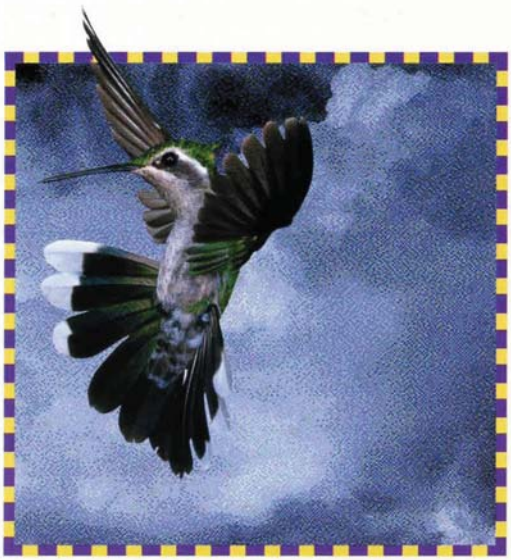
There are many systems of color specification, but they all have in common that three numbers, no more and no less, are needed to call out a color uniquely. All possible colors are describable with combinations of these three numbers. It is therefore impossible to invent a new color.

Cachet™

Learning Cachet



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Introduction

Cachet—

A simple, powerful solution for color desktop publishing

Cachet gives you the tools you need to produce predictable, professional color images with the ease of desktop publishing. With Cachet, you can

- Improve poor originals to correct for problems of exposure, film, and lighting in the original photography

- Enhance the color appearance of images to make them more appealing

- Select specific colors in an image and change them to match other colors in the same image or another image—even specify PANTONE® Colors

- Achieve color consistency among several similar photographs by making the same color changes to all of them automatically

- Create color separations that reproduce the colors in your image faithfully—even if you don't have any specialized knowledge of color reproduction

This book is a tutorial introduction to these tasks—a quick way to learn the basics of color editing and color reproduction with Cachet.

Getting started—

How to use this tutorial for a quick-start introduction to Cachet

The exercises in this book are designed to give you a quick "problem-and-solution" introduction to Cachet.

The problems are the kind of problems you're most likely to encounter as you prepare color photographs and other color images for publication—either on a color printer or using a professional printing process such as offset printing.

The solutions are Cachet solutions. They require no previous knowledge of color editing or color reproduction. The only color skills you need to begin using Cachet are visual skills—an appreciation of color and the ability to compare colors in two images. With Cachet, you make color corrections visually, using one or more images as guides for correcting your photograph.

First, make sure you know the Macintosh basics.

To do the exercises in this book, however, you must have basic Macintosh skills. You should know how to start and quit applications and how to work with files and folders. You should also know how to work with pull-down and pop-up menus, how to use dialog boxes, and how to open and close windows, move them around, and change their size.

If any of these operations are unfamiliar, see your Macintosh user's guide for help before you begin this tutorial.

Next, install Cachet.

You install Cachet with an installer. The complete instructions are in ***Start Here.*** The exercises in this book assume that you have already installed Cachet on your hard disk.

You will also need 7MB of free space on your hard disk to complete the tutorial. You need more space—about 3MB—if you plan to save copies of the images as you work. (Some of the exercises do not require that you save your work.)

Install the images you need for the tutorial exercises.

Cachet comes with practice images for the tutorial as well as a set of reference images that you use as guides to color correction. ***Start Here*** explains how to install these images when you install Cachet.

If you did not install Cachet yourself, take a moment to make sure you have two folders—Tutorial and Reference Images—in your Cachet folder. The Tutorial folder should contain the folders Scripts and User Images. If you don't have these folders, see ***Start Here*** for information about how to install them now.

Then, do some or all of the exercises in this book.

This book has five chapters. Each chapter is a complete exercise that shows you how to solve a typical real-world problem—and introduces several of Cachet's features at the same time. The five exercises are:

- Improving a poor original
- Enhancing reality
- Correcting color selectively
- Achieving color consistency
- Creating color separations

You can do all of these exercises in order or any one of them. However, Chapter 1, "Improving a Poor Original," outlines the basic color correction process—one that will solve most of your color problems. Also, most of the basic Cachet concepts are introduced in Chapter 1, so it's a good idea to do that exercise first. Then you can skip around if you like. You can probably complete all of the exercises in under two hours.

You should experiment a lot as you work through these exercises. The exercises are designed to let you explore Cachet's tools and features and try out your own solutions. Because color correction is a subjective process, it's impossible to give "correct" solutions. Nevertheless, some guidelines can be useful when you're working with any new tool, so the instructions usually include sample settings. These settings are shown graphically in the margin immediately after the instruction step. You can choose to use them or your own settings.

Finally, turn to* Using Cachet *to build additional skills and understanding.

The exercises in this book provide an overview of Cachet's major features and how they work. However, Cachet has many other features that can help you work more quickly and accurately.

You'll find all the details about all of Cachet's features, as well as step-by-step instructions for using them, in Using Cachet. You'll also find lots of important background information about color concepts and how Cachet works with color. Once you learn the basics here, rely on Using Cachet as your guide to color correction.

Improving a Poor Original

In this chapter, you learn to:

Open working and reference images

Use zoom tools

Use the MultiChoice window to make quick visual corrections

Adjust exposure, color balance, white point, and black point

Check for tone clipping

Make a quick print

Situation:

The original photograph was poorly exposed and poorly scanned. You need to correct for these errors.

Problems in the original photography of an image—wrong exposure or the wrong film or camera filter for the lighting conditions—can produce an original image that is too light, too dark, or has an undesirable color cast. Scanning errors can add to these problems, causing loss of detail in highlights and shadows.

Cachet can solve these exposure and tone problems when you need to use an original photograph that is less than ideal. For example, suppose you're producing a newsletter and you need to include a picture of the new vice president of marketing. However, the only available slide is underexposed—too dark. It also has a yellow-green cast from the fluorescent lighting. And the image in the slide is crisper than the scanned image you're viewing on your screen.

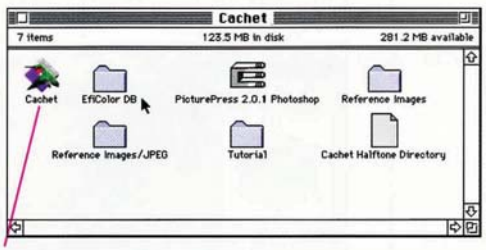
To solve these problems, you need to adjust the exposure, color balance, white point, and black point—the basics of color correction in Cachet. This chapter shows you how.

Open the working image

When you work with Cachet, the image you want to correct is called the **working image.** You can open one working image at a time. In this exercise, the working image is called *New VP.*

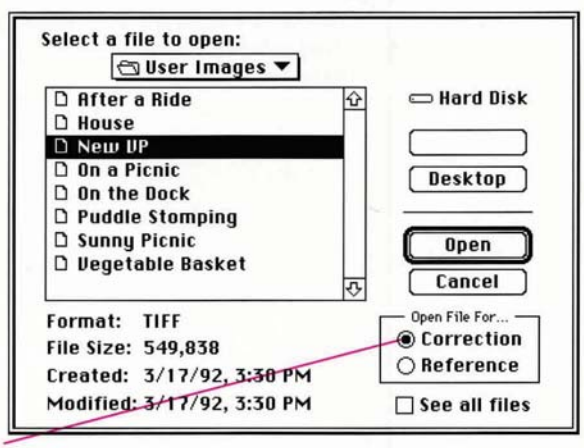
1 Start Cachet.

You start Cachet the same way you start any Macintosh application—by double-clicking the application icon. You'll find the Cachet application icon in the Cachet folder.



The Cachet application icon

When you double-click the Cachet icon, Cachet displays a dialog box so you can choose an image file to open for correction.



When this option is checked, Cachet opens the selected file as the working image.

2 Double-click the Tutorial folder, then double-click the User Images folder.

The *New VP* image is in the User Images folder. When you install Cachet, the Tutorial and User Images folders are normally installed in the Cachet folder. If you don't see them there, check the installation instructions in ***Start Here.***

3 Double-click* New VP *to open it.

When you open *New VP* as the working image, Cachet displays it in a window on the desktop. It also opens the Exposure & Tone palette automatically.

You use the Exposure & Tone palette for most basic color corrections.

Working image

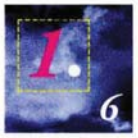
Because you usually work with several windows at one time, you may need to reduce your images to work comfortably. The zoom-in and zoom-out tools are available in every tool palette.

Zoom-out tool

Zoom-in tool

When you choose the zoom-out tool, the cursor becomes a magnifying glass with a minus sign. When you click the image, Cachet reduces it by half.

You can hold down the Option key to switch quickly between the zoom tools. For example, if the zoom-out tool is selected and you hold down the option key, the cursor becomes a magnifying glass with a plus sign. You can also use the Zoom Out and Zoom In commands in the Windows menu. They work just like the zoom-out and zoom-in tools. Feel free to use these tools and commands throughout the exercises in this book to choose the magnification you prefer. If you're using a large format monitor, you may prefer to work with the full-size image.



Open a Reference Image

Now you need to open a **reference image,** a digitized image that has been color corrected in Cachet and printed using Cachet color separations. You use a reference image to **edit-by-reference**™—that is, you refer to the colors in a reference image to edit and correct the colors of your working image.

Cachet comes with a set of reference images in digital and printed form. From the printed images in the ***Cachet Reference Image Guide,*** you select an image—or part of an image—that looks the way you want your working image to look when it's printed. Then you open the digital version of the image and adjust the colors in your working image to match similar colors in the reference image. Once the colors match on the screen, they will match when you print them.

When you edit-by-reference, you do not have to depend on calibrating your monitor or controlling lighting conditions in your work environment to predict how your image will look when its printed.

For helpful guidelines on picking a reference image, see "Reference Images" in Chapter 1 of ***Using Cachet.***

1 Find the* Businessmen *photograph in the Cachet Reference Image Guide.

When you want to work with a reference image, you start by choosing an image from the Cachet Reference Image Guide. This guide has images in three categories—people, landscapes, and still lifes.

Usually, the lighting of the image is more important than the subject. In this case, you're looking for the indoor, overhead lighting typical of an office environment. The *Businessmen* image is a good choice.

2 Choose Open from the File menu. When you choose Open, Cachet again lists the image files you can open. Because you've already opened a correction image, Cachet automatically checks the Reference option. (You can open only one correction image at a time.)

3 Open* Businessmen *in the Reference Images folder. All of the reference images are installed in the Reference Images folder when you install Cachet. If you don't see this folder in your Cachet folder, see ***Start Here*** for instructions.

When you open *Businessmen*, it appears in a window marked "Reference." You can open as many reference images as you need, but for now, this one is all you need.

4 If necessary, select the zoom-out tool and click the* Businessmen *image once.

For convenience, you can reduce the Businessmen image with the zoom-out tool and move it so you can see both images.

Now that you have two windows open on the desktop, you need to keep track of which window is active. Most of the Cachet tools only work when the working image is active. You can click the window once to make it active. Or choose the window you want from the Windows menu.

5 Adjust the brightness and contrast on your monitor, if necessary, until* Businessmen *looks good to you

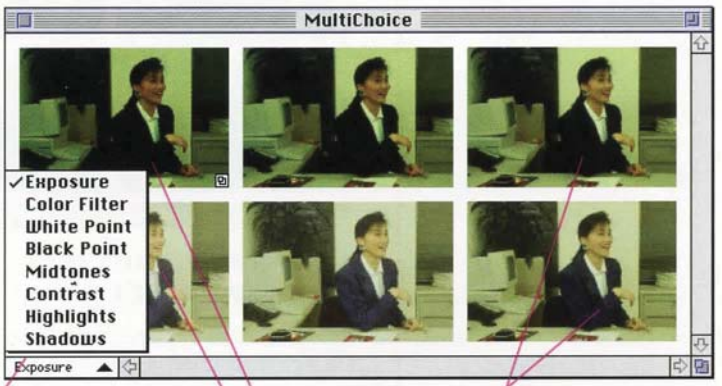
Before you go on, take a minute to make sure you like the way the reference image looks on your screen. It probably won't match the printed image in the Cachet Reference Image Guide. But it should look good to you.

Open the MultiChoice window

Now you're ready to start making corrections. You can use the tools in the Exposure & Tone palette to make these corrections. But sometimes it's easier to make adjustments when you have several variations to choose from. Cachet's MultiChoice window gives you these variations.

1 Choose MultiChoice from the Tools menu.

The MultiChoice window shows you the working image with six different exposures.



The choices in this pop-up menu correspond to the tools in the Exposure & Tone palette.

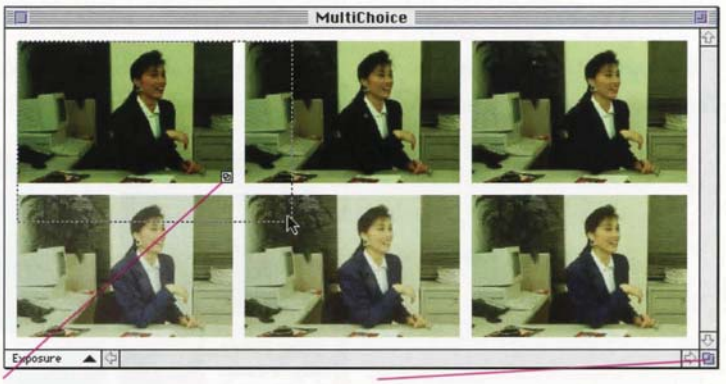
Least exposed

Most exposed

The current exposure setting of the working image falls between these two images.

2 Change the size of the MultiChoice window to fit the screen, if necessary.

You can change the size of the MultiChoice window so you can see it on the screen with the working image and the reference image. You can also change the size of images in the window.



Click here and drag to change the size of images within the window.

Click here and drag to change the overall size of the window.

When you change the size of the MultiChoice images, Cachet automatically adjusts the window size. However, changing the window size doesn't automatically change the size of the images.

Adjust the exposure

Compare *New VP* to *Businessmen*. *New VP* is darker—less exposed—than *Businessmen*. So you want to make it lighter.

1 Click one of the lower thumbnails in the MultiChoice window to lighten the* New VP *image.

When you click one of the MultiChoice images, Cachet adjusts *New VP* to match that image. The MultiChoice window then displays six new choices—three lighter and three darker than the current version of *New VP*.

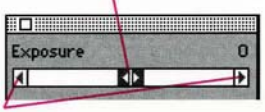
Cachet also changes the Exposure slider tool setting in the Exposure & Tone palette, so you can see how much you lightened the image. The numbers indicate the change on a scale of 100 to –100.

Now, you may want to use this slider tool to adjust *New VP* directly.

***2 Drag the exposure slider to the left or right to change the exposure of* New VP.**

The exposure slider compensates for under- or overexposure of the original. It makes the image appear lighter or darker. Experiment with different settings, comparing the overall lightness of *New VP* to *Businessmen*.

Drag here to change the exposure. Or click anywhere in the slider.



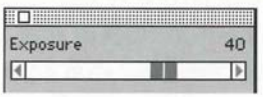
The numbers indicate the amount of change.

Click these arrows to change one step at a time.

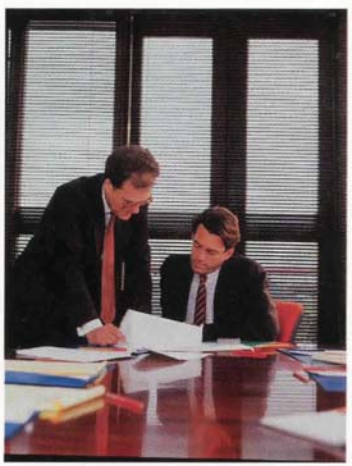
3 Hold down the Command key and click the exposure slider to reset it.

You can return to the original exposure at any point by resetting the exposure slider. When you hold down the Command key and click the exposure slider, Cachet resets this tool only. You can also click the Reset button, but it resets all the tools.

***4 Adjust the exposure so* New VP *has the same overall exposure as* Businessmen.**



Now adjust the exposure of *New VP* the way you want it. You can use either the MultiChoice window or the exposure slider—or both. The setting shown to the left will improve the exposure. But if you think another setting is better, try it.



Adjust the color balance

Perhaps the most obvious problem with *New VP* is the yellow-green cast produced by fluorescent lighting. Ordinarily a photographer would use a filter on the camera to avoid this problem. But you can use Cachet's color filter to correct the color balance now.

1 Choose Color Filter from the pop-up menu in the MultiChoice window.

The pop-up menu is in the lower left corner of the MultiChoice window. When you choose Color Filter from this menu, Cachet displays six variations of the color balance. In effect, it shows you how the image would have appeared had the photographer taken the photograph with six different color filters. Each variation represents one step toward one of the six color handles around the color filter in the Exposure & Tone palette.

***2 Click the MultiChoice image that most closely matches the color balance of* Businessmen.**

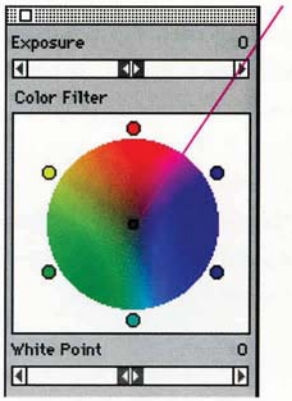
Compare the images in the MultiChoice window to the reference image, *Businessmen.* Then click the image you think is the best match for color balance.

When you click one of the images, the color balance of the working image changes and six new choices appear. The color indicator in the center of the color filter also moves in the direction of one of the colors. The six new choices are variations around this new color balance.

You can try a new choice to get a better match. Or you can work directly with the color filter.

3 Drag the color indicator in the color filter to change the color balance.

When you drag the color indicator, Cachet changes the color balance of the working image as you go. To adjust color balance you usually move the indicator in the opposite direction of the current color cast. For example, if the image is too green, you move away from green toward magenta.

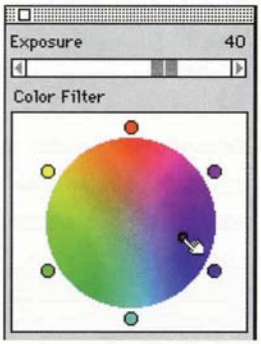


Drag the color indicator away from the undesirable color—away from green toward magenta, for example.

4 Hold down the Command key and click the color filter to reset it.

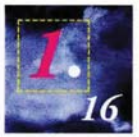
You can reset the color filter at any time to return *New VP* to the original color balance. When you hold down the Command key and click the color filter, the color indicator returns to the center of the filter, but your exposure setting remains unchanged. Don't use the Reset button, or you'll lose your exposure setting.

5 Adjust the color balance of the* New VP *to match* Businessmen *as closely as possible.



Use either the MultiChoice window or the color filter to adjust the color balance of *New VP.* Remember to use *Businessmen* as a reference. You can use the color setting shown at left as a guideline. But the final judgment is yours.

You can also use the color cast tool to adjust the overall color of the image. You'll learn more about the color cast tool in Chapter 2. For information about the difference between the color filter and the color cast tool, see Chapter 2 of ***Using Cachet.***



Adjust the white point

All images have a range of tones from white to black. Sometimes this full range of tones is not used when the image is scanned, so the image doesn't have as much true white as it could. If the whites are subdued, the problem may be the **white point**—the point in the range of tones where light tones become white. You can adjust this point in Cachet.

1 Choose White Point from the pop-up menu in the MultiChoice window.

When you choose White Point from the pop-up menu in the lower left corner of the MultiChoice window, Cachet displays six variations of white point. You should notice a difference in the amount of detail in light areas and the brightness of white areas.

2 Choose Step from the Tools menu. Then choose Small from the submenu.

Small changes in white point can make a big difference. So you may want to adjust the amount of variation between each image in the MultiChoice window with the Step command. When you choose Small, the steps between each image are smaller. In general, if you're having trouble getting a precise match with MultiChoice window, use smaller steps. If you are having trouble seeing the differences between images, use larger steps.

3 Click one of the lower images in the MultiChoice window to increase the white point.

When you click a MultiChoice image, Cachet changes *New VP* in the working image window to match it. The new white point setting also appears on the white point slider.

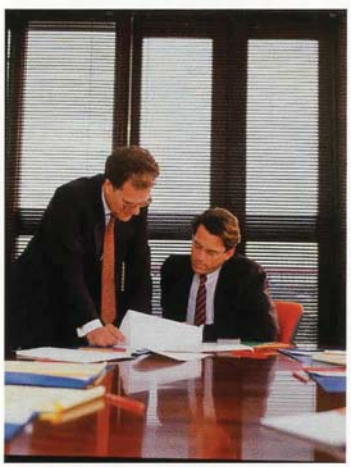
4 Drag the white point slider to the left or right to change the white point.

Drag the white point slider all the way to the left and to the right a couple of times to see clearly the effect of changing the white point. Then make smaller changes, comparing *New VP* to *Businessmen.* Pay particular attention to the whites in the image. You want the white report on the desk and the vice president's blouse to match the white papers in *Businessmen.*

***5 Adjust the white point so the whites in* New VP *match the whites in* Businessmen.**

As before, you can hold down the Command key and click the white point slider to return to the original white point setting. Don't use the Reset key, or you'll lose your exposure and color balance adjustments.

When you're through experimenting, try the setting at left, or use the MultiChoice window or the white point slider to select a white point setting that you think works best.



Adjust the black point

When an image lacks details in the dark areas, the problem might be the black point—the point in the range of tones where dark tones become black. You can change this point just as you did the white point.

1 Choose Black Point from the pop-up menu in the MultiChoice window.

As before, you can use the MultiChoice window to view a range of choices for black point. You should notice a difference in how black the dark areas appear.

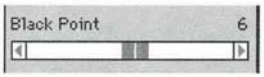
2 Click one of the lower MultiChoice images to increase the black point.

When you choose one of the MultiChoice images, the black point of *New VP* changes in the working image and six new black point variations appear. The new setting also appears on the black point slider.

3 Drag the black point slider to the left or right to change the black point.

You can experiment with the black point slider the same way you did with the white point slider. Drag the slider all the way to the right and to the left to see the effect of increasing and decreasing the black point. If you want to return to the original black point setting, hold down the Command key and click the black point slider.

***4 Adjust the black point so that* New VP *looks as crisp as* Businessmen.**



Use either the MultiChoice window or the black point slider to make your final choice for the black point setting, or try the setting at left. Your goal is to make *New VP* look as crisp as *Businessmen.*

Check for tone clipping

When you adjust the white and black point, you may clip some of the colors—that is, tones that were previously colored become white or black. When this happens, you may lose details in the light and dark areas of the image. Cachet has a clipping alarm that lets you see the pure white and pure black areas of your image. Of course, you can't restore details in areas of your image that were originally pure white or black. But you can restore detail you may have lost by adjusting the white and black points. The clipping alarm helps you see those areas.

1 Click the Check button in the clipping alarm in the Exposure & Tone palette. Then hold down the Show button to see tones that are clipped.

When you click Check, Cachet identifies areas of the image where tones have been clipped and momentarily highlights them. Depending on the settings you've changed so far, you will probably see some areas of tone clipping.

2 Adjust the black point until very few dark tones are clipped.

In general, the white and black point settings are correct when colors are just starting to be clipped. So experiment with changing the black point and then checking for tone clipping again. Adjust the black point and recheck for clipping until just a few pixels in the dark areas are highlighted by the clipping alarm. Adjust the white point, too, if the clipping alarm highlights a lot of pixels in light areas of the image.

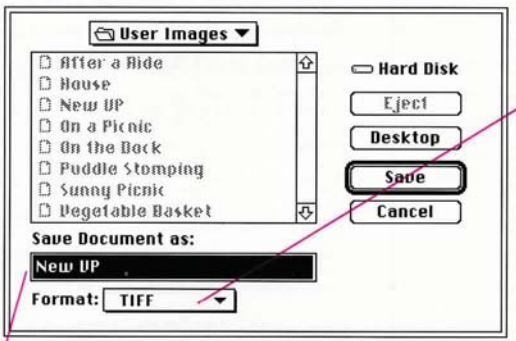
Again, remember you cannot restore details in areas that were pure white or pure black in your original image.

Save your changes

In Cachet, it's best to save the file only after you've made all the changes you want to make. Saving your changes in a copy and preserving the original is also a good practice.

1 Choose Save As from the File menu.

When you choose Save As, a dialog box prompts you for a new name for the image, as well as a file format.



You can choose a file format from this menu. If you don't choose a format, Cachet uses the same format as the original.

You type the new name here.

2 Name the new file* Newsletter VP *and save it in the User Images folder.

Don't change the format for now. Just save the new file in the User Images folder. When you click Save, *Newsletter VP* becomes the working image. If you'd like to see how much progress you've made, you can open the old working image, *New VP*, as another reference image and compare the two.

3 Choose Open from the File menu and open* New VP *as a reference image for comparison.

You can now see how far you've come from your original image. *Newsletter VP* is no longer too dark or too green. It's a good match for *Businessmen.*

Print a quick copy

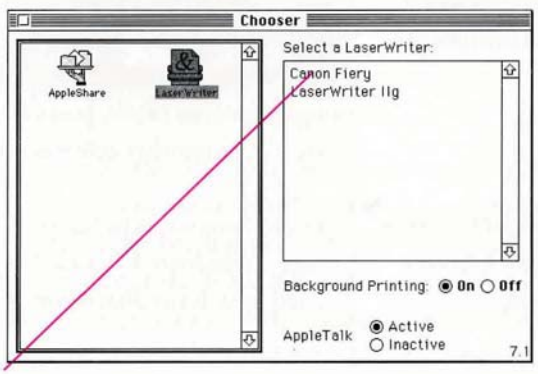
If you have a color printer, you can now print a quick copy of *Newsletter VP*. Because of Cachet's unique ability to faithfully render color on desktop printers (as well as traditional printing methods) a print from your color printer can serve as an early proof of your final image.

Cachet color is so dependable that you will be able to tell from this proof whether you are on the right track with your color correction—before you create color separations and begin the more expensive process of making films and creating professional proofs.

You'll learn more about Cachet's powerful printing and color separation features in the fifth exercise.

1 Use the Chooser to select the color printer you want to use.

Make sure you have selected the color printer you want to use. You use the standard Chooser desk accessory. It displays a dialog box like this:

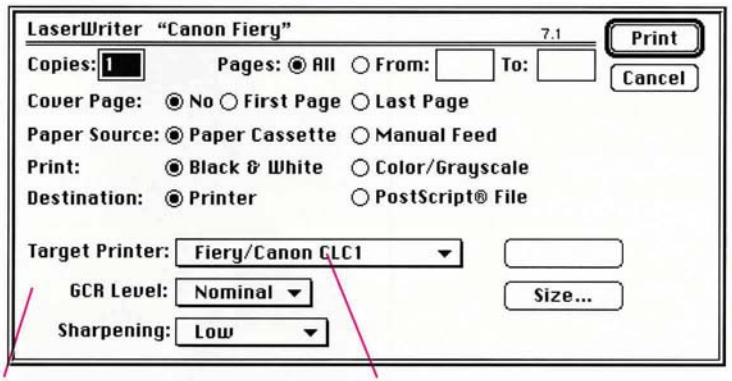


You click the printer you want to use.

You may also need to click a network if you are connected to more than one network.

2 Choose Print from the File menu.

Make sure the working image, *Newsletter VP*, is active. The Print command is only available when the working image is active. When you choose Print, the appropriate dialog box for your printer appears.



This is the dialog box for the Fiery Color Laser. Yours may look different.

A pop-up menu lists printers and printing methods that you can use with Cachet.

3 Choose your printer from the Target Printer pop-up menu.

When you print, Cachet translates the color data in your digital image into data the printer can use to reproduce your picture. Cachet translates color data differently for different printers in order to get the best possible reproduction. Therefore, you must tell Cachet which printer you are using. Be sure the printer you choose from the Target Printer pop-up menu matches the one you chose with the Chooser.

4 Choose Medium from the Sharpening pop-up menu.

You can increase the overall crispness of an image by adjusting the Sharpening level. In *Newsletter VP*, increasing the Sharpening level to medium will enhance the edge between the colors of her face and the light background. Too much sharpening makes the edges too harsh.

No sharpening

Low sharpening

Medium sharpening

High sharpening

Maximum sharpening

Changes to the Sharpening level affect your output—prints or color separations—and do not change the appearance of the image on the screen.

5 Click Print.

You can now compare your printed copy of Newsletter VP to the Businessmen image in the Cachet Reference Image Guide. Newsletter VP won't have the same color quality as Businessmen, because color printers don't have the color range and precision of professional printing processes. But the overall lightness and color balance should be close. You may also want to print the original New VP image to compare the two printouts.

Using a combination of the color filter and the exposure, white point and black point tools, you can correct a wide range of color problems. Learn about the other tools on the Exposure & Tone palette in Chapter 2 of Using Cachet.

You can now close all the images on your desktop. You can quit Cachet, or you can go on to the next chapter, where you learn how to make the natural world of color look even better than it is.

Enhancing Reality

In this chapter, you learn to:

Change the orientation of an image

Adjust saturation

Adjust color cast

Use snapshots to save interim versions

Situation:

The colors in your picture look dull. You want to make them livelier.

Most professional photographers do a good job of capturing the original colors of a scene. And most of today's films do a good job of reproducing those colors. However, sometimes the original scene itself is lacking something. The sky is not as blue as you'd like it be. Or the natural colors and the lighting don't convey the right mood.

With Cachet, you can change the color appearance of an image to overcome these shortcomings. For example, suppose you're producing a flyer for a real estate company to promote a new listing. The colors in the image the agent gave you are lifeless. To make the house look more attractive, you want the grass a bit greener, the colors a bit warmer. In addition, the image was scanned in the wrong orientation.

This chapter shows you how to solve these problems.

Open the working image

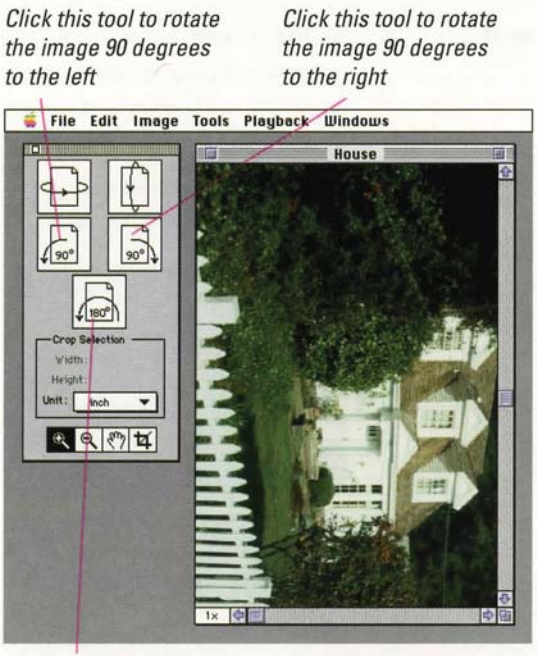
In this exercise, the image you want to change is called *House*. You start by opening it as a working image.

1 Open* House *in the User Images folder.

You can use the Open command to open the image if you have already started Cachet. Otherwise, Cachet automatically displays the Open dialog box when you start the application. The Correction option should be checked.

2 Choose Orientation from the Image menu.

When you choose Orientation, Cachet opens the Orientation palette, with tools for rotating, flipping, and cropping the image.



3 Rotate the image 90 degrees to the left.

The image now appears right side up on the page. You can use the zoom-out tool or the Zoom Out command in the Windows menu to reduce the image, if you want.

Open the reference image

You want a sunny picture with green grass as a reference image. The *Cottage* image in the Cachet Reference Image Guide is a good choice.

***1 Find the Cottage photograph in the* Cachet Reference Image Guide**

The lighting and colors in *Cottage* are close to what you'd like to see in *House* when it's printed.

2 Open* Cottage *in the Reference Images folder.

Use the Open command. The Reference option should be checked because you've already opened a working image. Cachet opens *Cottage* in a window labeled "Reference."

3 Adjust your monitor, if necessary.

As in Chapter 1, take a minute to adjust brightness and contrast of your monitor so that *Cottage* looks sunny and warm on your screen. Also, use the zoom-out tool or the Zoom Out command to reduce the image so it fits next to *House* on the screen. (If you're working with a large format monitor, you may not want to reduce the images.)

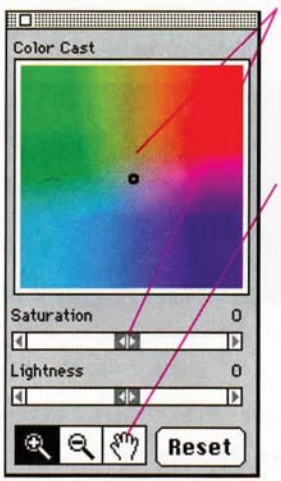
Adjust the overall saturation

Saturation is purity of color. It's what makes colors look vivid. When colors are undersaturated, colors look muddy or gray.

Most people prefer printed colors a little more saturated than they appear in reality. So to enhance the color appearance of House, begin by increasing the saturation.

1 Choose Color from the Image menu.

If there were problems with the original photography of *House,* you would correct those problems first with the Exposure & Tone palette. However, because *House* was well exposed with the right kind of film, you can go directly to the Color palette.



The Color palette has tools for enhancing the color appearance of an image.

It also has the standard tools for zooming and grabbing the image.

2 Drag the saturation slider to the right or left to change the saturation.

Experiment with increasing and decreasing the saturation of the image. Notice how decreasing the saturation seems to wash the color out of the image. Increasing it a lot, however, makes the image look artificial and unnatural.

One difference you may notice as you work with the saturation slider and the other tools in the Color palette is that Cachet does not update the working image as you drag. You see the change only when you release the mouse button.

You can also use the MultiChoice window to adjust saturation, if you want. You choose MultiChoice from the Tools menu and choose Saturation from the pop-up menu in the MultiChoice window.

***3 Adjust the saturation of* House *to match the saturation of* Cottage.**

Compare the depth of color of the roofs in the two images. Look at the grassy areas, too. The colors in these areas won't match exactly, but you can adjust the saturation until *House* looks as saturated as *Cottage.* Try the setting shown at left, or experiment with the slider until the colors look close to you.

However, *House* still doesn't look as sunny as *Cottage.* So you may want to make some other changes. But before you do, you can take a snapshot to save this version before you go on.

Take a snapshot

A snapshot is a temporary record of the working image. You can use snapshots to try out different combinations of changes. This lets you record changes as you go, so you can backtrack if you want to.

1 Choose Take Snapshot from the Playback menu.

When you choose Take Snapshot, Cachet displays this dialog box:

Cachet numbers snapshots automatically. You can give your snapshot a more meaningful name, however.

2 Name the snapshot* Saturated House *and click Snap.

When you click Snap, Cachet saves the information about the working image as a temporary file. In this case, the information includes the change of orientation and the new saturation setting.

Adjust the color cast

Now to get that sunny look you want, you can adjust the color cast. Changing the color cast is similar to changing the color balance with the color filter in the Exposure & Tone palette. But instead of compensating for a wrong filter in the original photography, it adds a desirable cast to the overall image.

1 Click in the color map to change the color cast.

Experiment with color cast by clicking in different areas of the color map. Notice how the color cast changes the mood of the image. If you click in the blue or green area of the color cast map, the *House* image looks cooler, maybe even overcast. If you click in the yellow or red area, it looks warmer.

You can hold down the Command key and click the color cast map to return to the original color cast.

***2 Adjust the color cast to make the colors in* House *warmer, like those in* Cottage.**

A red-orange color cast, similar to the setting shown to the left, warms up the *House* image.

***3 Take a snapshot and name it* Warm House.**

Take a moment to take another snapshot now, so you can compare the various versions of the image. Notice that Cachet lists the existing snapshots in the Take Snapshot dialog box.

Restore a snapshot

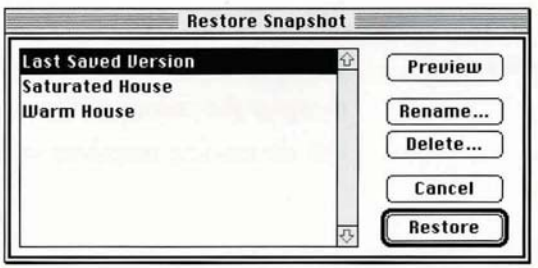
Now you have two snapshots of two different versions of the image. You also have the original version because you haven't saved any changes yet. You can compare these three versions to decide which you like best.

1 Click the Reset button.

When you click Reset, Cachet returns to the original version of *House,* without your saturation and color cast changes.

2 Choose Restore Snapshot from the Playback menu.

The Restore Snapshot dialog box lists all the snapshots you have taken. It also has buttons for restoring, previewing, renaming, and deleting snapshots in this list.



Move the dialog box if necessary, so that it doesn't block your view of the working image.

3 Select* Saturated House *and click Preview.

Now you can get another look at the *House* image with just the saturation changes. Cachet temporarily displays this version as the working image. The dialog box remains open, so you can preview another snapshot, if you want.

4 Select* Warm House *and click Preview.

Cachet now displays the snapshot that includes both the saturation and color cast changes. If you like this one, you can restore it. Or you can go back to *Saturated House.*

5 Click Restore.

When you click Restore, Cachet restores the snapshot you've selected and closes the Restore Snapshot dialog box.

6 Choose Save As and give the image a new name before you save it.

If you're happy with the current *House* image, you can save your changes. When you save, Cachet deletes all the snapshots you have taken since you last saved.

You can now close the images. Then you can quit or go on to Chapter 3 to learn about correcting selected colors in an image.

Correcting Selected Colors

In this chapter, you learn to:

Select colors you want to change

Mask areas you don't want to change

Match colors in a reference image

Adjust selected colors manually

Crop an image

Situation:

The overall color is okay, but you want to change some of the individual colors.

Sometimes you want to change some of the colors in an image without changing all of them. You may want to highlight an object by making it a little more saturated than it is. Or you may want to match a particular color.

With Cachet, you can select specific colors and change their color cast, saturation, and lightness. You can also match a reference image color automatically just by clicking it. For example, suppose you're preparing the pictures for a magazine spread about healthy food. You've been given a photograph of fresh vegetables piled attractively on a kitchen table. The overall color is fine, but the tomatoes in the basket and the avocados don't look quite as healthy as you want them to. Also, the photograph shows a little too much of the kitchen.

You can use Cachet to make the tomatoes in your image match some healthier tomatoes in a reference image. You can also adjust the saturation of the avocados and crop the image to focus on the vegetables, not the kitchen. This chapter shows you the steps.

Open the working and reference images

As in the previous exercises, you start by opening both a working image and a reference image.

1 Open* Vegetable Basket *in the User Images folder as the working image.

If you've just started Cachet, the Open dialog box appears automatically. Otherwise, you use the Open command. Check the Correction option in the Open dialog box if it is not already checked.

2 Find the* Fruits and Vegetables *photograph in the Cachet Reference Image Guide

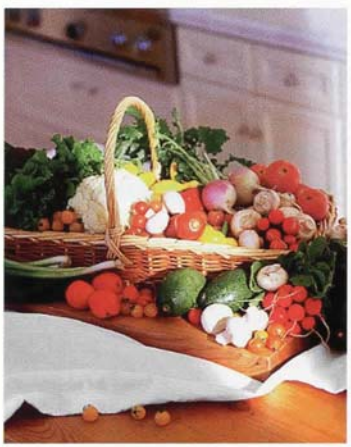
You see how this image looks when it's printed. You want the avocados and tomatoes in *Vegetable Basket* to match the richness of those in the photograph.

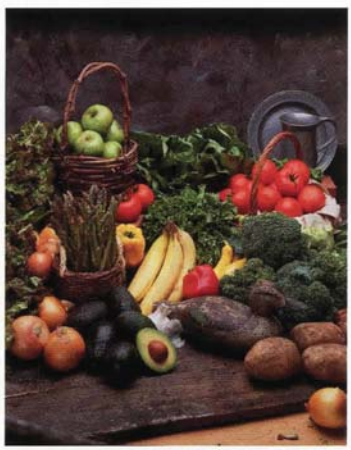
3 Open* Fruits and Vegetables *in the Reference Images folder as the reference image.

Use the Open command again to open the reference image. If you've already opened *Vegetable Basket* as a working image, the Reference option is automatically checked.

After you open the reference image, adjust the monitor, if necessary, to make *Fruits and Vegetables* look good to you.

If necessary, use the zoom-out tool or the Zoom Out command to fit the images on the screen together.



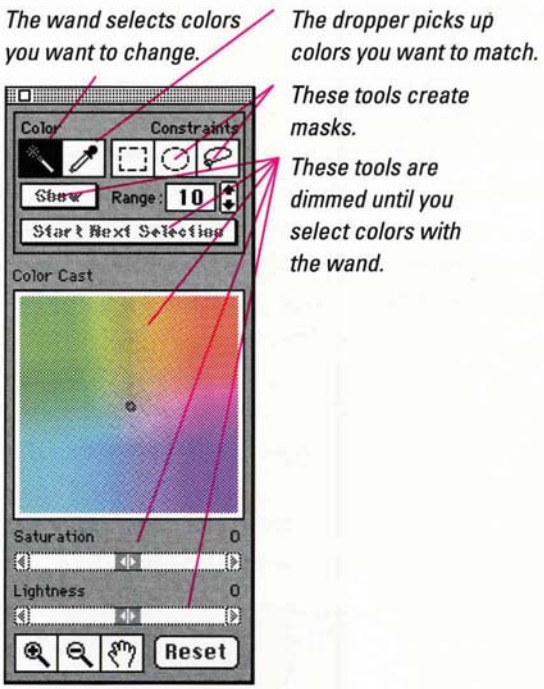


Select colors in the working image

You can start your color correction by selecting the the reds in the tomatoes.

1 Choose Selective Color from the Image menu.

You use the tools in the Selective Color palette to select and change specific colors.

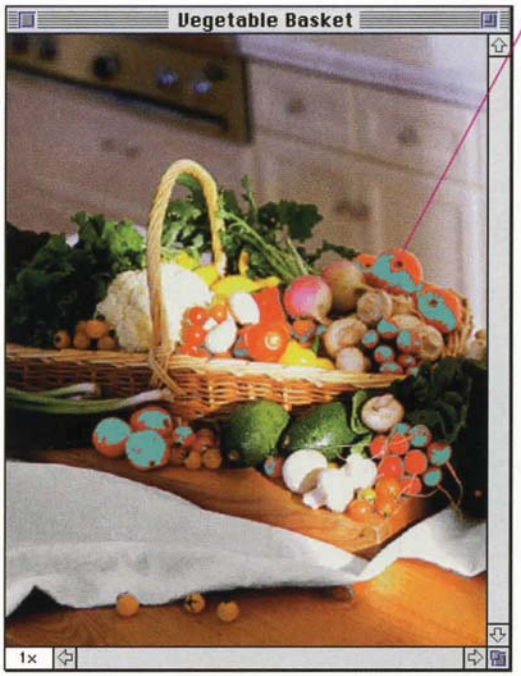


2 With the wand, click the tomato at the top right of the basket.

Make sure the working image is selected. Then click the left side of the tomato where it's mostly red. Cachet selects and momentarily highlights a range of reds that are close to the color you click.

3 Hold down the Show button.

When you hold down the Show button, you can see that Cachet has selected many of the red areas of the image—though not all.



When you hold down the Show button, Cachet highlights the selected colors.

You can also hold down the Shift key to see the selected colors.

Select more colors

Because the tomatoes in the image represent a wide range of reds, Cachet didn't select them all with the first click. You can shift-click to select more reds.

1 Hold down the Shift key and click somewhere else in the tomato.

When you hold down the Shift key, you can see the pixels that are already selected and click another red to add more red tones to the selection.

2 Choose Undo from the Edit menu and then hold down the Show button.

When you choose Undo, Cachet undoes the last selection you made. So if you accidentally add a color that you don't want to change—by clicking a white pixel, for example—you don't have to start all over again.

3 Hold down the Shift key and click to select all the tomato reds.

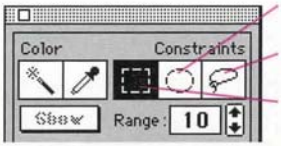
Now use the wand to select all the reds in the tomatoes. Use the Undo command if you get colors you don't want. Don't worry if some of the selected reds appear in parts of the image you don't want to change. You're going to mask these parts of the image.

Notice that Cachet shows all the reds, not just the reds in the tomatoes

You may want to zoom in to get a better look at the tomatoes. You can choose Zoom Detail from the Windows menu to see all the image detail. See Chapter 1 of ***Using Cachet*** for more details about displaying images.

Create a mask

When you select colors in an image, Cachet selects those colors everywhere in the image. If you want to limit the selection to a particular part of the image, you can use the constraint tools:



Elliptical marquee

Lasso

Rectangular marquee

1 Click the rectangular marquee and drag to draw a box around the tomatoes in the basket.

You use the constraint tools to outline the areas you want to change. Cachet limits any changes you make to the area inside the outline.

Everything outside the constrained area is unaffected by your changes

2 Hold down the Show button.

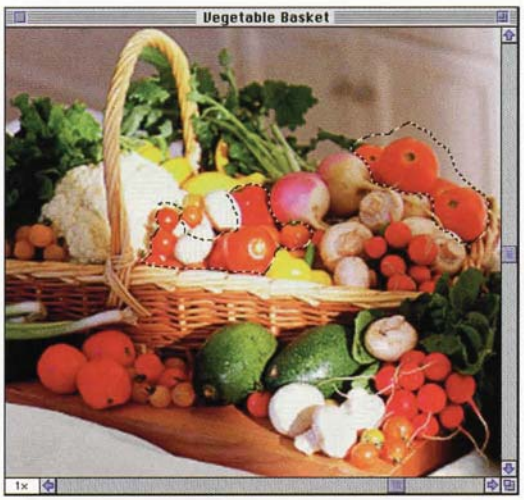
Now when you hold down the Show button, Cachet shows only those selected pixels that fall within the area you've outlined. Notice that you still have some unwanted pixels selected—for instance, you don't want to change the red of the radishes or the turnip. So you need a more precise mask.

Make the mask more precise

Often, you can easily select the colors you want to change using the rectangular or elliptical marquee. When you need a more precise mask, as you do with this picture, you can use the lasso to draw a tight outline around the areas you want to change.

1 Click the lasso and drag to outline the vegetables you want to change.

You can draw very carefully around problem areas—where reds you want appear right next to reds you don't want—and then draw more quickly where you don't need to be so precise.



You can hold down the Shift key to draw more than one mask or add to a mask. You can hold down the Command key to delete a mask or delete an area from a mask.

2 Hold down the Show button.

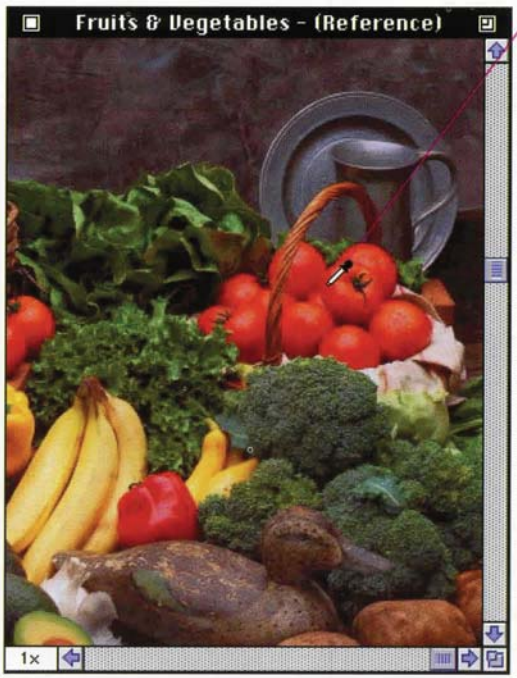
Now when you hold down the Show button, you should see only the reds in the tomatoes selected. You can use the Wand to pick up more reds. Remember to hold down the Shift key.

Match a color

Now that you've selected all the reds you want to change, you can let Cachet automatically match the colors of the ripe red tomatoes in the reference image.

1 Click the dropper and click the* Fruit and Vegetables *image to make it active.

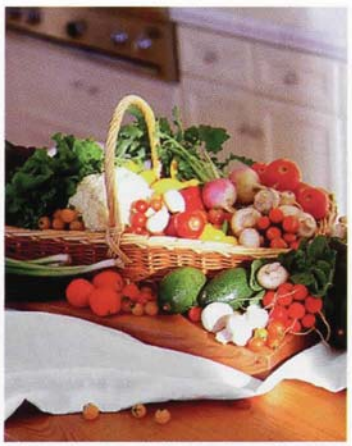
When you click the dropper and move the pointer over the active window, the cursor becomes a dropper.

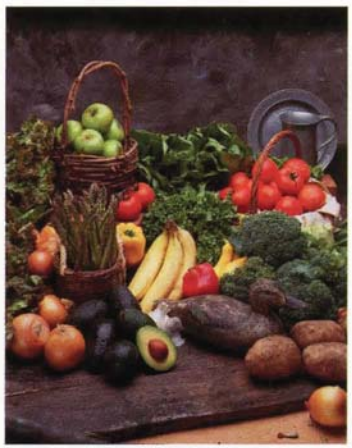


You can zoom in to pick up a particular color.

2 Click a tomato red that you like.

Cachet now replaces the range of reds that you selected in the working image with a new range of reds that more closely match the color you selected in the reference image. (If you don't like the new color, choose Undo and then click a different red in the reference image. You can also use the color cast, saturation, and lightness tools to refine the matching.)





You can also use the dropper to match colors in another part of your working image or to specify PANTONE® Colors.

Select a new range of colors

Turn your attention now to the avocados.

1 Click Start Next Selection in the Selective Color palette.

When you start the next selection, Cachet records the color changes you've made to the tomatoes and deselects the outlined area.

2 Use the lasso to outline the avocados in the working image.

You can create masks before or after you select the colors you want to change. This time, create your mask first. (Remember to make the *Vegetable Basket* image active before you draw.)

3 Use the wand to select the range of green colors in the avocados.

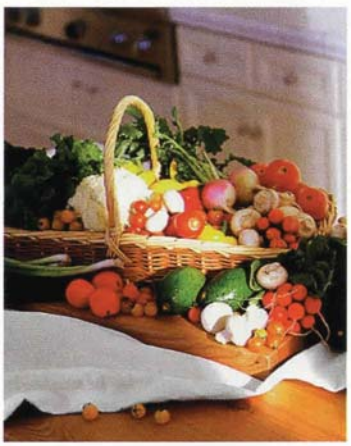
Remember to hold down the Shift key when you click to add additional green tones.

Increase the saturation of the selected colors

The avocados look a little washed out compared to the ripe red tomatoes. You can use the saturation tool to make them a more captivating green.

1 Drag the saturation slider to the right to increase the saturation of the avocados.

Experiment with different saturation settings, or try the one shown at left until you find the one you think looks best. Your goal is to get approximately the same saturation in the avocados and tomatoes.



2 Click Start Next Selection.

As before, Cachet records your changes.

Notice that the saturation tool is reset to zero. This time, though, the zero setting includes the new avocado greens. Each time you click Start Next Selection Cachet incorporates the changes you've made so far, then returns each tool to a zero setting in preparation for your next change.

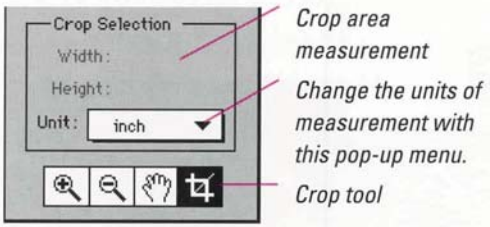
When you work with selective color, be sure you are satisfied with your changes before you click Start Next Selection. Once you click Start Next Selection you cannot use Undo to restore the previous selection.

Crop the image

The final step is to crop the image to focus more on the vegetables and less on the kitchen in the background.

1 Choose Orientation from the Image menu.

The Orientation palette replaces the Selective Color palette. In addition to the standard zoom and hand tools, it has a tool for cropping images:



2 Click the crop tool and drag to draw a frame around the basket of vegetables.

You can use the crop tool to draw a frame around the part of the image you want to keep. Watch the crop selection box—you'll see the dimensions of the frame change as you draw. If you make a mistake as you're drawing, click anywhere **outside** the frame and start over. Or drag the handles on the corners of the frame to adjust it.

3 Click anywhere inside the frame to crop to image.

Move the pointer over the selected area and the crop tool becomes a pair of scissors. When you click inside the frame, Cachet crops the image as you indicated and changes the window size. If you make a mistake, you can use the Undo command immediately after you crop to undo the the change.

You've now solved all the problems with this image. You can use the Save As command to save the changes in a file with a new name. Or you can close the images without saving changes and then go on to the next chapter.

Achieving Color Consistency

In this chapter, you learn to:

Create a script of color changes

Apply the script to make the same changes in several images

Situation:

You have several photographs from the same roll of film—all with the same problems. You want to make the same changes to all of them.

Color consistency is important when several pictures of the same subject appear side-by-side on a page. You can always use reference images to achieve this consistency. But if all the images were taken at the same time—with the same film, lighting, and exposure—you can use Cachet **scripts** to make the same changes to all of the images quickly.

For example, suppose you're working on a sportswear catalog. You have many pictures of models taken at the same location with the same roll of film. The day was cloudy and overcast, and all the images are underexposed. A film processing error has also introduced a strong blue cast.

This chapter shows you how to correct one of these images and then save the changes as a script that you can apply to the rest of the images.

Open the working and reference images

As before, you begin by opening a reference image and a working image.

1 Open* On a Picnic *in the User Images folder as the working image.

Use the Open command. In the dialog box, make sure the Correction option is checked before you click Open.

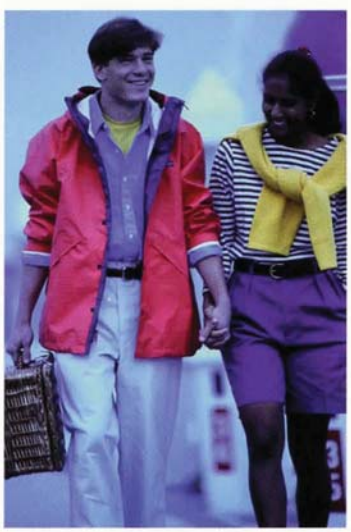
2 Find* Frisbee Team *in the Cachet Reference Image Guide.

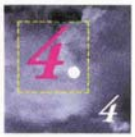
Frisbee Team has good lighting and exposure, and a pleasing overall color. You want *On a Picnic* to have a similar appearance when it's printed.

3 Open* Frisbee Team *in the Reference Images folder as the reference image.

Use the Open command again to open the reference image. The Reference option is automatically checked.

After you open *Frisbee Team*, adjust the monitor, if necessary, to make the image look good to you. If necessary, use the zoom-out tool or the Zoom Out command to fit the images side-by-side on the screen.

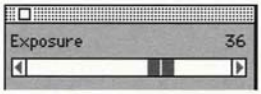




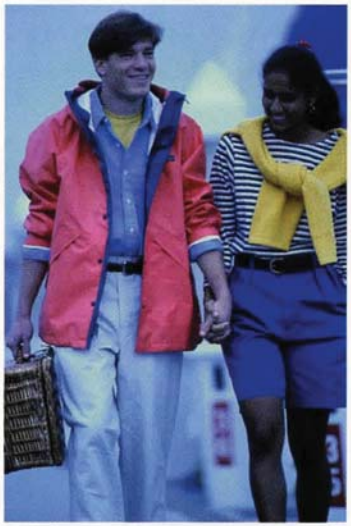
Adjust exposure and tone

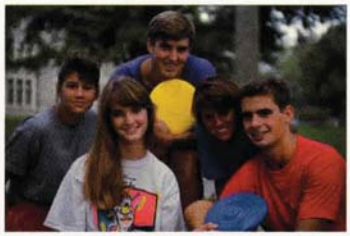
Start by correcting the exposure and tone problems. You use the tools in the Exposure & Tone palette.

1 Use the exposure slider to adjust the lightness of On a Picnic *to match* Frisbee Team.

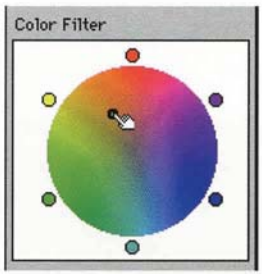


The picnic photograph is a little dark—underexposed—compared to the frisbee image. Experiment with exposure settings to match the overall lightness of the reference image.

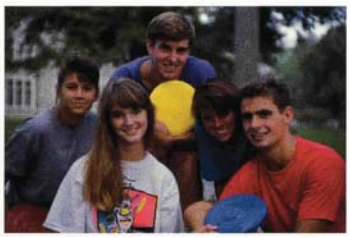




***2 Use the color filter to adjust the color balance of* On a Picnic *to match* Frisbee Team.**



The film processing error that produced the strong blue cast mimics a filter problem. To correct for it, move the color indicator in the color filter away from the blue filter. Experiment with the best filter setting, somewhere between yellow and red, to match the color balance of *Frisbee Team.*



3 Use the white point slider to get whiter whites in the working image.

The lining of the man's jacket—at his collar and cuffs—is supposed to be white. Drag the white point slider to the right until the lining matches the white of the woman's tee-shirt in *Frisbee Image*. You can use the clipping alarm, as described in Chapter 1, to check for tone clipping. Don't worry about small amounts of clipping.

4 Use the midtones slider to bring out details.

You can bring out some details in the man's face and hair by adjusting the midtones.

Add a color cast

Even with the exposure and color filter problems solved, *On a Picnic* still looks cool. You can add a warmer glow with a yellow-red color cast.

1 Choose Color from the Image menu.

Cachet closes the Exposure & Tone palette and opens the Color palette, with its color cast map.

2 Use the color cast map to add a warm yellow-red cast to the image.

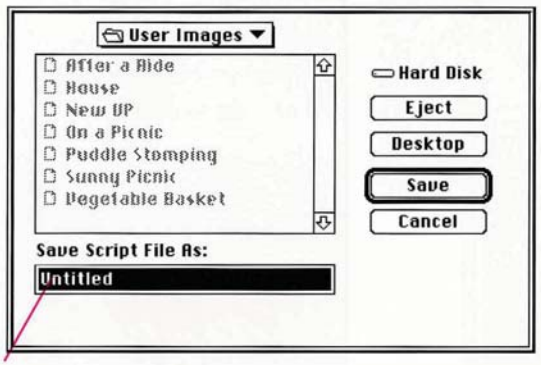
Experiment to find to the best color cast setting for a sunny look. You may want to open another reference image, too. The *Cottage* image you used in Chapter 2 has a sunny look you can use as a guide.

Save the changes in a script

When you're happy with the changes you've made, you can save them in a script. A script is a record of every change you've made since the image was opened or saved. You can use a script to make the same changes to other images automatically.

1 Choose Save Script from the Playback menu.

A dialog box prompts you for the name of the script.



You type the name of the script here.

2 Name the script Picnic Script and save it in the User Images folder.

Type the new name to replace Cachet's default name.

3 Choose Save As and rename the image Corrected Picnic. Click OK.

If you save the changes you've made, you can open the corrected image as a reference later on in this example. If you wish to save disk space, you can just close the image without saving the changes. You can also close any reference images you have open.

Apply the script to a new image

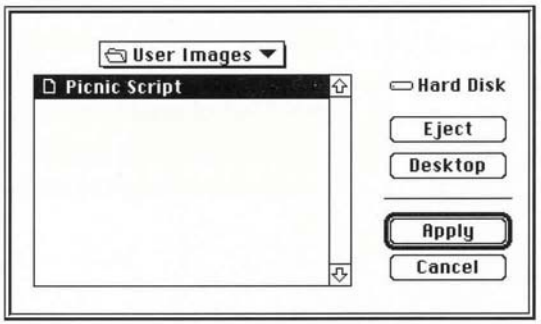
Now you can make the same color corrections to several more images automatically.

1 Open* After a Ride *in the User Images folder as the working image.

Use the Open command and be sure the Correction option is checked in the dialog box. If you saved your corrections to *On a Picnic*, open that file as a reference image.

2 Choose Apply Script from the Playback menu.

A dialog box lists the scripts you've created. If you saved the scripts in a different folder, go to that folder.



3 Select* Picnic Script *in the User Images folder and click Apply.

When you click Apply, Cachet makes all the changes recorded in the script to *After a Ride.* (Or, you can use *Sample Picnic Script* which is in the Scripts folder. The Scripts folder should be in your Tutorial folder. If you don't see it there, check the installation instructions in ***Start Here.***)

If this image needed additional corrections—to change specific colors, for example—you could make those now.

There are some changes you might not want to include in a script. For instance, a change in orientation might not apply to more than one image in a series. Also, if your script included a mask, Cachet would create the mask in the same location in each image. Usually, applying identical masked color changes to unlike images doesn't make sense.

You can continue experimenting with scripts by applying *Picnic Script* to two more images—*Puddle Stomping* and *On the Dock*. Just open each of these images, one at a time, as the working image, and then use the Apply Script command.

Puddle Stomping *before applying script*

Puddle Stomping *after applying script*

You'll also notice that there are some other scripts in the Scripts folder. These are scripts with recommended corrections for all the images in Chapters 1 through 4. You can apply these scripts to the original images and compare the results to your own corrections, if you want.

When you're finished experimenting with scripts, you can save the changes in files with new names, or just close the images without saving changes. Then you can continue on to Chapter 5, where you learn how to make color separations for a color-corrected version of *On a Picnic*.

Creating Color Separations

In this chapter, you learn to:

Check for out-of-gamut colors

Correct out-of-gamut colors

Change the size of an image

Save an image as a set of color separation files

Situation:

You want to use an image in a document and have it printed professionally. You need color separations.

If you plan to use your color-corrected images in a document or if you plan to have them printed professionally, you need color separations. **Color separation** is the process of converting the red, green, and blue (RGB) data of your image file into the colors used by your printer. For example, cyan, magenta, yellow, and black (CMYK) for offset printing, or cyan, magenta and yellow for reproduction on the Kodak XL7700. For offset printing, each separated color is transferred to a piece of film. The four films are also called color separations.

In traditional prepress color work, making color separations is an exacting process that requires expert knowledge of the color reproduction process. With Cachet, making color separations is much easier.

You decide which printing process you want to use, then Cachet uses a unique database of printer-specific information to create color separations that are optimized for the printer you select. Your service bureau uses these color separations to create the actual color separation films.

This chapter explains these steps, using a color-corrected version of the picnic photograph you worked with in Chapter 4.

Open a color-corrected image

The *Sunny Picnic* image is a color-corrected version of *On a Picnic*. You start by opening it as the working image.

1 Open* Sunny Picnic *from the User Images folder as the working image.

Use the Open command. In the dialog box, make sure the Correction option is checked.

If you prefer, you can use Corrected Picnic, your own color-corrected version of *On a Picnic*. However, you probably won't get the same results when you check for out-of-gamut colors.

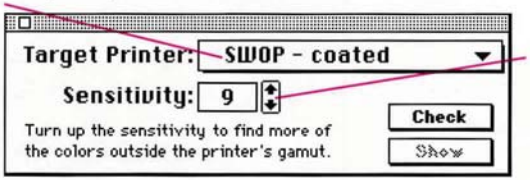
Check for out-of-gamut colors

Every printing process has a range of colors that it can reproduce. Out-of-gamut colors are colors that are outside this range, and thus potentially difficult to reproduce. You can choose to let Cachet adjust the out of gamut colors automatically. Or you can use the gamut alarm to display the colors so you can correct them manually.

1 Choose Gamut Alarm from the Tools menu.

Cachet opens the Gamut Alarm window. You can move it, if necessary, so that it doesn't block your view of *Sunny Picnic*.

The Target Printer pop-up menu lists all the printers and printing methods that Cachet works with.



You adjust the sensitivity of the gamut alarm by clicking these arrows.

2 Choose SWOP-coated from the Target Printer pop-up menu.

SWOP stands for standard web offset publications. When you choose SWOP-coated from the pop-up menu, Cachet uses an internal profile of this printing method to compare the range of colors in your image to those that are possible in web offset printing.

3 Click Check.

When you click Check, Cachet evaluates your image against the SWOP-coated profile. It briefly highlights all the colors that are out of gamut—that is, all the colors in your image that cannot be reproduced precisely by web offset printing.

Cachet highlights the colors that are out of gamut.

As you can see, a few areas of the image—primarily in the red jacket—are out of gamut. Before you correct the out of gamut colors, take a moment to experiment with the gamut alarm.

4 Change the sensitivity to 7 and click the Check button again.

This time, very few pixels are highlighted.

When you set the gamut alarm sensitivity, you control how much of the out of gamut colors you will see. For instance, if you set the gamut alarm sensitivity to 10 (high sensitivity), you are telling Cachet to show all the out of gamut colors. Then you can correct all of them manually.

When you set the alarm to 1 (low sensitivity) you are telling Cachet to show only the colors that are extremely outside the gamut. You can correct those manually and let Cachet handle all others.

5 Change the sensitivity back to 9 and click the Check button.

You can set the sensitivity of the alarm to match the degree of control you'd like to have when correcting for out of gamut colors. For now, use a high sensitivity.

Correct for out-of-gamut colors

1 Hold down the Show button to show out-of-gamut colors.

Make sure the gamut alarm is still open on your desktop.

When you hold down the Show button, Cachet highlights the colors that are out of gamut.

2 Choose Color from the image menu.

3 Use the saturation slider to reduce the overall saturation.

As before, you can see that the main problem is the bright red jacket.

Out of gamut colors are usually either too saturated, too light, or too dark. If a vivid color like the jacket red in this image is out of gamut, it is usually too saturated. So try reducing the saturation. Don't reduce it too much, though, because you don't want the overall image to get washed out. (Use the Selective Color tools if you prefer.)

4 Click Check again and then hold down the Show button.

After you make a change, check for out-of-gamut colors again. This time, there should be only a few out-of-gamut colors. You can let Cachet handle these.

Sunny Picnic *with reduced saturation setting.*

5 Close the Gamut Alarm window.

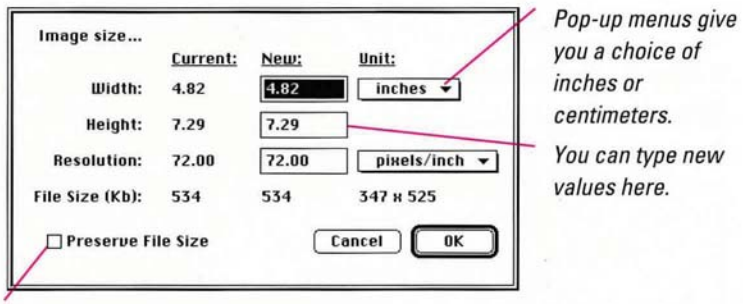
Now Cachet can produce color separations that will faithfully reproduce the colors in your image. But before you make color separations, change the size of the image, and then save your changes.

Change the image size

You can change the size or resolution of an image in Cachet, or you can wait until you import it into your final document (a page layout document, for instance) and adjust the size there. Try it in Cachet for now.

1 Choose Resize Image from the File menu.

The Image Size dialog box appears on your screen.



The default setting is Preserve File Size ON.

2 Make sure Preserve File Size is on, then change the width to 2.5 inches.

When you type the new value for the width, Cachet automatically calculates the new height to keep the aspect ratio of the image constant. It also adjusts the resolution. See Chapter 5 of Using Cachet for more details about image size.

3 Click OK to close the Image Size dialog box.

The size of the image on your screen does not change because the file size (m x n pixels) remains the same. The size change will show up when you print your image.

If you were to change the image size with Preserve File Size off, Cachet would resample the file—increase or decrease the number of pixels in the file. When the number of pixels in the file changes, the size of the screen image changes as well.

Save the changes

You can save the file in its original format, or save it as a new file in a different format.

1 Choose Save As from the File menu.

A dialog prompts you for the name of the new file. It also shows the current file format—TIFF. You can save the file in PICT, Photoshop™ or Raw format. A pop-up menu shows you the format choices.

2 Name the new file and click Save.

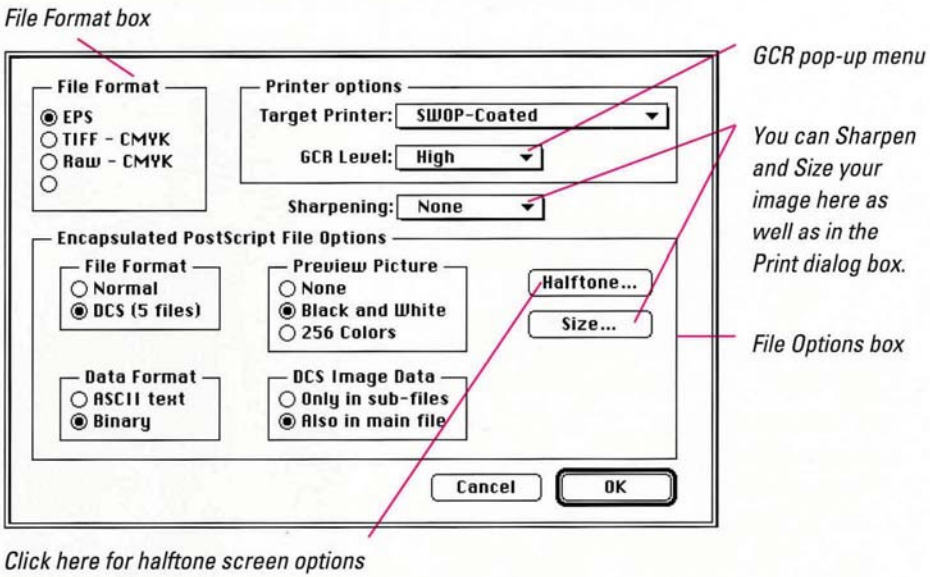
Cachet saves your changes—the corrections for out-of-gamut colors and the size change—with the name you type. This file becomes the working image.

Create color Separations

Now you are ready for the final step, creating color separations. You can import Cachet color separations into your page layout program—the page layout program will use the Cachet separations instead of creating its own. Because they are optimized for your printer, using Cachet separations gives you more control over the quality of the printed image.

1 Choose Save Separations from the File menu.

Cachet opens the Separations Options dialog box.



2 Choose SWOP-Coated from the Target Printer pop-up menu.

Since you chose SWOP-Coated when you used the Gamut alarm, it should already be selected—if not, you may have tested the color gamut for a different printer.

3 Choose Medium from the GCR Level pop-up menu.

GCR (Gray Component Replacement) is technique for removing from the color separations some of the cyan, magenta and yellow colors that produce gray, and replacing them with a corresponding amount of black—without significantly affecting the appearance of the printed image. The amount of adjustment you make depends on your printer. Some print houses prefer working with a high or low proportion of black ink, others prefer a low proportion. Also, the more black there is in an image the less cyan, magenta and yellow ink is required to print it, potentially reducing printing costs.

GCR set to none

GCR set to maximum

Cachet separations will produce faithful colors for any GCR level you choose.

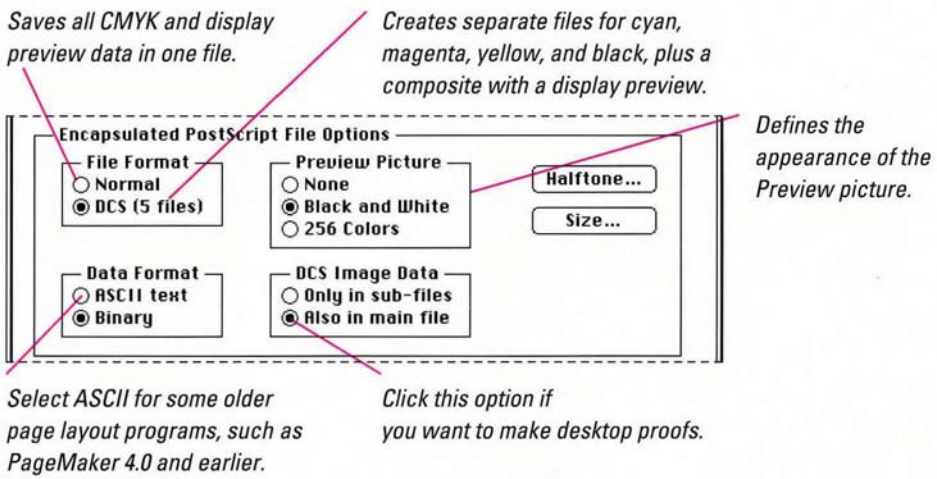
Like the Size and Sharpen options in this dialog box, changes to GCR affect the output—the color separations and the print—but do not affect the appearance of the image on the screen or the data in the image file.

4 In the File Format box, click EPS.

The File Format box gives you the option of creating EPS, TIFF-CMYK, Raw-CMYK, or Raw-RGB format separations. With some newer versions of page layout programs, you'll get the best results by using TIFF-CMYK. However, most use the EPS (Encapsulated PostScript) format, so leave that option selected for now.

5 In the File Options box, notice the File Format, Data Format, Preview Picture, and DCS Image Data settings.

The file options displayed at the bottom of the dialog box vary depending on the file format you select. When you select EPS, Cachet displays options that let you control the way the image appears once it's imported into your page layout program.



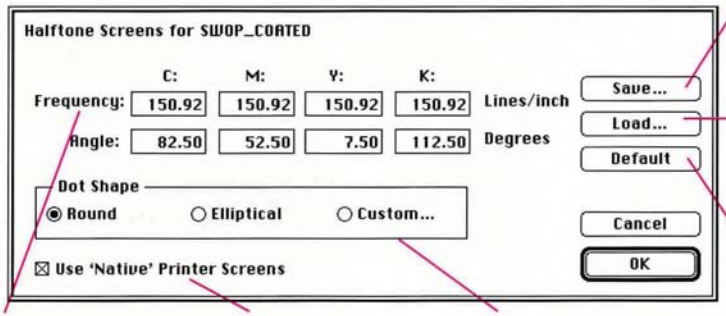
For now, leave the EPS options in their default settings.

Before you begin using Cachet separations, you will need to determine whether your page layout program requires the EPS separation data all in one file (Normal format) or in five files (DCS format).

If your program requires DCS format you will also need to set the DCS Image Data. When you plan to create a proof of your page layout, select the "Also in main files" option. When you plan to go directly to an imagesetter, you can save some space on your disk by selecting the "Only in sub-files" option. With this option selected, only the preview picture is incorporated into the page layout—the image itself will not print out until you go to film.

6 Click Halftone

Cachet displays the Halftone Screens dialog box for the SWOP-Coated printer.



Save any custom screens you create.

Load settings from another file.

Return to the default settings.

The default measurements for line frequency and angle are different for each printer.

Turn Use 'Native' Printer Screens off to use Cachet settings or create custom settings.

Change the shape of the printed dot.

Many printers reproduce images by converting each color—cyan, magenta, yellow, and black—into a pattern of dots called a halftone screen. The four screens are printed one on top of the other to create the printed image. Factors such as the angle of displacement between the screens, or the number of lines per inch in a screen can affect the final appearance of the image.

When you leave the "Use 'Native' Printer Screens" option checked, Cachet does not supply any halftone screen settings with the color separation data. You can import the color separation data into a page layout program or send it to an imagesetter, and let the program or imagesetter determine screen angles and line frequencies.

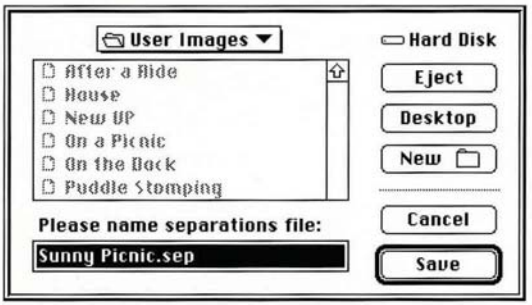
When you uncheck "Use 'Native' Printer Screens" Cachet supplies halftone settings for the printer you've chosen. If you wish to achieve a particular effect, you can use the Custom option to adjust the settings—however this requires expert knowledge of the color reproduction process. Your service bureau may also be able to provide you with specific settings for their printer.

7 Leave "Use 'Native' Printer Screens" checked, then click OK.

Cachet closes the Halftone Screens dialog box and returns to the Separations Options dialog box.

8 Click OK.

Cachet displays the Save dialog box.



Cachet automatically names the separation file *Sunny Picnic.sep*. You can rename the file if you wish.

9 Click Save.

Cachet saves the separation data in the User Images folder.

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