

# Prepare your photos for the Internet

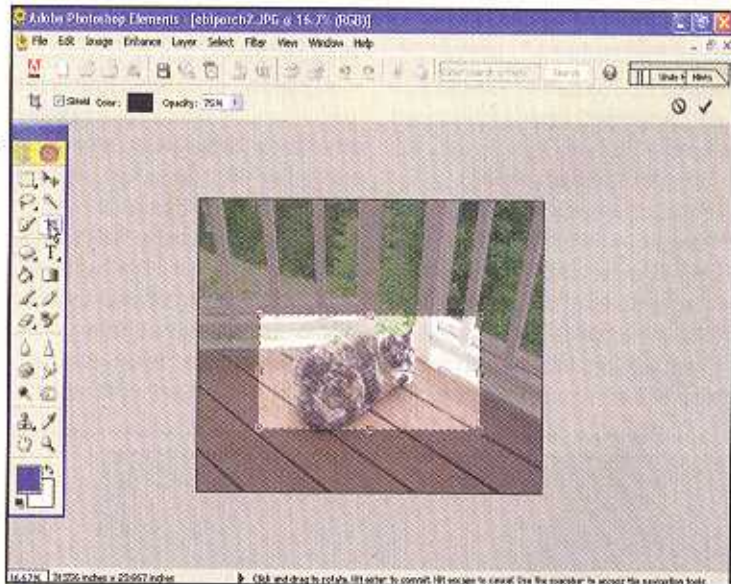
Easy photo-processing tricks. *by Russell Shaw*

**W**hen you shoot pictures with your digital camera, or digitize photos and other objects with a flat-bed scanner, you'll produce big files that are packed with fine detail.

These images are just the ticket for printing, but they're utterly inappropriate for emailing to friends or publishing on your personal Website. We'll explain why and what you can do about it.

First, let's tackle the "why." You need a lot of detail in images you're going to print, because a printer is capable of producing higher-resolution images than monitors are. The higher the resolution, the more detail in the image; the more detail in the image, the larger the file size. A computer monitor, on the other hand, is much less capable of reproducing ultra-fine image detail. Saving image files with lots of detail, therefore, is overkill if you plan to display the image only on a monitor.

Actually, it's more than overkill, because it's a veritable certainty that some of your email correspondents will have restrictions on the size of attachments they can receive.



→ The key to cropping an image is to isolate the most important subject in your photograph and eliminate anything that distracts the idea from that subject.

Sending these folks emails with huge files attached simply isn't good etiquette.

The typical Hotmail subscriber, for instance, is limited to just 10MB (megabytes) of file space for all their email. And anyone who has dial-up Internet access (as opposed to broadband services, such as DSL or cable) will be annoyed by the length of time it takes to download unnecessarily large attachments.

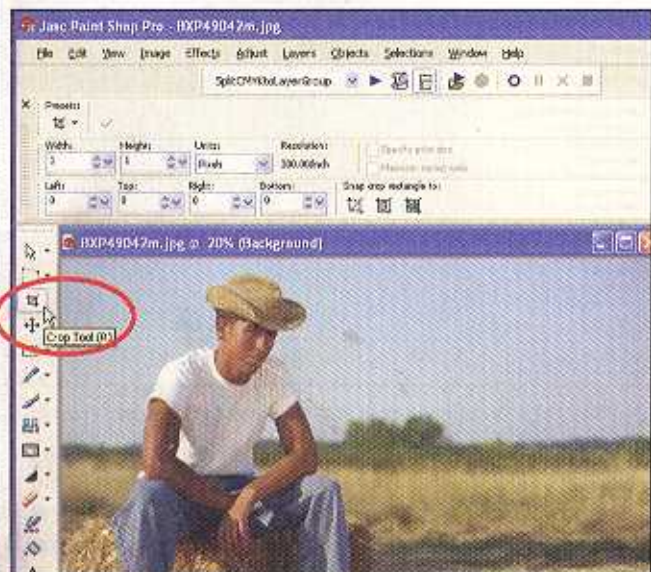
By the same token, if you post huge images on your personal

Website, visitors with dial-up Internet access will be just as perturbed with the time it takes for these images to load in their Web browsers. For that matter, even people with unlimited email and lickety-split broadband Internet access don't appreciate Websites that behave like cold molasses on a winter's day.

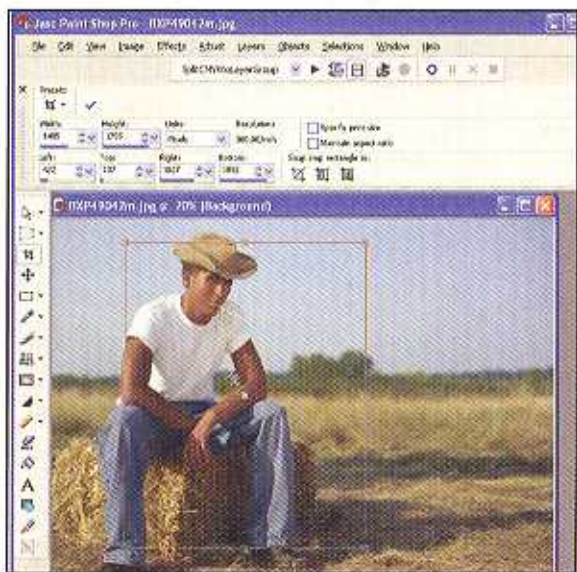
If you are placing these images on your Website, you'll also need to consider the amount of space that your Web-hosting service allows you to have. A digital

## CROP YOUR DIGITAL PHOTO The EasyWay

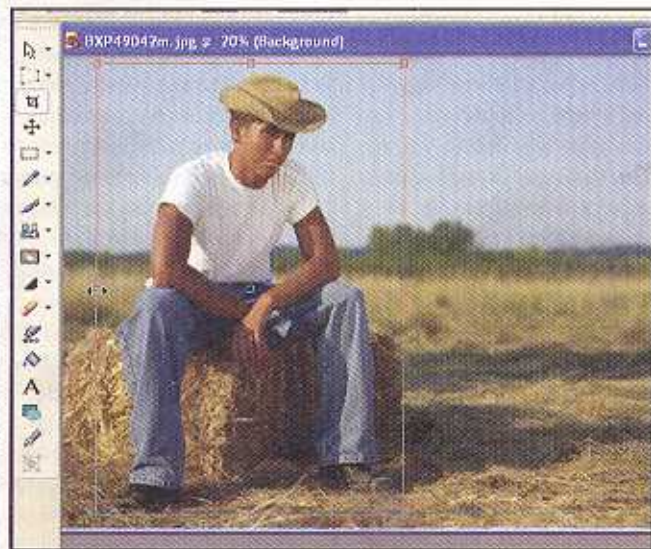
Cropping a photo is useful for two reasons: Cutting away extraneous elements in your image will focus attention on the subject. Since there's now less information in the photo, the file size will be more compact, too. We'll use Paint Shop Pro for this example. You'll find a trial version of the software on the disc included with this issue.



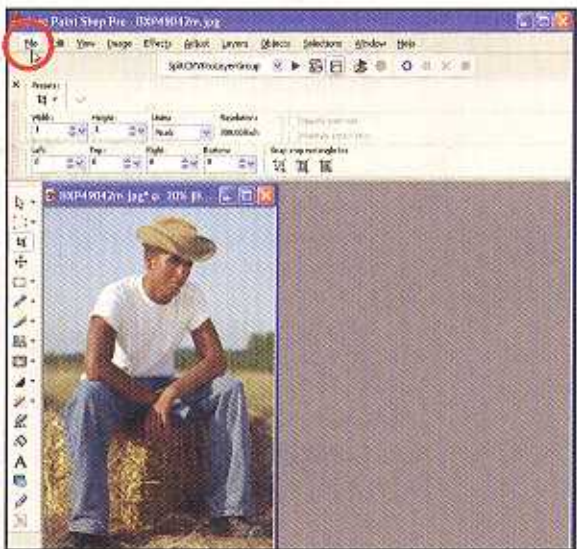
**1** Launch Paint Shop Pro and open the image file you want to work with. Examine the photo and identify the most important area you want the viewer to focus on. Click on the Crop tool, which you'll find in the left-hand toolbar.



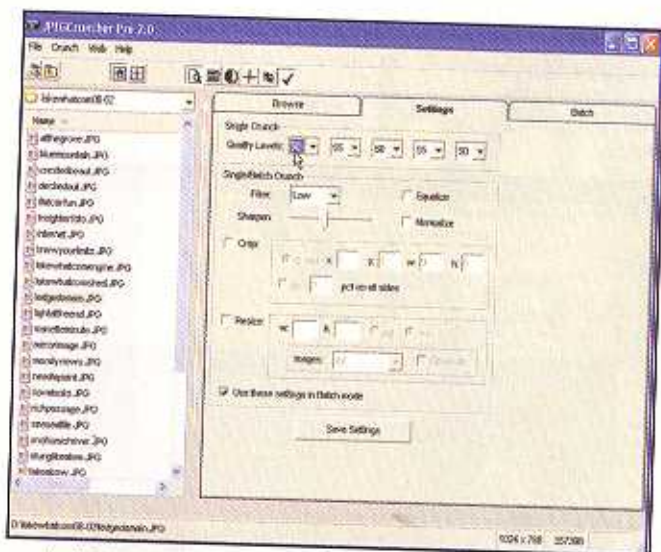
**2** Drag the mouse pointer over the image near where you want to crop. Hold down the left mouse button and drag the pointer, creating a box around the subject. It doesn't matter if the box is perfectly positioned now; you'll be able to adjust it.



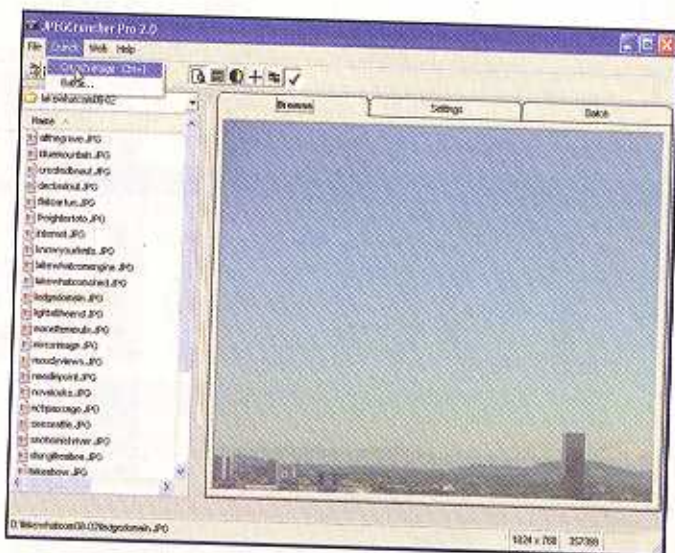
**3** Drag the mouse pointer anywhere inside the box to reposition it. When the mouse pointer hovers over the squares around the perimeter of the box, it will change to a double-headed arrow. Hold down the left mouse button, drag, and you can resize the box.



**4** Double-click with the left mouse button, and your image will be cropped. Click File, Save As, and assign the new image a file name (choose a different file name, so you don't overwrite the original).



➔ In JPEGCruncher Pro, the user has adjusted the settings so that the "crunched" photo file will be half the size of the original.



➔ When the user clicks "Crunch image," the image in the preview pane will be reduced in size by about 50 percent.

camera capable of storing its images in TIFF, RAW, or some other uncompressed format can produce files easily larger than 10MB. If your Web host grants you 25MB of space, just two of these files will consume nearly all of it.

Long download times, indistinguishable resolution improvements, and limited storage: three good reasons for reducing the file size of your images before you post them on your personal Website or send them to your email correspondents. Let's take a look at a few ways of accomplishing that goal.

## REDUCE FILE SIZES BEFORE YOU SHOOT

Here's a proactive approach to economizing on digital-photo files: If you know your shots will be used exclusively for your Website and never for conversion to prints, set your digital camera to save picture files at the desired size, resolution, and format as soon as they're snapped.

The specific process for this varies from one camera

manufacturer to the next, but they all use the same general language and approach: Using menus displayed on the camera's LCD screen, find the camera's settings for image size. Image size is generally expressed as the number of pixels (an acronym for "picture elements") that will be contained in the photo.

An image size of 640 by 480 pixels (i.e., 640 pixels wide by 480 pixels high) is typically ideal for photos that will be posted on the Web. Pictures with larger dimensions will require more storage space and longer downloading times; pictures with smaller dimensions will require less storage space and shorter downloading times.

Using the same buttons and menus on your camera, find the setting for "picture quality" or "image quality." Whatever it's called on your camera, adjustments to this setting will determine the amount of detail that will be present in the pictures you take.

Unlike image size, which is defined by a single element—the

number of pixels present in the image—image quality is comprised of a number of factors, including contrast, resolution, and clarity.

Taking pictures with the image quality set to "high" or "fine" will result in files that could be twice as large as the files for images taken at the camera's "standard" or "normal" setting.

Here again, if you know your pictures will only be displayed on a Website or viewed as an email attachment, go with the lower setting. If you *do* plan to print your digital photos, choose the higher quality settings and edit the photos down the road (more on that topic in a moment).

## FILE TYPES

Most consumer-oriented digital cameras store their images in a compressed file format, such as JPEG. When an image is stored using a compressed file, some information about the image is permanently discarded. Ideally, the information that's lost is redundant or unnecessary; and typically, it's very difficult for the eye to discern that a digital image

file has been compressed—unless you perform a lot of editing on the image, enlarge it significantly, or repeatedly convert it back and forth between other file formats.

Many mid-range and *all* high-end digital cameras provide the option of storing photo files in either JPEG format or in an uncompressed format, such as RAW or TIFF (an acronym for Tag Image File Format). Since images saved as RAW or TIFF files are not compressed, none of the original information about the picture is lost when the file is saved.

This explains why all high-end digital cameras provide the option of saving in these formats: professional photographers frequently perform a great deal of editing on the photos they shoot.

The trade-off, of course, is that JPEG files tend to be fairly small, while TIFF and RAW files tend to be gigantic. If your pictures will be displayed only on a computer monitor—and you have the option of choosing file formats—save them in JPEG format.

If you plan to print your photos, and your camera provides the option, consider saving them in TIFF or RAW format to preserve as much image quality as you possibly can (but be aware that the files could be huge).

Before using these shots for your Web page or as email attachments, however, convert them to JPEG format in your favorite image-editing program. (In fact, all the Web-based photosharing services—including Ofoto, Shutterfly, and PhotoSite—require your pictures to be stored in JPEG format. Look elsewhere in this issue for discussions of these services.) Don't worry, the original TIFF or RAW files won't be destroyed in the process—the new files will be copies that are

stored in a different format.

Image editing software, such as Jasc Software's Paint Shop Pro (you'll find a trial version on the disc) and Adobe's Photoshop Elements, is an essential tool for any digital photographer. And converting images from TIFF or RAW to JPEG is only one of the uses for these types of programs. You can also correct a photo's coloring, compensate for poor lighting conditions, sharpen an image, and perform any number of other adjustments.

One of the best uses for this type of software, however, is to reduce an image's file size—and improve its overall composition by isolating the most important element in it—by cropping it. (Refer to the sidebar "Crop Your Digital Photo" for details).

Yet another way to reduce the file size and downloading times of your digital photos and scans is to simply reduce the size and resolution of the image. Shrinking a photo from dimensions of 800-by-600 pixels with 300 dpi (dots per inch) of resolution to 640-by-800 pixels with 72 dpi resolution can have a dramatic impact on file size—all without significantly reducing perceived image quality when viewed on a monitor.

To do this in Paint Shop Pro, simply load the file and click on the **Resize** menu. When the **Resize** requestor box appears, make sure there's a checkmark in the box labeled "Lock aspect ratio," so you don't inadvertently distort the picture's dimensions.

Next, set the **Resolution** to 72 dpi and change the width (in the **Pixel Dimensions** box) to 640. Since you've set the program to maintain the photo's original aspect ratio, the height will automatically change to 480. Save the file (tweak the name, so

you don't overwrite the original) and compare the size of the new file to that of the original. You should see a significant difference in file size.

### CRUNCH TIME

If you find that your images are still too large, take a look at an image-compression utility, such as Spinwave's JPEGCruncher Pro. When you load a picture into these types of programs, the software will analyze the image, identify extraneous elements, and eliminate them to shrink the picture's file size.

Some abstract colors, unnecessary features on the margins of your photos, and background elements unnecessary for your photo are typical candidates for JPEGCruncher's Pro's automated, digital chomper.

The intent here is to reduce file size without impacting visual quality, but the more you compress the image, the lower the visual quality will be. It's up to you to decide on the right balance between the two.

Employ some of the tricks and tips—in concert with the software we've discussed here—and you'll end up with pictures that not only look better, but that require a lot less storage space and data bandwidth, too. ■

### CONTACT INFO

Here's where you can obtain additional information about the products discussed in this sidebar:

**PAINT SHOP PRO 8, \$99**  
www.jascsoftware.com

**JPEGCRUNCHER PRO, \$49.95**  
www.spinwave.com