and Channels dialog

menu you get when you click on *File* in the Toolbox's menu bar. This is also known as a *pop-up menu*. Some menus are presented like a button, so that when you click on it the menu opens with the currently selected menu item displayed over the button. Change the selected item and the button's text changes when the menu closes. These are called *option menus*. Usually, option menus are used in places where only a few options are available. Pop-up menus are used in most other places. *Tear-off* menus are versions of pop-up menus; you can identify these by the dashed line across the top of the menu. Click on the dashed line to tear off the menu. Click on it again to close the window the menu is placed in after being torn off.

The last bit of terminology has to do with buttons. You're familiar with simple push buttons—click on them and something happens. Alternatives to this are *radio* buttons, which are a series of diamond (usually) shaped options. You can click on only one of these—they are mutually exclusive. The other possibility is an ordinary *toggle* button. Click it once to turn it on and it appears depressed into the screen. Click it again and it is disabled, making it appear like it is sticking out from the screen. Radio buttons are just a series of interrelated toggle buttons.

It's an easy bit of terminology but important to understand as we go through this text. But don't let yourself get swallowed up by the terms—the GIMP is a tool for getting work done. When in doubt, forget the terms and just experiment for a while. You can always come back and put names to features later.

## ◆ Features You'll Learn to Love

There are many features in the GIMP with which you will become very familiar over time. A few of these are important to point out right from the start. Without an understanding of these, you may find your work a bit more tedious.

The Layers and Channels features, the dialog of which you've seen previously when we talked about terminology, are indispensable to the GIMP artist. Layers in particular will be used often, even for the most minor of artwork. These can be thought of like a series of clear acetate sheets laid one atop the other. The final image is viewed through these sheets; this is known as the *composite* image (compositing means to combine the layers). An example of the use of layers is in the creation of shadows. The top layer may contain some text, below which is a blurred and offset copy of the text. The composite of these two layers gives the appearance of the text lying above the background a sort of 3D appearance.

The Layers and Channels dialog has many options for adding, deleting, moving, and managing layers in general. You'll be creating *masks* for layers—regions which are blocked from use in the composite image—as well as applying different methods of composition for each layer. Finally, the Layers and Channels dialog also contains the new *Paths* option, which allows you to create and edit lines and curves in your image. We'll discuss layers in more detail in Chapter 2, "Layers."

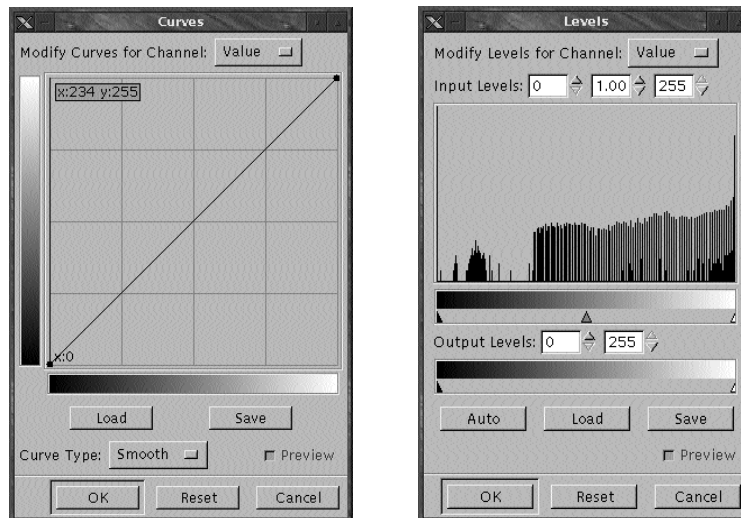
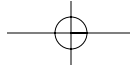


FIGURE 1-9 The Curves and Levels dialogs



Color management is another area you'll be dealing with on a daily basis. Most of the color tools are found in the Canvas menu, under the *Image->Colors* option. Tools like Curves, Levels, Hue/Saturation, and Desaturate are all used to manage colors globally within a layer or within a selection (selections are a discussion on their own, and we'll deal with them in Chapter 3, "Selections and Masks").

Finally, effects filters are where you are most likely to want to jump to right now. The heck with all this basics stuff—show me the fractals! Well, if you're into experimenting, open a new Canvas window and try out the *Filters->Render* options from the Canvas menu. The menu options here all lead to effects filters which render (i.e., draw) images without or with little regard to the image's current contents. In other words, they are cool to play with and you don't need any existing image to do something fun with them. But once you're done there, come back here. There are a lot of other effects filters, and they all have important purposes for the Web.

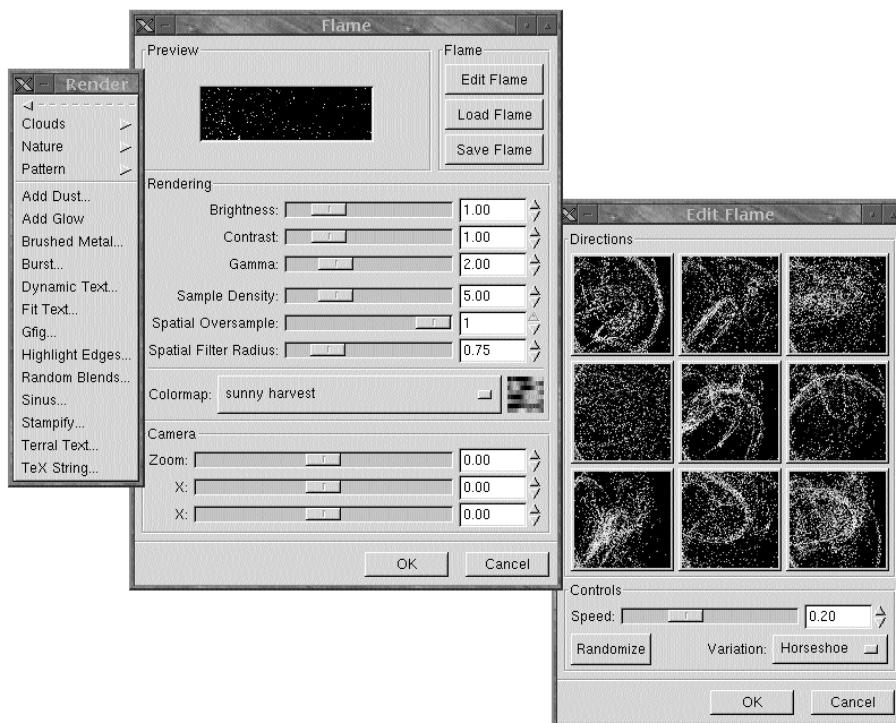
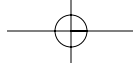


FIGURE 1-10 The Flame dialog and the Render filters menu



## RECAP

We've covered some basics here, an introduction for those who are brand new to the GIMP and the Web. Getting started with a new tool often requires a little help with understanding what it is you're looking at, and that's what we've done in this chapter. But we're just getting started. In the next chapter we're going to look at layers, one of the most useful core features of the GIMP. Understanding layers is key to understanding how both static and animated images are made. Without layers, there would be no 3D effects, no drop shadows, no beveled edges. We'll look at what layers are and how to do something useful with them.

