ADOBE SCRIPTING

SCRIPTING WITH PHOTOSHOP AND ILLUSTRATOR

You can use scripting to control the behavior of Photoshop and Illustrator. A *script* is a series of commands that tell Photoshop or Illustrator what to do. With scripting, you can streamline your workflow by consolidating repetitive tasks into a single script.

As you become more comfortable with scripting, you can start to build a library of scripts and functions that make it easy to solve a wide variety of problems in a short amount of time. If you can define ahead of time the steps required for a specific task, chances are you can quickly write a script that can do the work for you; and after you write the script, you can use it again and again to solve similar problems.

WHY USE SCRIPTING

A script can perform a wide variety of automation tasks. You can do everything from creating a new document with a specified size to automating the application of filters and effects on an entire directory tree. You can also create and manipulate the many types of layers and layer sets in Photoshop and Illustrator. You can even use scripting to create path items, symbols, and other art in Illustrator. See Chapter 3 for more on working with documents, Chapter 4 for more on working with layers, and Chapter 5 for more on creating paths, symbols and art in Illustrator.

Scripting also allows you to create and manipulate text and text items in both Photoshop and Illustrator. You can create functions to apply commonly used styles to a number of text items, or to quickly change the font, size, justification, or any number of properties. You can then easily make changes to all text items in a document or even an entire folder of documents. See Chapter 6 for more information on working with text in Photoshop and Chapter 7 for how to use text in Illustrator.

By using variables and datasets with Illustrator, and opening and reading text files, you can use scripting to separate form and content. You can import and change text and images easily. Using information you find in a text file, a simple script can change all the text in a document and swap images. See Chapter 9 for more on using variables and datasets, and Chapter 8 for more on file systems in Illustrator and Photoshop.

Automating complex and repetitive tasks is one of the most powerful uses of scripting. You can take care of the small, repetitive day-to-day tasks that often interfere with the creative process by using scripting and save time and frustration. You can create scripts to operate on open documents, create new documents, or process all the files in an entire directory tree. When coupled with the ability to export documents to a wide range of formats, scripting opens up a world of ways to save time and get jobs done quickly. See Chapter 11, for more on batch processing and the foundational skills you need to automate your workflow. See Chapter 10 for more on exporting and printing your document.

Scripting for Photoshop and Illustrator uses files that are separate from the applications themselves. This makes it easy to trade and distribute your scripts to others. There is a young community developing on the Internet of people using scripting for Photoshop and Illustrator. Photoshop 7 and Illustrator 10 are the first versions of these applications to support scripting, but as more people become familiar with its uses, this community will surely grow. You might want to look through the Adobe forums at: www.adobe.com/support/forums/main.html.

AN INTRODUCTION TO SCRIPTING

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ACTIONS VS. SCRIPTS

Photoshop and Illustrator both support two different models of automation: actions, and scripting. The traditional way to automate a task is using a recorded *action*. An *action* is sort of macro that runs a recorded action. You begin recording and step through the task step-by-step, and after you finish recording, you can use the action. One advantage actions have over scripting is recordability. Writing a script is sometimes more of an intense task than pressing Record and creating an action. You can quickly achieve many short, simple tasks with actions.

However, actions are severely limited in the type of operations they can perform. Most importantly, actions cannot have conditional logic. This means they do the same thing every time and cannot make decisions based on the current situation.

Automating Photoshop and Illustrator with scripting allows you to incorporate logic in your automated tasks. Scripts can use logic to make decisions at key points, changing their behavior in response to the conditions they encounter. You can even implement complex decision trees when using scripts for automation. For example, a script can make decisions about how to handle files based on the name of their directory. You can have a directory of full-size images and a directory called thumbnails, and the script can apply a different set of filters, effects, and sizes to the contents of the thumbnails directory. You can also use actions and scripts together to easily automate complex and powerful operations.

SUPPORTED SCRIPTING LANGUAGES

You can script Photoshop and Illustrator using three different scripting languages: AppleScript on the Mac; Visual Basic for Windows; and JavaScript for cross-platform compatibility. Scripting is only supported as of Photoshop 7.0 and Illustrator 10.0 and all three languages work with both applications. Both AppleScript and Visual Basic allow scripts to communicate with multiple applications and a variety of Web services and other data sources.

Although JavaScript is somewhat limited in these respects, it does have the advantage of being cross-platform. A

script you write on a Mac continues to work on Windows. Keeping your scripts platform independent makes them easier to distribute and reduces the likelihood of rewriting an old script to work on a new computer.

JavaScript is also an easy to learn and widely applicable language. The core syntax for scripting Photoshop and Illustrator in JavaScript is identical to the syntax you use in JavaScript on the Web. If you are familiar with using JavaScript on the Web, or even ActionScripting for Flash, you can quickly learn Photoshop and Illustrator scripting.

DIFFERENCES BETWEEN PHOTOSHOP AND ILLUSTRATOR SCRIPTING

The fundamental features for scripting Photoshop and Illustrator are the same; there are, however, some slight differences in the execution of specific commands. Many of the differences are simply a result of the different features and purposes of each application. For example, both use the `documents.add()` method to

create a new document. But the parameters this method takes vary between the two applications; Photoshop offers different color modes and fill types, while Illustrator has a choice of color spaces. Despite these specific differences, the basic concepts still hold and you can apply them to both applications.

INSTALL SCRIPTING SUPPORT FOR PHOTOSHOP

As of Photoshop 7, scripting support is not included out-of-the-box. To allow Photoshop to be scriptable using AppleScript, Visual Basic, and JavaScript, you must download and install the Scripting Support Plug-In from Adobe. Installation is easy and allows you to utilize the power of scripting. Future versions of Photoshop may include support for scripting without the need to perform this installation. Check the Photoshop documentation or the Adobe Web site for more information.

To enable scripting for Photoshop 7, you must download the scripting plug-in from Adobe. The Web site for is this: www.adobe.com/support/downloads/detail.jsp?ftpID=1535 for Macintosh users, and www.adobe.com/support/downloads/detail.jsp?ftpID=1536 for Windows users. A copy of the plug-in for both platforms is also included on the CD-ROM included with this book.

On the Macintosh, the installer package comes as a disk image. Simply mount the image by double-clicking it, and then run the Photoshop Scripting Support installer. For

Windows, the installer is a self-extracting archive that, when launched, creates a folder. After the expander finishes, double-click the Photoshop Scripting Support installer. On both platforms, make sure Photoshop is not running when you start the installer.

The installer comes with release notes, sample scripts, documentation, and utilities. Keep a copy of the documentation, sample scripts, and utilities for later reference. The Utilities folder contains the Scripting Listener plug-in, which allows you to record complex actions and translates these actions into JavaScript, and Visual Basic on Windows, that you can use in your scripts. Make sure not to install the plug-in right away. It is difficult to use and severely slows down the speed of Photoshop. Just keep it somewhere handy for use later on. See Chapter 11 for more on using this plug-in.

INSTALL SCRIPTING SUPPORT FOR PHOTOSHOP
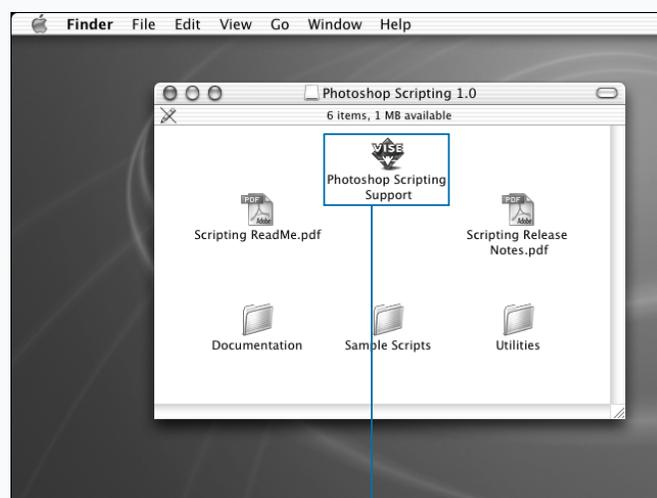
1 Download the installer from the Adobe site, or copy it from the CD.

**2** Double-click the Photoshop Scripting Support installer.
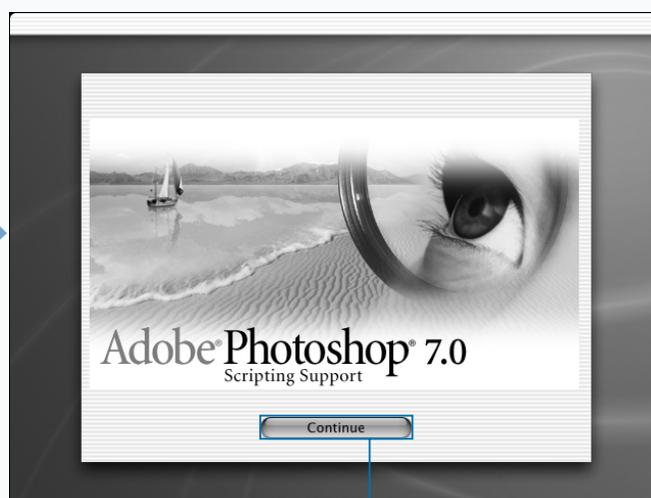
■ The Adobe Photoshop 7.0 Scripting Support start screen appears.

3 Click Continue.

Extra

Occasionally Adobe releases a new version of scripting support for Photoshop. These newer versions may include expanded functionality and fix issues that may have cropped up in older versions. A great resource for finding the latest version of the Scripting Support installer is www.versiontracker.com.

Illustrator comes with scripting support enabled with the application. You do not need to install anything for AppleScript, Visual Basic, and JavaScript to work with Illustrator. There are, however, a few extras on the Illustrator CD-ROM that are not copied to your hard drive when you install Illustrator. Insert the CD-ROM and open the Illustrator Extras folder. A scripting folder contains sample scripts and documentation. You should copy this folder to your hard drive for later reference. One of the best ways to learn any programming language is to look closely at the work of others and try to understand the way their code works. Once you feel more comfortable with JavaScript, you should take a look at the sample scripts. There are different types of sample scripts included depending on your platform; make sure that you are looking at the JavaScript examples.
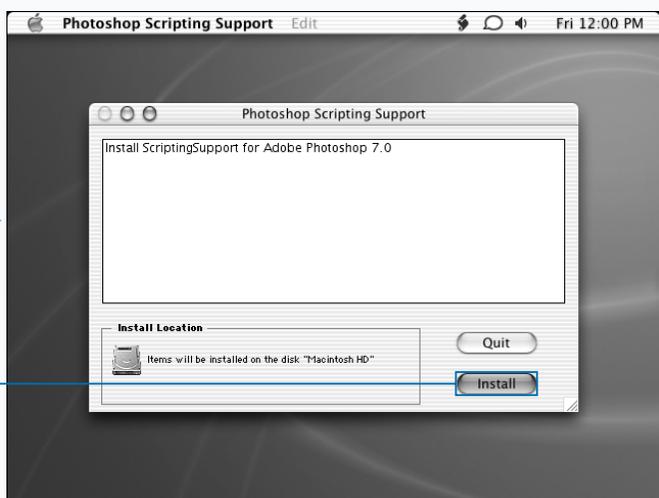
■ **4** Click Install and follow the instructions to install the plug-in.
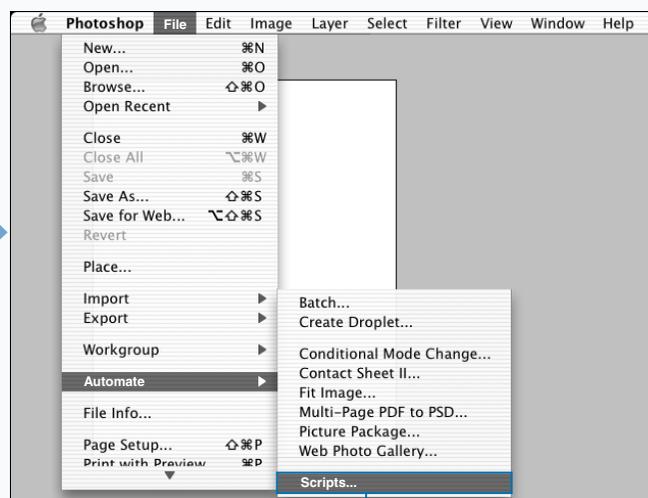
■ The plug-in installs.

■ You can verify that scripting support has been installed by clicking File ➪ Automate ➪ Script.

RUN A SAMPLE SCRIPT IN PHOTOSHOP AND ILLUSTRATOR

You can run a JavaScript from inside Photoshop and Illustrator. Running a script lets the application know that it should execute the steps defined in the script. Before you can use your own scripts, you need to familiarize yourself with how to execute scripts in Photoshop and Illustrator.

There are minor differences in the steps required to run a script in Photoshop and Illustrator. In Photoshop, you access the Scripts option via the File ➪ Automate menu path. You then select and execute your sample script from a dialog box that appears. Photoshop does not allow you to run scripts if you select text or if you are currently entering text with the Text tool. Make sure that you are not in text mode before running any scripts. In Illustrator, you access scripts via the File ➪ Scripts menu path. Instead of a dialog box, Illustrator lists all scripts in the menu that appears. Selecting a script for the menu runs the script. For both

Photoshop and Illustrator, you can also browse to find a script in another location. In Photoshop, you use the Browse button on the dialog box. In Illustrator, you use the Browse menu option.

The Photoshop scripting support installer installs some sample scripts to get you started and Illustrator come packaged with a number of sample scripts as well. Take a look at some of the sample scripts by opening them in a text editor. Looking at other people's scripts helps you learn and helps you discover new and better solutions to problems you may encounter.

See the section "Storing Scripts" for more on adding scripts to the Scripts menu in Illustrator and dialog box in Photoshop. Please note that the results shown in the steps of this section may differ from your results depending on the script that you run.

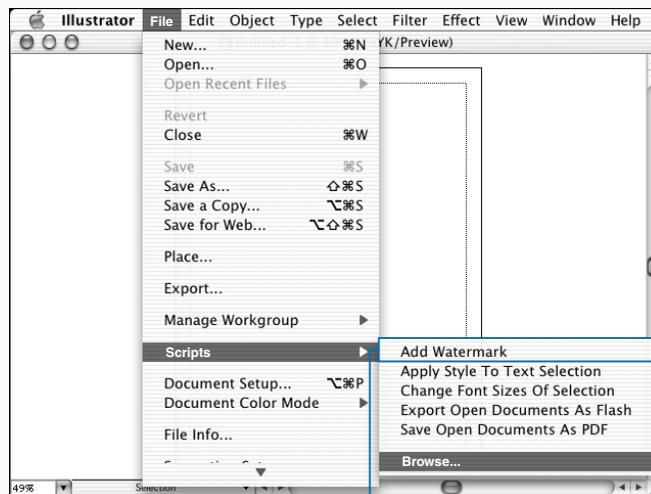## RUN A SAMPLE SCRIPT IN PHOTOSHOP AND ILLUSTRATOR
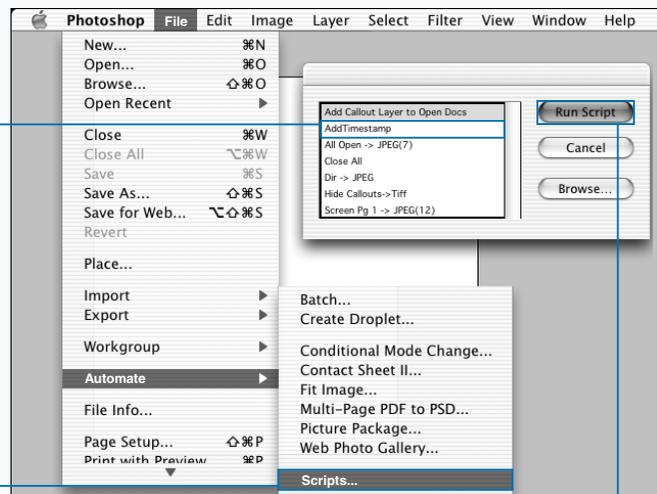
RUN A SCRIPT IN PHOTOSHOP

1 Open a document in Photoshop.

2 Click File ➪ Automate ➪ Scripts.

3 In the Scripts dialog box, click the script name.

4 Click Run Script.

■ You can also double-click a script name to run it.

■ The script runs and modifies the document.

RUN A SCRIPT IN ILLUSTRATOR

1 Open a document in Illustrator.

2 Click File ➪ Scripts and select a script to run.

■ The script runs and modifies the document.

STORING SCRIPTS

You can keep your scripts organized in Photoshop and Illustrator. You can easily access your scripts from inside Photoshop and Illustrator to save you time and automate common tasks. Keeping your scripts organized is a good way to make them easier to find, modify, and use. They can also help you develop a library of reusable code. It is much easier to write a function that serves a particular task once and then to reuse that function whenever a similar task turns up. For example, you may need to add a piece of text or label to every open document. By writing this script in a general way, you can easily modify it to add a watermark image to all open documents.

The scripts that appear in the Photoshop Script menu are located next to the Photoshop application in the Presets/ Scripts folder. Any scripts that you place in this folder are visible in the Run Script dialog box. If you want to keep your scripts in another location, you can always use the Browse button to browse your hard drive to find the script.

In Illustrator, all scripts are stored in the analogous location, the Presets/Scripts folder next to the Illustrator application. Any scripts you place in this location appear in the Scripts menu in Illustrator. Illustrator has the added advantage of allowing you to store your scripts in folders. The menu includes all folders, and you can navigate to them from within Illustrator. The Scripts menu also contains a Browse item to let you locate scripts kept in another location. The Script menu in Illustrator is limited to displaying only four levels of folders.

STORING SCRIPTS
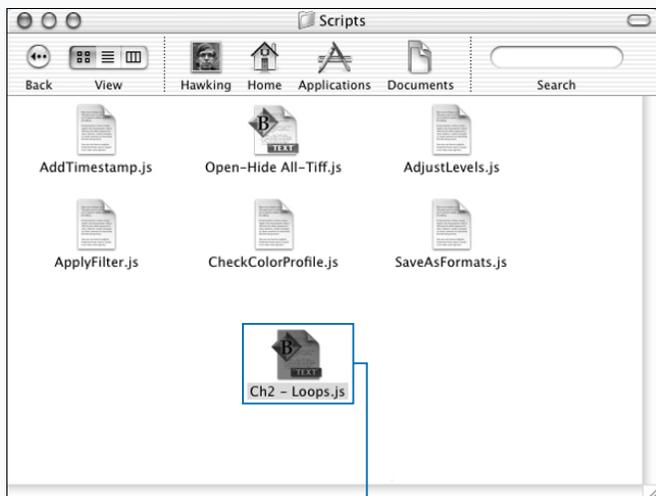
1 Open the Scripts folder located in the Presets folder next to either the Photoshop or Illustrator application.

2 Choose a script from the CD-ROM and copy it to the folder.
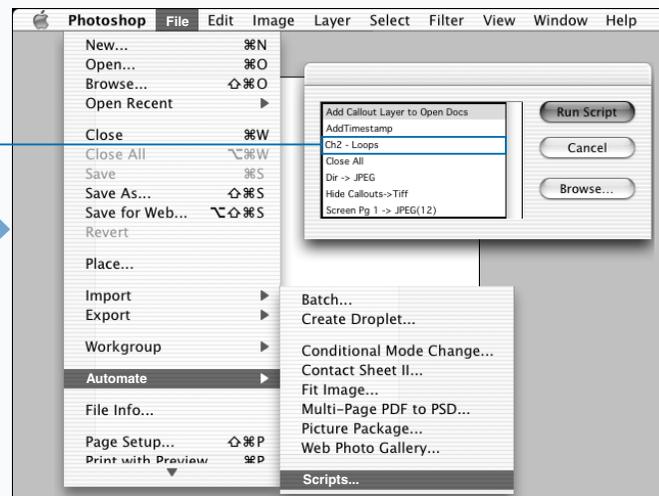
3 Launch the application.

■ The script appears in the Script menu.

Note: If you choose to use Photoshop, the Scripts dialog box appears and displays the newly added script.