



## Photo Taking and Re-Sizing for the Web

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Regardless of what you have in mind (with the possible exception of printing the original image), it is usually **not** a good idea to use the picture as generated by a camera or scanner!

A state-of-the-art digital camera produces pictures with 5-12 million pixels (MP) and a scanned image may easily have up to 40 MP (as well as often being in the TIFF format which definitely would need to be converted to JPEG/JPG before being used on the Internet). That is quite a lot of information and friends or family won't appreciate receiving an e-mail with a couple of shots in this format.

For a Web site, speed is critical. Visitors to a photo site, gallery or page may be prepared to wait for a few moments knowing that this is graphic-intensive, but that would be assumed to be seconds rather than minutes.

Even nowadays, there are many people with slow connections, so even if images load very quickly in your browser, this may be quite different for someone accessing the Internet via a telephone or dial-up modem!

Even worse, if you have a Web site of your own and people look at your photos, this may generate much more traffic than necessary -- and actually cost you money. Sometimes your Web host may switch off your site when you have exceeded your quota.

Fortunately, it is very easy to bring down the file size of a picture.

### **Size of the Photo**

The first consideration is, of course, how big the photo should be on-screen?

Most people now have a screen resolution of 1024x768 and above. However, there are still a few people around with 800x600 -- either because they use small monitors, or because they do not see well and have set their big monitor to a lower resolution.

Also, there are increasingly other media like cell phones and set-top boxes (Nintendo Wii, etc.) that may use even smaller resolutions. It is up to you to decide where to draw the line perhaps knowing "the market" or who will be most often viewing your Web site and its photo images.

It's best to try and accommodate everything from 800x600 upwards without the need for the browser to have to use scroll bars. So, even though the screen may be 800 pixels wide, this doesn't mean that you can see an 800 pixel wide image without horizontal scrolling. There are browser bars, tool bars, and task bars, etc., so it's probably wise to deduct 150-200 pixels from your maximum.

Before you re-size your photo, you might want to crop it. There often are some details that you do not want or need in the finished picture. And, if someone steals your images, a cropped photo could come in handy allowing you to prove authorship. (They would not have the missing parts of the original shot, but you do).

Cropping also sometimes is a good way of improving the composition of a photo. For example, by using the "rule of thirds": With a high-resolution photo, you can select the most interesting part and even cut a portrait format out of a landscape format picture.

(Actually, this sort of cropping is exactly what the digital zooms of modern digital cameras are doing.) Chances are, though, that the results achieved with your favorite photo-editing software will be much better with a bit of practice.

## **File size and Image Formats**

Digital cameras -- as well as scanners -- usually offer you the option to save your pictures in raw or tif (TIFF) mode. These are so-called "loss-free" formats so the image is not (yet) compressed. This uses lots of disk (and camera) storage space, but gives you the best output. And, it's how you should probably retain the original. If you save a file as jpg (JPEG), it will be much smaller, but you will lose some image information (normally referred to as "resolution") *every time you save your picture!*

The "jpg" format still is the best for photos on the Web; for line art and non-photographic graphics (such as logos, etc.), usually gif will give you the better results.

So, it is not advisable to do re-save an image several times. (Meaning: always reduce size, lower resolution, and crop unwanted portions using the original *never* over-writing the original, but saving under a new name, e.g. DSC00001.JPG -> DSC00001a.JPG or 20080123.jpg -> 20080123\_web.jpg)

It is strongly suggested that you save your image in a loss-free format first (storage space is cheap), and only work on a copy. Save it as a "jpg" (if it's not already) only when you are done.

So, it is best to save the optimized photo in a loss-free format: if you have to work on it again (e.g. for making it into a picture for your Web site), you do not need to repeat all the steps to optimize it.

When saving your picture as a "jpg" file, you will be able to specify a quality. This determines the strength of the compression used. If you use 100%, there will be little-to-no loss of information, but chances are your file will still be too big for the Web.

Usually, 80% to 95% will give you results that you can be barely distinguished from 100% and the file size will decrease dramatically. There are programs that allow you to see the results even before saving your picture.

Be careful, though. Most programs give you the remaining quality as a number, for example "95%". Paintshop Pro(r), for example, gives you the quality loss! So if you want to have 95% quality in that program, youd have to choose "5%".

Most pictures can be brought down to 30-50KB (from 7MB to 40MB!) for 600x400 pixels without any problem.

Photos containing very intricate textures may need more, but ***100KB should be the absolute maximum on the Web!***

## **Preparing your images for the Web**

Many people now own digital cameras, even cell phones produce pictures with an acceptable quality and some old-fashioned photographers still shoot photos on film but put them in a scanner afterwards.

So, it is easier to share photos than ever before. You can just send them to others by mail, upload them to a Web gallery or even put them on a photo site of your own. However, the Web is a very special medium and there are a few things that you should consider before doing so.

Here are some quick tips on how to prepare your photos best for the Web.

These are just the most important aspects. If you want to go further into this matter, there are many in-depth tutorials for the major software packages. on the Web (entering the name of your software and "tutorial" will usually bring up a lot of references in your favorite search engine).

Quick tips:

- Whatever you do, always use a copy of the original file, not the original!
- When you have finished optimizing your photo, save one copy in a *loss-free* format (e.g. tif) and the one you actually want to use on the Web as jpg
- Do not save a jpg file repeatedly
- Sharpen your image only shortly before saving it.
- Graphics, other than photos, are usually better saved as gif files.
- Cut down on image size:
  - - crop your image to the part you need
  - - only use the quality you actually need on a display screen/monitor (not for print)
  - - make sure that the photo fits on screen without scrolling
- Calibrate your monitor (for serious photographers)
- It is more important to know your software well rather than buying the most expensive application. You can get good results even with free software that comes with your camera or with Windows(r)
- If you scan images, always start with the source negative or slide, not a print