Optimising Images for the Web

Preparing artwork to be included in Web pages is a balancing act — you're aiming for good image quality and color reproduction but also small file size for fast downloading. Unfortunately, image quality and speed tend to work against each other. The more detail and color subtlety you want to preserve in an image, the bigger the compressed file tends to be, and thus the slower to download. Color reduction and image compression become all-important.

Choosing a Format

Photoshop's Save For Web dialog box and ImageReady's Optimize palette are designed to help you choose the best file format for good image quality and small size. The most often used file formats are these three:

- **JPEG** excels at compressing **photographs**. It allows "full" 24-bit color (millions of colors), so people whose computer systems can display 24-bit color (or 16-bit) will see the image at its best (or close to it). (Those with 8-bit systems will see a dithered version.) But JPEG doesn't allow you to make part of the image transparent to let the background of the Web page show through. Also, if applied with too high a degree of compression, JPEG can cause serious image degradation, especially at the boundaries between contrasting colors.

- **GIF** ("Jif") great for **flat-color artwork** and small elements, but poor for large photos because it supports only 8-bit color at most (256 colors), and its compression method is optimized for areas of flat color. It does allow limited **transparency,** however. So you can have graphics that are silhouetted against the Web page background. And it supports **animation**.

- **PNG** (pronounced "ping") allows either 8-bit or full 24-bit color and precise control of transparency (through the use of alpha channels, which can be full 8-bit grayscale masks). It compresses well and also takes into consideration the different gamma characteristics (brightness) of the monitors used on Mac, Windows, and Unix platforms, so that images created on one system are less likely to look too light or too dark when viewed on another platform.

Windows Internet Explorer used to have poor support for PNGs. So for general distribution, Photoshop's GIF and JPEG formats are still the best bets. However, for incorporating raster-based art into the vector-based Flash format, PNG may be a great choice, because the Flash plug-ins for browsers can handle this high-quality, transparency-capable format.

Photographs and Continuous-Tone Images

If you're starting with a photograph or other continuous-tone image, you're likely to get better results with the following format choices:

- **If your image is rectangular and it doesn't have any areas that need to be transparent,** use **JPEG**. Try several Quality settings (or let Photoshop choose them for you automatically), comparing the resulting files for image quality and loading time. Often Low quality works for photos, while Medium may be needed for color gradients. You can use an alpha channel mask to target compression to certain areas of an image.

- **If your image has a shape other than rectangular, especially if it has a soft, feathered edge, JPEG** is still an option if your Web-page background consists of a seamless, randomized texture that doesn't require precise alignment. In that case, transparency can be faked by incorporating the background tile pattern into the image. Be sure to use the same compression settings for both the tile and the image so the two backgrounds will continue to match.

- **If your image is small and silhouetted,** you'll probably want to use the **GIF format,** realizing that you'll have to compromise color depth in order to get transparency.

Flat-Color Artwork

For flat-color artwork, **GIF** is the better format. If you need **transparency** so the background of the Web page can show through your artwork, or if you want animation, use GIF.