Using images in your portfolio

Image formats

The two most common image types used on the Web are JPEG and GIF. JPEG, joint photographic expert group, is a graphics format best suited for photographs, images with many colors, and graphics that use color gradients. GIF, graphics interchange format, is a graphics format best suited for flat color images and line art. GIFs support only 256 colors, so it is important to create them using web-safe colors. GIFs also allow transparency and animation.

Balancing quality and file size

Some common terms used to describe web graphics are *pixel, resolution, quality*, and *download time*. A pixel is the smallest element of a computer screen. Resolution is the number of pixels (dots) per inch. Typically, computer monitors have a resolution of 72 pixels/inch (ppi). The quality of an image refers to how good it looks to the human eye. Download time relates to the file size of an image; bigger files take longer to download but have better quality.

For print, designers usually worry more about quality than file size, so images are saved at resolutions of 300 ppi or above. For web images, on the other hand, file size is important. No one wants a lengthy wait as web pages load (Table 1). A decrease in file size usually means decreasing image quality. Since web images are intended to be viewed on a computer screen, their resolution can be decreased to 72 ppi. Putting a 300 ppi image on the web is pointless because its quality is limited by the display capabilities of the screen. Both GIFs and JPEGs are compressed image formats that help decrease file sizes. Additionally, image editing software such as Adobe Photoshop have settings that allow you to make trade offs in image quality and file size. Table 2 shows a JPEG image saved at different quality and compression levels. Notice how the image's appearance degrades as the file size decreases.

File size	**Download time**
1 MB	200 sec
150 KB	30 sec
50 KB	10 sec
10 KB	2 sec

Table 1. Approximate file download times on 56Kbs modem

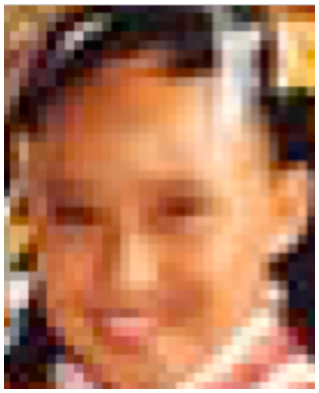
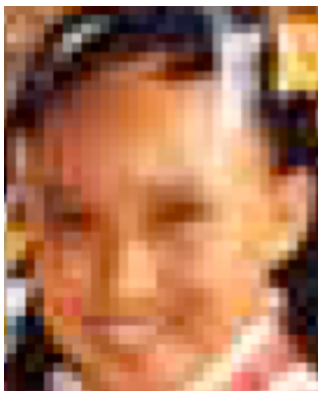
	Original 300 ppi (print)		Zoom = 300% Quality = print
	JPEG 72 ppi Quality = 80% File size = 20 K		Zoom = 300% Quality = 80%
	JPEG 72 ppi Quality = 40% File size = 8K		Zoom = 300% Quality = 40%
	JPEG 72 ppi Quality = 20% File size = 4K		Zoom = 300% Quality = 20%

Table 2. An image saved at various quality and compression levels.

Other tips

- Save your images at the size you plan to use them. Don't shrink or enlarge images that you place on a web page. You will either end up with a small image that has a really big file size or a very pixilated large image.
- Don't overwrite the original images. You never know when you might need them. Save your edited images as a copy.
- When resizing images, keep the original proportions. Stretched and squished images look bad, especially if people are involved. If you need a different shape, use an image-editing program to crop the image.
- Use images that add meaningful information to your site.
- Use animated images very sparingly. You might think the jumping, flashing alien is great, but he is probably drawing the users' attention away from what they are supposed to be looking at.
- Make sure any text in the images is legible.
- Follow copyright laws. No, you cannot steal images from other websites and use them on your site.