

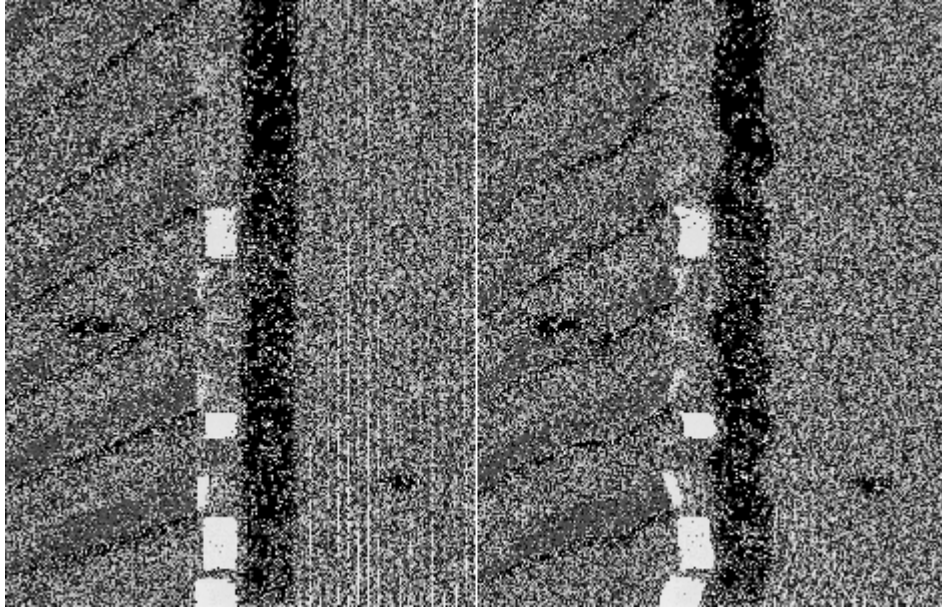
# 4a

## Fun with Pictures: Basic Editing

With film photography, most people's creative involvement with their photos stops with clicking the shutter. With digital photography, the equivalent moment to dropping your film off for developing is moving the files to your computer; and if you want to, you can simply print out the photos and treat them the way you would treat film photos. But that would be a shame, because with digital photography, this is the point where the creative fun can really begin.

Graphics editors are tools that can improve the results—and even let you add special effects, as in Figure 4-1. And most are so easy to use (at least for basic editing) that there's no good reason not to try. Here then, is an introduction to basic photo editing, or if you prefer something that sounds less formal, here are some easy ways to improve your pictures.

In general, the more you pay for a photo editor, the more effects you'll have to choose from.



**Figure 4-1.**

A camera lets you take pictures like the one on the left. A photo editor lets you fix problems or add interesting effects, as with the version on the right.

## What's a Photo Editor and How to Get One

Office 2003 now comes with Microsoft Office Picture Manager. Microsoft Office XP had Microsoft Photo Editor.

Odds are you already have a photo editor, and quite possibly more than one. Most cameras come with a photo editor in the package. So do most scanners. So do some programs that you might not expect would have a photo editor—notably Microsoft Office XP, which includes one with the straightforward name Microsoft Photo Editor.

We've collected a bunch of photo editors over the years and a few more came with the cameras we gathered as aids in writing this book. We'll use several of them to illustrate basic editing skills. Before we get to any photo editing, however, you might find it helpful to know what makes a program a photo editor.

## Types of Graphic Programs

Type (text) and shapes are vector objects. Vector data is calculated mathematically, and the object is defined by its shape and its mathematical attributes.

Graphics fall into two broad categories: vector graphics and bitmap graphics. We'll tackle vector graphics first.

*Vector graphics* define lines and shapes as actual objects. Draw a straight line, for example, and a vector graphics program knows where it starts and where it stops. Draw a circle, and the program knows where the center is and how large the radius is. Add a little more information about color and the thickness of the lines, and you can exactly describe the line or shape.

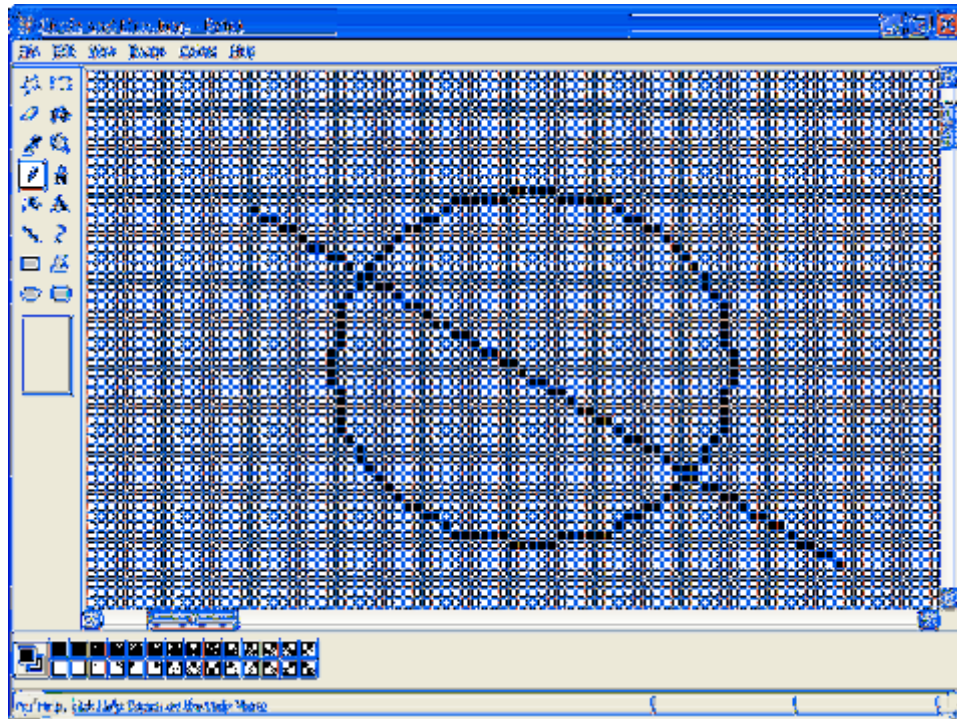
Images, no matter how complex, ultimately can be broken down into combinations of tiny lines and shapes, and computers can store the images as a collection of definitions for those lines and shapes.

By convention, programs that use vector graphics are called *drawing programs*. If you can remember that, then when you see a program that calls itself a drawing program, or includes the word *draw* in its name, or you see an option like the *drawing* toolbar in Microsoft Word, you'll know immediately that it's a vector graphics program or feature, rather than a photo editor.

The alternative to describing images as a collection of lines and shapes is to think about the image as a grid of bits (in the sense of being the smallest part of the image, not a computer bit). You then define the position and color of each bit. Bitmapped graphics programs don't know anything about lines or circles or any other shape as individual objects. They only know about the bits at each position in the grid. If enough bits of the same color lie in a line along the grid, and they're surrounded by bits of other colors, you get a line. If they lie in a position that describes a circle, you get a circle.

When you describe an image like this, each bit is mapped to a specific location on the grid, which is to say, the image consists of a bunch of mapped bits, and the image is called *bitmapped*. Programs that deal in this kind of graphics are known as *bitmapped graphics programs*.

Figure 4-2 on the following page shows a graphic that we created in a bitmapped program. We then zoomed in on the image far enough so you can see the individual bits in the grid, and we set the program to show the grid.



**Figure 4-2.**

Zoom in on (or enlarge) a bitmapped graphic far enough, and you can see the individual pixels, or bits.

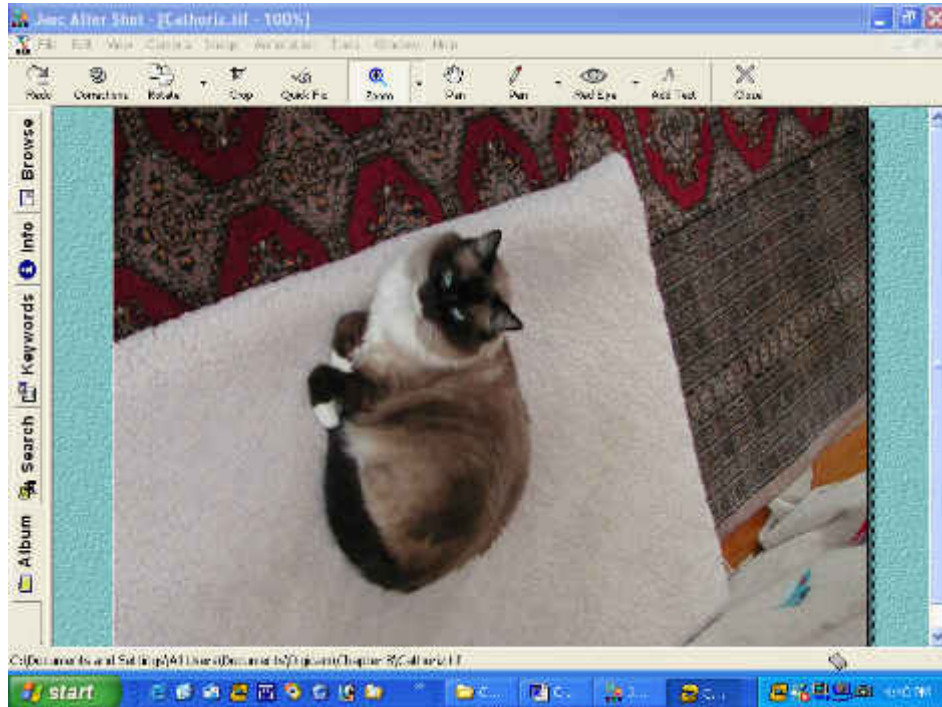
As you can see in the figure, you won't be far off if you think of bitmapped graphics as drawn on a piece of graph paper. The individual cells in the grid are filled in according to the definition for each bit. It's the computer equivalent of a paint-by-numbers kit.

By convention, bitmapped graphics programs are called *paint programs*. So just as the word *draw* in a program name tells you that you're dealing with a vector graphics program, the word *paint* tells you that you're dealing with a bitmapped program.

If you have a typical installation of Microsoft Windows on your computer, you have at least one bitmapped graphics program, called Microsoft Paint—which is the program we used for Figure 4-2. If you're not familiar with it, you can find it by opening the Start menu and choosing All Programs or Programs, depending on your version of Windows, and then Accessories. Paint will be one of the menu items. Figure 4-2 shows the Microsoft Windows XP Professional version of Paint.

## Rotating and Cropping Images

The most common reason for rotating an image is that you shot it in vertical format. If you did that, it will show sideways when you open it up in your photo editor, as in Figure 4-3.



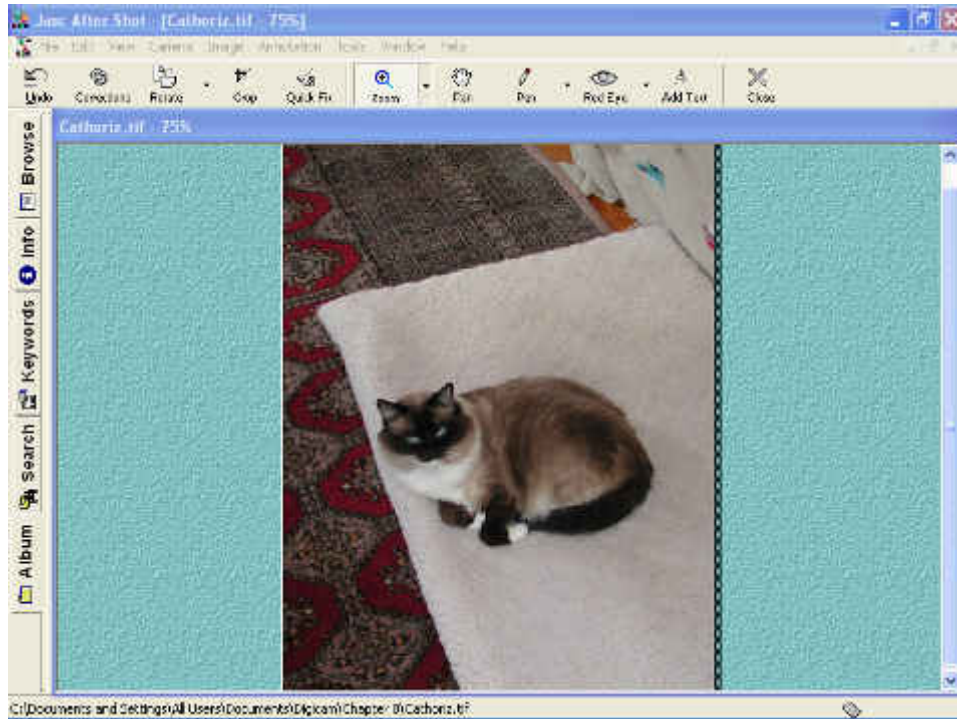
**Figure 4-3.**

Vertical shots show sideways by default when you first open them.

Any photo editor will let you rotate the image. Almost all have simple menu choices for rotating 90 degrees clockwise or counterclockwise. Many offer a choice of 180 degrees as well. A few don't offer a menu choice, but will let you go into a Rotate mode, and then use your mouse to rotate the picture. This typically involves *dragging and dropping* a corner of the picture, meaning that you click on the corner of the photo and, while holding the mouse button down, *drag* the corner to indicate how far to rotate the picture. When you're done, you release the mouse button to *drop* the picture, which indicates that you're finished dragging.

## Cropping to Clean Up Clutter

There are all sorts of reasons why you may want to crop a photo. One of the most common is that there is some distracting element on the left, right, top, or bottom that you want to get rid of. Another is that you want to close in on the subject of the photo. For an example, take a look at Figure 4-4. This is Figure 4-3 rotated to a vertical position, but we've now zoomed out so you can see most of the photo.



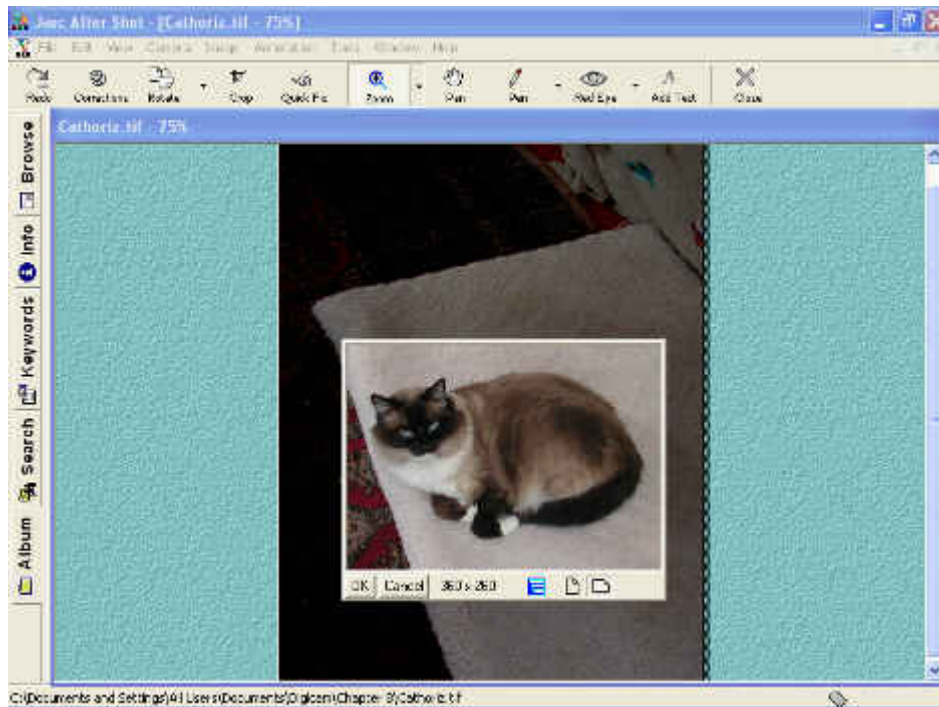
**Figure 4-4.**

The visual clutter in this picture distracts the eye from the cat. (This is nearly the entire photo.)

This photo is a cluttered mess. The subject is the cat. The rug and the slice of floor and blanket in the upper right corner are distracting. Even if they weren't a problem, the cat is taking up only a small portion of the picture, and should surely be larger relative to the picture size. Ideally, you would have noticed all this when you took the picture, and framed the scene differently, but in the real world, you might not have been able to get close enough to the cat before she ran away. Realistically, you have to deal with what you've got.



Every photo editor has some sort of cropping tool. Typically, you'll choose the cropping tool or choose a selection tool from a toolbox, click on one corner of the cropped image you want to define with the mouse, and then drag the mouse across the image to select the part of the image you want to keep, as shown in Figure 4-5.

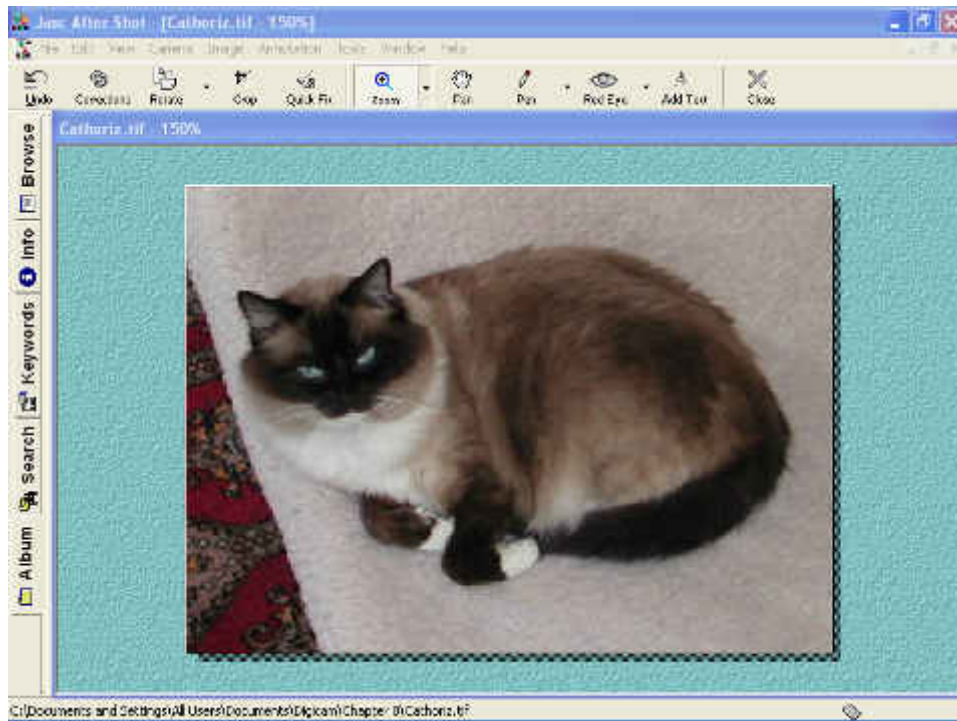


Commands for proceeding with the crop range from clicking OK, to clicking a check mark, to pressing Enter on the keyboard. Some photo editors require that you choose Crop from a menu choice.

**Figure 4-5.**

The rectangular selection, which stands out as a light area in After Shot, shows the part of the picture you'll keep after you give the command to crop.

When you're happy with the selection, you can give the command to crop the image. In Figure 4-6, we've both cropped the photo and zoomed in on it so you can see it better.



**Figure 4-6.**

After cropping, the cat takes up most of the photo.

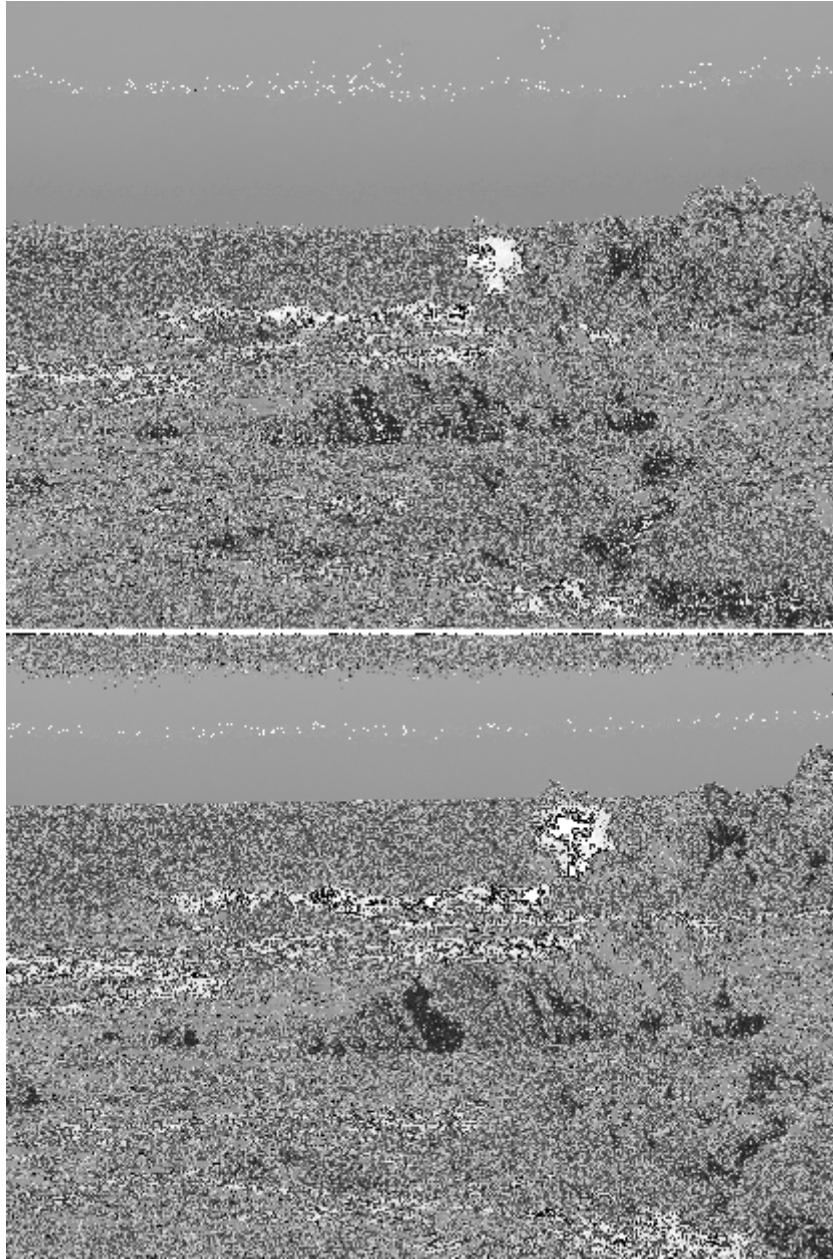
This is a much better picture. The cat is dominating the photograph, and there's much less clutter. We're not done improving it yet. (For one thing, we want to get rid of that distracting oriental rug entirely; for another, the cat is beginning to show some pixelization when we look at it at full-screen size.) But again, before we go any further with this shot, let's go on a short side trip, and discuss another reason why you might want to crop an image.

## Cropping Can Make a Boring Shot More Interesting

You can also crop a picture with an eye toward making it more interesting. If you took a photo with the subject dead center, for example, and later decide it's a dull picture, you may be able to shift it somewhat to turn it into a more interesting photograph. Figure 4-7, for example, shows the same shot before and after cropping.



Here, there is less sky, which is an unnecessary part of the picture. Cropping the sky also brings the focus back to the waves and the rocks, which are now positioned very nicely in the image.



**Figure 4-7.**

The photo on the top is the original version. The one on the bottom is the same photo after cropping.

Next, we'll learn about how to change the size of your photo with losing the quality of its resolution.