

File Formats and Resolutions

No matter which photo editing program you use, to prepare images for the Web you'll need to know a few basics about the standard image file formats and when each should be used. Currently, three image formats are widely supported by web browsers:

■ JPEG

The JPEG format is an image compression format that was developed by the Joint Photographic Experts Group specifically to store photographic images. Although there's no limit to the number of colors the JPEG format can display, it's a lossy format that can create visual artifacts depending on how much you compress the file—see Figure 5.20.



Figure 5.20: An image of a strawberry saved at increasing levels of JPEG compression

■ GIF

GIF (Graphics Interchange Format) is an eight-bit format that compresses files on the basis of the number of colors in the image. Although the compression ratio of the GIF format is very good, it supports a maximum of only 256 colors and is therefore useless for photographs. However, the format is suitable for images that contain very few colors, or large blocks of solid color. Images such as logos, cartoons, and line drawings are great candidates for being saved as GIFs. Two other nifty features of GIF are that it can display transparency (see Figure 5.21), and it supports animation. In the late 1990s, UNYSIS (the company behind the compression algorithm used in GIF images) tried to claim that GIF was a proprietary format, and charged companies royalties for any program that created GIF files. This, and the 256 color limitation of the format, led to the creation of the PNG format.



Figure 5.21: A transparent GIF and a transparent PNG shown against different backgrounds

■ PNG

The PNG (Portable Networks Graphics) format was developed by the W3C as an alternative to GIF. The lossless compression style of the PNG algorithm works similarly to that of GIF in that files with fewer colors end up having the smallest file sizes. Like GIF, PNG also supports transparency, though it does it so much better than GIF. With GIF images, transparency is binary: it's either on or off. Transparency in PNG images is implemented by means of an **alpha channel** that sits alongside the red, green, and blue channels, meaning that each pixel in a PNG image can have up to 256 different levels of opacity. The effects of this difference are illustrated in Figure 5.21—notice that you can still see the background image through the PNG image, while the GIF is either completely opaque or completely transparent. Unfortunately, Internet Explorer 6 does not support transparency in PNG images properly, though Internet Explorer 7 does.

Borders and Edge Treatments

Once you have inserted your JPEG, PNG, or GIF image into your web page, you may still find yourself a bit underwhelmed by its presentation. By default, images that are placed on a web page using an HTML `` tag sit inline with the text that surrounds them. A hyperlinked image typically has a rather unattractive blue border. But what if you want to give an image a frame like one you might use to display a picture on your wall? What if you want an image to have a border around it that makes it look like a Polaroid picture? Perhaps you want it to have corner tabs like the ones you'd use to stick an image into a



Figure 5.22: My 2¢ on adding edge and border effects to images

photo book. In these cases, you have two options: apply your desired effects directly to the photo using image editing software, or use CSS background images and borders to style the image within your web page. You can see my creative use of a border in Figure 5.22.

Applying Effects Directly to the Image

Altering an image to add borders and edging effects may not seem like a big hassle. It only takes a little quality time with Photoshop to give a photo the look you want. But problems can arise if you have to give every image on a web site the same look. And what would happen if you had to add new images or change any of the existing pics? In either case, a task that would normally involve only a minor change to your HTML, plus a second or two to copy the new photo to the web server, might take half