



Tips and Tricks

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RESOLUTION— How Much Is Good Enough?

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Let me start by sharing an experience I had several years ago. I was working on a project with a celebrity photographer. He was working with a digital camera for the first time—a first-generation, \$25,000 Kodak camera.

Kodak provided him with a camera to test on the set and he took this amazing shot of pop queen Madonna. As it happened, the camera was set up to shoot in low-resolution mode, and it captured a small, 3MB image.

He called me for help and asked if there was anything we could do.

They needed a 20MB file to generate digital 35mm slides for press kits. So, with Adobe Photoshop and Live Picture, as well as some retouching tricks, I readjusted the image into a 20MB file.

This was years ago, and in terms of technology, that's a lifetime.

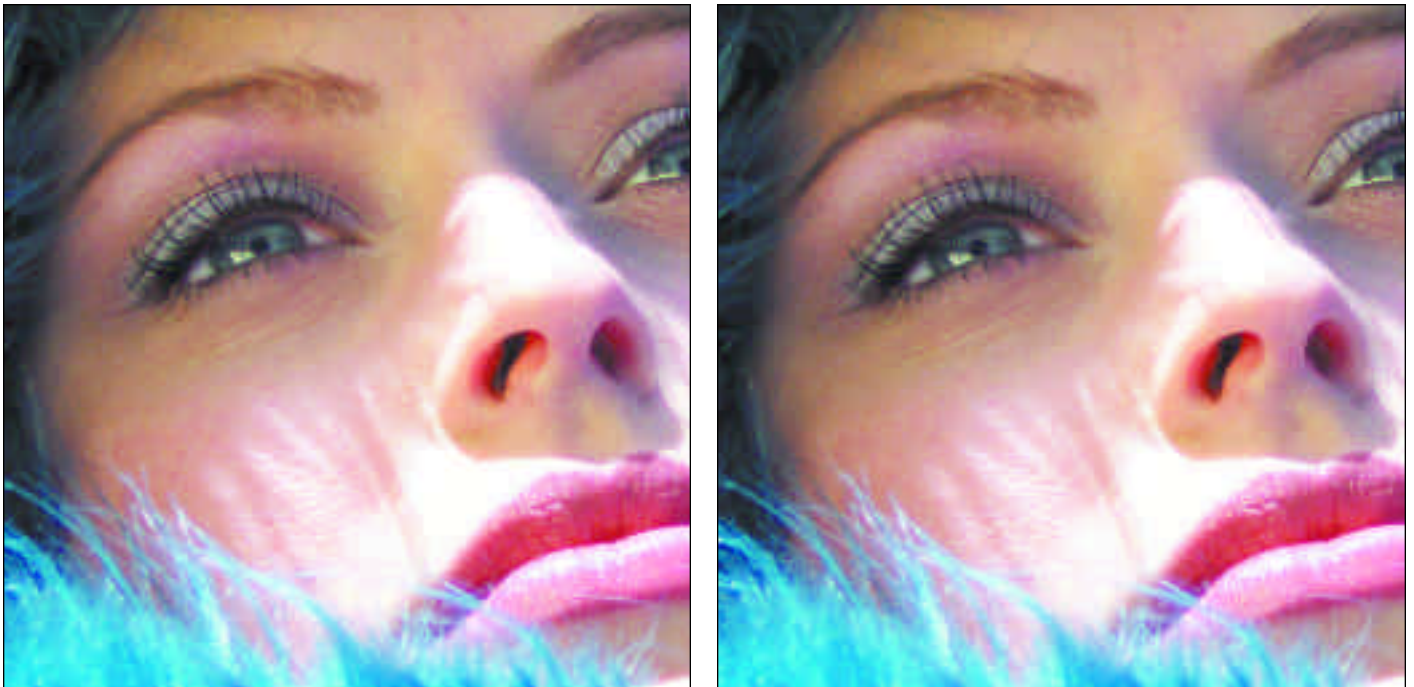
LET'S TALK RESOLUTION

Resolution depends on several variables, such as input devices and output devices. So where do you start?

I always think of resolution in file sizes relative to my desired output.

For example, if I am sending an image digitally to a client and it will be reproduced in an American magazine with a line screen of 133 lines per inch, I double the line screen to get my pixels per inch (which comes to 266). I then round it up to 300 ppi to leave a little extra information.

This means my image should be at least 300 ppi at the actual desired output size. Adobe Photoshop, Painter, CorelDraw, or whatever your digital imaging application of choice is can be used as a file calculator. To do this, create a new document and a



The image on the left is the original image. On the right, the same image has been scaled at 400 percent.

GUIDE FOR FILE SIZES FOR PRINT: (Numbers are rounded up so they are easy to remember)				
IMAGE SIZE	COLOR SPACE	PIXELS PER INCH	MEGABYTES	DESIRED OUTPUT
8x10	RGB	300 ppi	20MB	35mm Slide or Inkjet Print
8x10	CMYK	300 ppi	30MB	Magazine Advertisement
8x10	RGB	800 ppi	150MB	Transparency
4x5	RGB	300 ppi	5MB	Inkjet Print
4x5	CMYK	300 ppi	7MB	Magazine Advertisement
4x5	RGB	800 ppi	40MB	Transparency
Web Page	RGB	590x325 pixels	30–60K	Web Page

dialogue box appears asking you for your image size, color space, and pixels per inch. You'll notice that the software automatically tells you the file size once you type in the information.

Another area of resolution that is confusing for people is the resolution of their input devices—specifically, desktop scanners. It is important to understand that many desktop scanners have optical resolutions of 600 dpi but can scan at 1,200–4,800 dpi. What the scanner does is interpolate (i.e., make up) the pixel detail above 600-dpi resolution.

In essence, it is faking the pixels for you. I recommend scanning at the true optical resolution of the scanner, then using tools such as Genuine Fractals to get higher resolutions.

TODAY'S TECHNOLOGY

Genuine Fractals Pro from Altamira Group (www.altamira-group.com) is a plug-in that enables Photoshop users to work in a proprietary format for scaling file resolution up and down with no degradation in quality. The software recalculates your images with mathematical equations, allowing for image stability.

Normally when scaling an image up, a quality loss in the highlight and shadow detail can be seen around the edges of the image, causing it to get muddy and pixelated.

We at Dancing Icon have produced amazing 20x30 gallery prints from 2.1- and 3.1-megapixel digital camera files using this technology. The original files are

generally only 4MB to 9MB.

To illustrate this, take a look at the images featured in this article. The first one is the original image at 100 percent. The second is scaled at 400 percent. Can you see the difference?

So what's the moral of this story? As long as you know what is required in the end, you can work in whatever resolution you feel most

comfortable with, then rescale the image afterwards as per the requests of your client.

