Mac Basics
SUPERGUIDE

MacBook Pro

Snow Leopard Edition

Macworld

Foreword

We're very lucky here at *Macworld*. In both print and on the Web, we've got an amazingly diverse readership. Among our readers there are some incredibly geeky, tech-savvy people who can write programming code in their heads and disassemble a MacBook Pro with a paper clip. But we've also got a lot of readers who consider themselves novice Mac users and who avidly read what we write in order to flex and improve their Mac skills.

Believe it or not, this book is for both kinds of readers. If you're one of the newer users struggling with the fundamentals of operating a Mac, the *Mac Basics* Superguide will get you up to speed.

This book is filled with easy-to-follow, detailed tips and information about using the Finder and the Dock, switching between programs, using Apple's Spotlight search tool, opening and saving your files, and setting up system preferences and user accounts. We've tossed in some basic security and troubleshooting advice to keep your Mac up and running smoothly. And our own Dan Frakes, who pens the *Mac Gems* column in print and on the Web, has assembled a list of great low-cost programs that will enhance your Mac experience.

So that covers the novice users. But what about those geeky Mac experts? Why is this book for them?

The answer is simple: It's for them because it helps everyone they know. It's for all of their friends and family members who use them as the be-all, end-all Mac resource. The reality is, a Mac expert can only be in one place at any given time. This *Mac Basics* Superguide can always be around as a handy reference when there's no flesh-and-blood expert nearby. And with any luck, the expert will also be getting fewer calls as his or her friends and family start to master their Macs on their own.

Or to put it another way, this is the book I gave to my mom so that she could figure things out on her Mac when I'm not available to help.

With this edition of the *Mac Basics* Superguide, we've updated the entire book to reflect the changes in Apple's latest version of Mac OS X, Snow Leopard. And if you find yourself wanting more, please consider the other books in our Superguide series, *Total Snow Leopard* and *Mac OS X Hints*.

I hope you enjoy the book—no matter which kind of Mac user you are.

—Jason Snell, Editorial Director, *Macworld*
San Francisco, December 2009

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Application menu
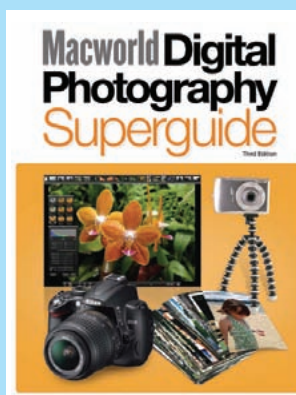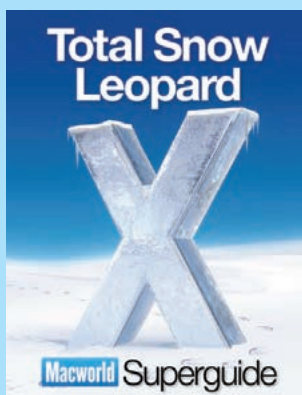
Apple menu

Menu bar

Fast User Switching menu
Spotlight menu

Finder window

Search field

Internal hard drive

Home folder

External hard drive

Sidebar

Desktop

Dock

Mac OS X at a Glance

A Quick Guide to Snow Leopard's Interface Elements

Getting acquainted with any new operating system—even one as elegantly designed as Apple's Mac OS X—can be a challenge. Newcomers face strange terms, unfamiliar interface elements, and a host of seemingly inexplicable features. Wondering what Mac users mean when they refer to the sidebar or to the Spotlight menu? Not sure what to call the list of applications at the bottom of your screen? Here's a quick look at some common OS X interface elements—items we'll refer to again and again in the pages of this book.

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The Finder

How to Locate Files, Create Folders, and Navigate OS X

When many people new to the Mac first hear the name Finder, they assume that the Finder is OS X's search feature. But in fact, the Finder is the space where you interact with your Mac—it is OS X's metaphorical face (it's even represented in the Dock by a smiling blue face). When you look at your desktop or at a window showing your files and folders, you're looking at the Finder.

You'll use the Finder for many of your day-to-day tasks. For instance, it's where you create new folders to organize your files; review information about the size of files; move, duplicate, and delete files; burn files to CD-R or DVD-R discs; and browse your Mac's hard drive. And yes, the Finder can actually help you find files—it's tied to the systemwide Spotlight search feature (see the *Searching Your Mac* chapter).

Parts of the Finder

You navigate files, folders, and applications on your Mac from a Finder window. To open a new window, click an empty part of your desktop, click File in the menu bar, and select New Finder Window (or press ⌘-N). You'll also get a new Finder window whenever you click the Finder icon in your Dock; or double-click on a folder icon, or on your hard drive's icon on the desktop.

The Main Finder Window

OS X gives you four different ways to browse through your files in a Finder window—the icon, list, column, and cover flow views (see "Pick a View"). You control a window's view by using the Finder's View menu or by clicking the small View icons at the top of a Finder window. Deciding which view to use is partly a matter of personal preference and partly dependent on what you're looking at in the Finder.

COVER FLOW VIEW Cover flow view helps you browse files quickly in the Finder, just like in iTunes. When you click the Cover Flow button (or press ⌘-4) in the Finder, previews of your files will appear as glossy graphics in the top section of the window; the same files are shown in a list in the window's bottom section. Cover flow view is great when you need to sift through a folder of photos, videos, or even text files. The Finder can even display and play the contents of those files (see "Press Play"). You can see more than just a basic preview in cover flow view—you can page through PDFs and text files, and play movie and audio files. The downside of this view is that it limits the number of files you can see at a time.
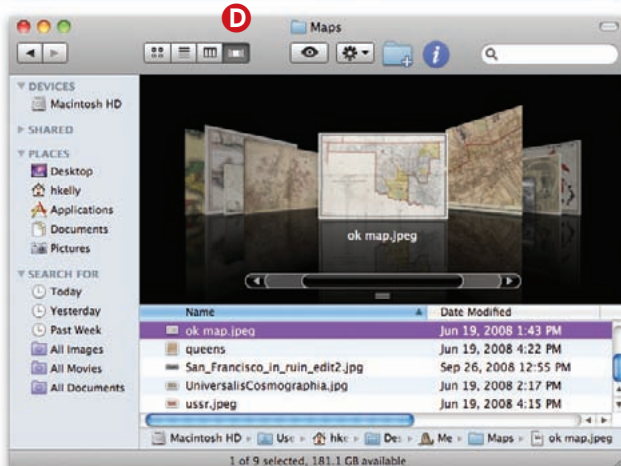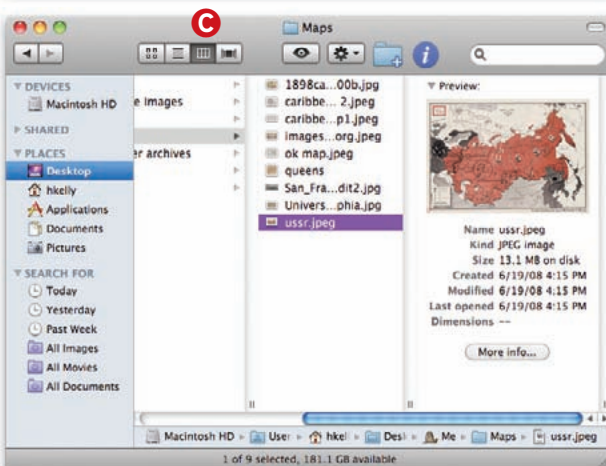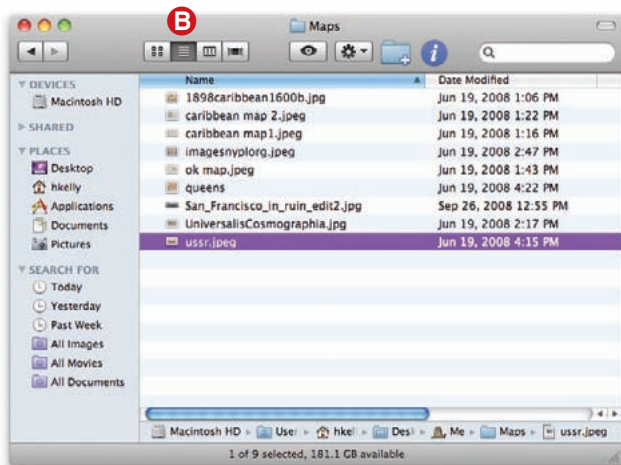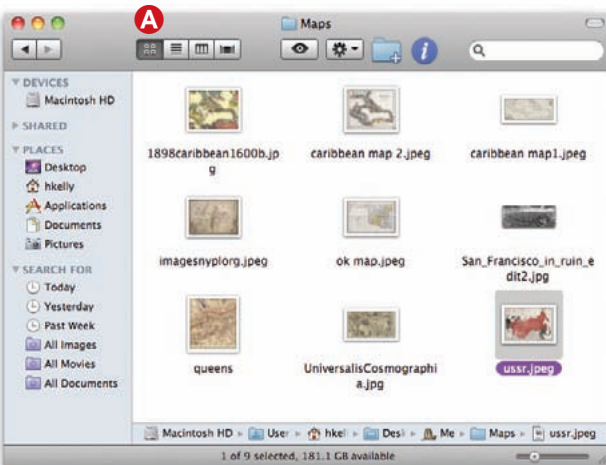
Pick a View There are four ways to view Finder windows in OS X: the icon view **A**, list view **B**, column view **C**, and cover flow view **D**. Choose one by clicking on the appropriate view button at the top of a Finder window.

ICON VIEW You're already familiar with the icon view—that's what you see when you look at your Mac's desktop. In this view, you can arrange representations of your files and folders as you please, just as if you were working in real space. The icon view is particularly handy if you have a folder of photos, for instance. Each photo's icon will be a smaller version of the image—a thumbnail—so it's easy to tell which shot is which at a glance. To change the size of these icons, drag the icon size slider on the bottom of any icon view Finder window to the left or the right. In Snow Leopard, icons can be as large as 512 by 512 pixels.

You can not only place icons wherever you please, but also change how this view looks. From the View Options inspector (View ▸ Show View Options or ⌘-J), you can, for example, adjust grid spacing (how close together icons appear) and choose a color or picture as a folder background. The second option lets you set, say, a green background for folders containing important files and a blue background for folders containing documents you need to edit.

LIST VIEW But the icon view isn't always the most practical choice. You can also choose the list view, which shows a list of files and folders on alternating rows of white and light blue backgrounds. Next to each folder is a disclosure triangle. Click the triangle, and you'll see the contents of the folder without having to open it.

This view is particularly useful for sorting your files according to a specific criterion—for example,
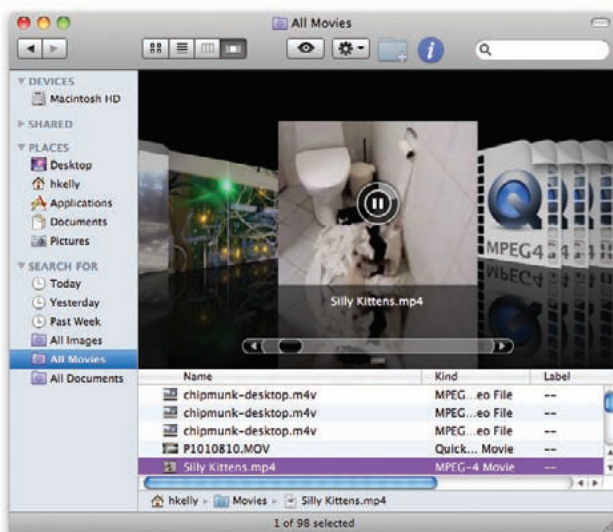
Press Play In Snow Leopard, you can preview text files, PDFs, movies, and music from within the Finder.

> **TIP**
> # Customize Finder Views
> Now that you know the Finder's view options, you can start customizing. To change the default view for all Finder windows, start by selecting File ▸ New Finder Window to open a new window. Adjust the window to look the way you want—in addition to changing the view mode, you can change the window's size and position or use the View Options window (View ▸ Show View Options) to tweak colors and alter your grid spacing if you're using the icon view.
>
> Now click the Use As Defaults button. From now on, Finder windows will open with your chosen settings. Unless you click this button, changes you make to the Finder window will apply only to the current window. This can come in handy when a certain option proves useful for only certain types of files. For instance, choose the Show Icon Preview option to make the Finder display a thumbnail of files' contents for file types it's familiar with. Since this is most useful for photos and videos—you can see their contents at a glance—you can turn previews on only for folders that contain them.

alphabetically, by date, or by file size. Say you want to see the file you've just saved to the desktop. Open a Finder window, and click the Desktop icon on the window's sidebar on the left side. After choosing the list view, click the Date Modified column header—it should default to newest-to-oldest order. If it puts the list in oldest-to-newest order, just click the header again, and the sort order will reverse. (This works for all the list view's column headers: click once to sort by that attribute; click twice to reverse the sort order.)

You can add other columns of information, such as Date Created and Comments, in the View Options window (View ▸ Show Options or ⌘-J). Under Show Columns, you'll see the different columns you can add or remove. Check the box by the information you'd like to see.

COLUMN VIEW For many people, column view is the easiest way to navigate today's large hard drives—in one open window, you can get to any spot on your hard drive with a few clicks. In this view, each column corresponds to a location on your hard drive. When you click a folder, the contents of the folder appear in the next column to the right. If you click a file or a program icon, information about that file or program appears in the next column. You can also

preview an image, flip through a PDF or text file, or play movie or audio files directly in this column, just like you can in icon and cover flow view.

To change the sort order of items in column view, use the View Options menu. Go to View ▶ Show View Options, or press ⌘-J. Now use the Arrange By pop-up menu to sort the column windows by name, date modified, date created, size, kind, or label. Unfortunately, these settings are global, so you can't have one window sorted by name and another sorted by date modified.

There are a few quick ways to change the width of columns in column view. Resize a single column by dragging the very bottom of one of the column dividers until it's the desired width. Alternatively, double-click the divider to make it the size of the longest filename automatically. You can Option-double-click to make all columns as wide as the widest column in the Finder window, but this can make the window unmanageably huge. It's usually better to resize all the columns at the same time by pressing and holding the Option key while you drag.

The Finder's Sidebar

The sidebar is the light blue list of disks, shared drives, locations, and searches that appears on the left edge of all your Finder windows (see "On the Side"). If you click an icon once in the sidebar, the item will launch (if it's an application) or open (if it's a folder, file, or device). The sidebar is handy because whenever you have a Finder window open, it's right there, saving your mouse a trip all the way down to the Dock to click a folder or application.

Items in the Finder's sidebar are arranged by category—Devices, Shared, Places, and Search For. Hide or reveal a category's items by clicking the disclosure triangle next to the category name. Click and drag any item away from the sidebar to make it disappear in a puff of smoke. If you want to rearrange items in a category, just click and drag an item up or down. You can also select Finder ▶ Preferences, click Sidebar, and then select—or deselect—items in the list there.

DEVICES Items in this category include your computer; its hard drives; any external drives you have connected; your iDisk (if you have a MobileMe account and have it mounted or use local iDisk syncing); and any CDs, DVDs, or iPods you have connected. This category may also include digital cameras, memory cards, USB drives, and so on.

Using the sidebar's Devices category, you can
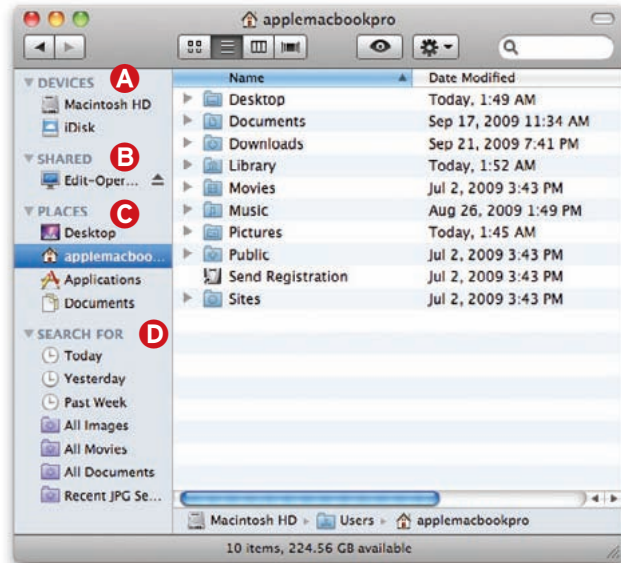
On the Side The Finder's sidebar has four sections: Devices **A**, Shared **B**, Places **C**, and Search For **D**.

quickly eject (or unmount) disks or hard drives. Control-click (or right-click) a device in the sidebar and select that option in the contextual menu. If the device you want to eject has any open files or is being used—for example, if your iPod is syncing—you'll get an error message. You can't eject your startup disk either.

SHARED This category includes other computers or storage devices on your network. Not only Macs show up here; any Windows, Linux, or Unix computers that Apple's Bonjour networking technology recognizes show up as well. Other shared items will display in this section if you use the Finder's Go ▶ Connect To Server command to connect to them. If any computers on your network are missing, you may need to relaunch the Finder: hold down the Option key, then click and hold the Finder icon in the Dock, and then choose Relaunch Finder from the menu that appears. This will update the Finder's display.

PLACES This category lets you access folders and files with a single click. By default, folders such as your Home folder (represented by the house icon with your user name next to it), Applications, Documents, and Desktop will be here. But this part of the sidebar becomes truly useful when you customize it. To add a folder or file to this section—say, for a project you're currently working on—select it and drag it to the sidebar position you want. Alternatively, select the item in the Finder, press ⌘-T, and then drag it to reposition it.

Move items around so the most important ones are at the top. You'll notice that the folders at the top

Master the Finder

Although you can access most Finder commands from the Finder menu bar, using keyboard shortcuts for common actions will save you a lot of time.

IF YOU WANT TO DO THIS…	PRESS THIS
Open a new Finder window	⌘-N
Create a new folder	⌘-Shift-N
Get more information about a selected file or folder	⌘-I
Switch to the list view	⌘-1
Switch to the icon view	⌘-2
Switch to the column view	⌘-3
Switch to the cover flow view	⌘-4
Show view options for a folder	⌘-J
Create an alias of an item	⌘-L
Move the selected item(s) to Trash	⌘-Delete
Select multiple files and folders even if they aren't next to one another	⌘-click
Select multiple files and folders that are next to one another	Shift-click
Bring up a contextual menu with additional options	Control-click
Create a copy of the item being dragged	Option-drag
Move the item being dragged from one drive to another	⌘-drag
Create an alias of the item being dragged but leave the original where it is	⌘-Option-drag
Start a search	⌘-F
Jump to your user folder	⌘-Shift-H
Jump to the Applications folder	⌘-Shift-A
Get help with the Finder	⌘-Shift-?

level of your user folder (Desktop, Documents, Music, and so on) have custom icons; other folders have plain blue icons unless you give them custom icons. That's a simple thing to do and makes spotting the folder you need much easier.

You can use one of your own images or get something from the Web. There are lots of free icons out there—from flags to logos to pictures of Apple computers—from sites such as Iconfactory, but you can use any graphic you find. Copy the image. For example, if it's on a Web page, Control-click the image and choose Copy Image from the contextual menu that appears. Select a folder in the Finder,

press ⌘-I, and then click its folder icon at the top of the Info window. Press ⌘-V to paste the image here. To remove the image, just select the folder in the Finder again, press ⌘-I, click the custom icon at the top of the window, and then press Delete.

The Finder sidebar also appears to the side of Open and Save dialog boxes, making it a great way to save files into folders you use often.

SEARCH FOR This section contains smart folders, or saved Finder searches—both the Finder's default smart folders, such as Today (files you've used today) and All Movies (all your video files), and any you've created.

This is an easy way to access, for example, all of the "hot" projects that you've given a red folder label to. Create a smart folder by selecting File ▶ New Smart Folder. Click the plus sign (+) underneath the search field, click the Kind pop-up menu, and then select Other. In the list that appears, select File Label. In the Finder window, click the red square and then Save. In the dialog box that appears, name the folder, select the Add To Sidebar option, and then click Save (for more on smart searches see the *Searching Your Mac* chapter).

The Toolbar

At the top of each Finder window is a toolbar. It's visible all the time, unless you hide it by pressing ⌘-Option-T (this also hides the sidebar). By default, the toolbar contains a number of useful buttons, as well as the search field. Click the back and forward buttons to navigate to folders you've visited recently. Click any of the four View buttons to set your Finder

Tricked-out Toolbar Your toolbar is highly customizable in Snow Leopard. To bring up this list of options, go to View ▶ Customize Toolbar.

Add the Path Bar

With all the different view options and layers of folders, it's easy to get disoriented. One solution is to enable the path bar (View ▶ Show Path Bar). Displayed on the bottom of your Finder window, the path bar is a bread-crumb trail that shows your location in your Mac's folder hierarchy Ⓐ. Once turned on, the path bar remains visible from session to session, so you can see the path at all times.

Even better, you can drag and drop an object onto any folder in the path bar, and the dropped object will be moved (if it's on the same drive) or copied (if it's on another drive) to that folder. Control-click any file or folder within this path bar and you'll get a basic contextual menu. Using this menu, you can open the selected item, its parent folder, or its Get Info window. (You can also see your current path by Control-clicking the location name at the top of the Finder window.)
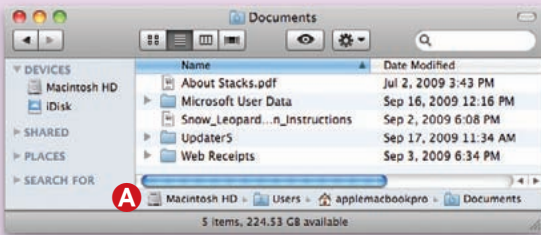
view to icon, list, column, or cover flow view. Click the Action menu (labeled with a gear icon) to quickly create a new folder, make a file alias, move something to the Trash, and more. (The Action menu is particularly useful when you want to compress a

file or folder.) Click the Quick Look button (labeled with an eye icon) to view the contents of a file, or to quickly turn a bunch of graphic files into a slideshow.

To quickly jump to another folder in your hierarchy, control-click or right-click on the window's title (called a *proxy icon*) above the toolbar. You'll get a list of parent folders.

You can customize the toolbar by choosing View ▶ Customize Toolbar (see "Tricked-out Toolbar"). There are about a dozen buttons you can add for actions you perform often, such as ejecting disks or getting information about files. But that's not all you can do to the toolbar—you can also add your favorite files, folders, or programs to it. Drag an item up to the toolbar to a position—say, to the right of the standard buttons—and then wait a second. The cursor will change to a green plus sign (+). Release the item or move it to a different location, and it will be added to the toolbar.

This is another good way to keep folders in a location that displays in all your Finder windows, or to put applications in a place where you can access them quickly. Once you've added an item to the toolbar, just click to open or launch the item; you can also drag files onto folder and application toolbar icons. If you have an application icon in the toolbar, you'll probably have to drag your files a much shorter distance to reach that icon than to reach an icon on the Dock.

You can change the size of toolbar icons, as well as whether their names display; you can even forgo icons in favor of text. Do this from the Customize Toolbar dialog box or by ⌘-clicking the button at the top right of the window. Keep clicking while holding down the ⌘ key to cycle through the six possibilities.

Get Oriented

Now that you know how the Finder works, you can use it to access your files. But where is everything? Here is a primer on OS X's file organization system.

Locate Your Files

Although you can store files almost anywhere on your Mac, OS X comes with a basic organizational scheme already in place that you'll do well to follow. If you double-click the hard-drive icon on your desktop, you'll see a window containing four folders: Applications, Library, System, and Users.

APPLICATIONS As the name implies, this is where OS X stores applications, and any application stored here is available to all users on your Mac. Apple-provided applications automatically install themselves here, as do many third-party ones, and you can choose to install other programs in this folder as well. Most applications don't have to reside in this folder to run, but it's a good idea not to move anything already installed in this folder. Occasionally, software updates depend on finding the standard programs in their default locations.

SYSTEM The inner workings of OS X reside in this folder: for instance, the default system fonts, as well as the drivers (think "extensions" if you're coming from OS 9) for things like video cards, mice, printers, and scanners. In short, you want to stay out of this

folder. Thankfully, OS X prevents you from changing items in this folder (at least accidentally).

LIBRARY The Library folder holds some special things that are available to all your Mac's users. Printer definitions reside here, as do all the standard desktop images (the ones listed in the Desktop & Screen Saver preference pane). Unlike the System folder, this folder will occasionally need to be opened. For example, if you want to install fonts that all users can share, put them in the Library folder's Fonts folder.

USERS The Mac is designed to be used by many people, each with his or her own account (see the *User Accounts* chapter). OS X keeps your things private by tucking them into your own space inside the Users folder. If you open the Users folder, you'll see a folder for each user account you've created. Your own user folder is marked with a special icon that looks like a house and the name you've given it. This is the folder OS X has reserved for your files (among other things, as you'll see). It's known as your Home folder or your user folder.

Get to Know Your User Folder

Inside your user folder is a collection of subfolders, each with a custom icon that makes it easy to identify (see "Your User Folder"). Apple created these folders to provide users with an easy-to-understand system
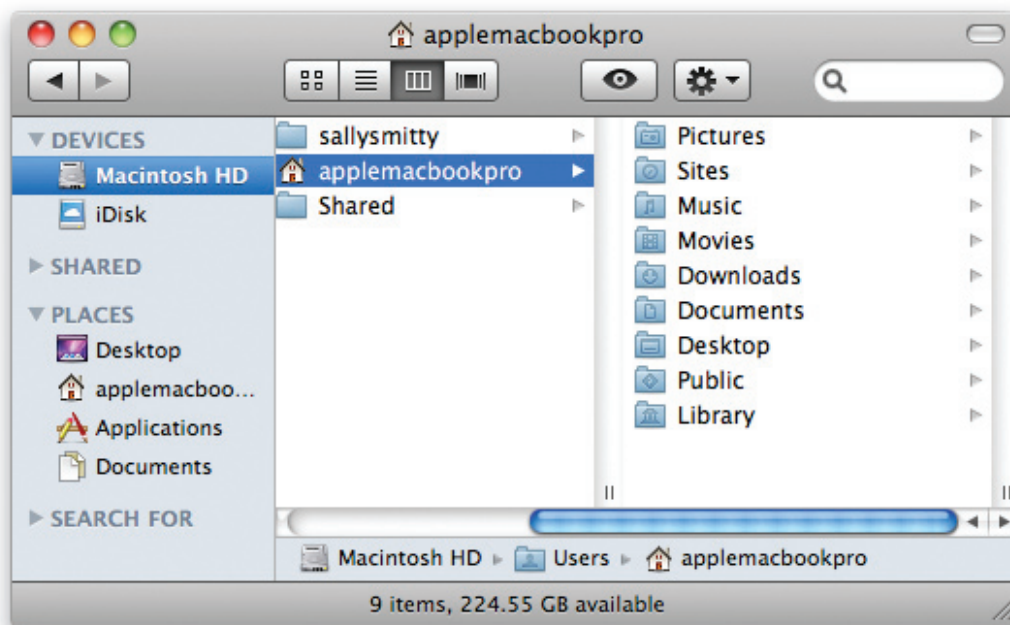
Your User Folder Inside your folder, you'll find these nine already-created folders that keep your system organized.

for keeping track of their files. These are the folders you'll be frequenting the most on a daily basis.

You don't have to use OS X's preset folders. You can create new folders inside any existing folders or on your desktop. But there is one important rule to keep in mind in here: do not rename or delete any of the existing folders in your user folder. If you do, you may run into trouble later, as many programs assume that these folders exist with their current names.

DOCUMENTS, MOVIES, MUSIC, PICTURES These folders are fairly self-explanatory. Feel free to store your files in them. Programs place files in these folders, too—iTunes uses the Music folder; many programs write files to the Documents folder; iMovie and iDVD use the Movies folder; and Photo Booth and iPhoto store their images in the Pictures folder.

LIBRARY This folder stores application and system files specific to your user account. This is where OS X keeps all of your applications' preferences, support files needed by applications, and so on.

SITES The Sites folder holds files related to OS X's built-in Web server.

PUBLIC You can use the Public folder to share your files with other users on your Mac—anything you place in that folder will be visible to other users, and they'll be able to copy items from it. Other users can give you a file by placing it in the Drop Box folder inside the Public folder.

DESKTOP As the name implies, this folder holds any objects that you place on your desktop. If you use the Finder to create a new folder in your Desktop folder, it will immediately appear on your desktop.

DOWNLOADS This folder helps keep your desktop clean by acting as the default destination for all downloaded files. It is conveniently represented by a stack on your Dock (see *The Dock* chapter). Simply click the stack once to see all recently downloaded songs, documents, and programs.

Delete Files

OS X gives you a number of ways to delete files. You can drag the item to the Trash icon on the far right side of your Dock. You can select an item (by clicking its icon once) and then press ⌘-Delete. You can also Control-click an item and select Move To Trash.

Whenever you use one of these methods, your file goes into OS X's Trash. But it doesn't disappear for good. Instead, it waits there until you empty the Trash. You can see what's in your Trash at any time by clicking the Trash's Dock icon. Need to open a file to make sure

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TIP

Use the Contextual Menu

One way to interact with items in the Finder is by using contextual menus, which pop up when you Control-click (or right-click, with a two-button mouse) an item. What you see in a contextual menu depends on the properties of the item you selected. When you Control-click a folder, you see one set of options; when you Control-click an application, you see another. Often, these menus offer the quickest way to do something—for instance, adding a color label to an object or making a quick duplicate of a file.

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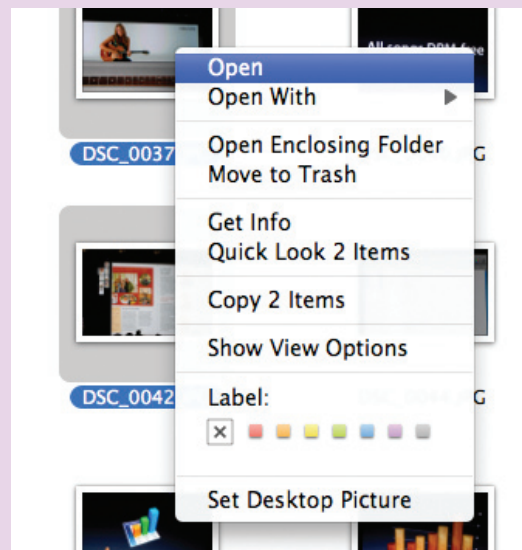
you really want to throw it out? Drag it to an appropriate application on the Dock to open it. You can also click the Quick Look button (the eye icon) for a preview.

You can change your mind and fish files out of the Trash—until you select Finder ▶ Empty Trash (or Control-click the Trash icon in the Dock and choose Empty Trash from the contextual menu). When you do that, everything in the Trash is permanently deleted.

If you throw away some really top-secret stuff, like your "How to Beat Google" business-plan draft, you'll want to empty the Trash in a special way—select Finder ▶ Secure Empty Trash. When you do, OS X writes meaningless data over the space on the drive that the files occupied. This ensures that no one, not even someone with special recovery tools, can retrieve your files.

Easy Finder Tricks

There are many more ways to work with your files using the Finder. You can create shortcuts, get more information, and get a full-sized preview.

Create Shortcuts for Your Files

OS X gives you multiple ways to quickly access your files, folders, and applications and keep your system organized without being cluttered. Here are your shortcut options.

ADD TO THE DOCK You can add a shortcut for a file, folder, or application by dragging an item to the Dock and holding it there for a moment. A space will open up and you can let go of the item. That shortcut will be there until you delete it. For more on the Dock, *The Dock* chapter.

USE THE SIDEBAR The Places section of Finder's sidebar is a collection of quick links to the folders Apple assumes you'll use most. To add an item, drag it to this section of the sidebar, wait for the blue line to appear, and then release the mouse.

If you run the same searches frequently, you can save them in the Search For section of the sidebar. After you create a search in the Finder (see the *Searching Your Mac* chapter), click the Save button, and you'll see an Add To Sidebar option. You can also remove or rearrange searches within the sidebar by clicking and dragging.

There are a couple of ways to customize the sidebar and fill it with the shortcuts you want. To add or remove files, folders, or applications, you can use the Finder's Sidebar preference pane. Select Finder ▶ Preferences, and then click Sidebar (see "Sidebar Preferences"). Here you can specify which items show up in the sidebar. Alternatively, just drag items into or out of the area. Note that you can add drives only to the Devices section, and you can add applications, folders, and files only to the Places section.

CREATE ALIASES If you want to store a shortcut somewhere other than in the Dock or in the sidebar, you can create an alias. An alias is a small file that points to something on your Mac (it's similar, but not identical, to a Windows shortcut). Double-clicking an alias does the same thing as double-clicking the original item—folders and documents open, and applications launch. Use aliases to get easy access to

files and applications while keeping the originals in one place (applications in the Applications folder and documents in your Documents folder, for example).

To create an alias, simply select the file you'd like an alias of, and then select File ▶ Make Alias (or press ⌘-L). You can also create an alias by holding down the ⌘ and Option keys and then dragging a file to a new location—a small arrow in the corner of the drag icon indicates that you'll create a new alias when you release the mouse. Every alias icon has a small arrow at its bottom left. If you no longer need the alias, delete it. The original file or folder won't be harmed, since the alias is just a pointer to the original.

As you use your Mac, you'll begin to see how incredibly useful aliases can be. Say you want to keep your favorite recipes together in one spot, but you also like to keep your large recipe collection organized in folders by both year and style of food. You could create a new folder called **Favorite Recipes** and copy your favorites into it, but that would take more disk space—and if you ever edited the original recipe, your copy wouldn't reflect those edits. Instead, create a new folder and then put
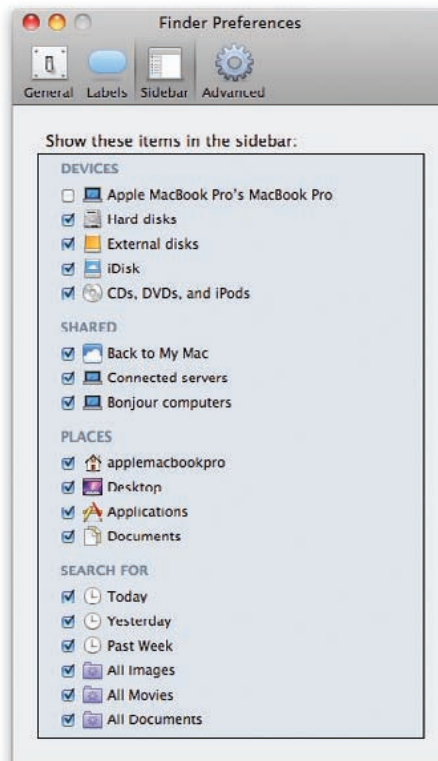
Sidebar Preferences Customize the shortcuts on your Finder sidebar by going to Finder ▶ Preferences and clicking the Sidebar tab.

aliases of your favorite recipes in it. Aliases take up almost no space, and you don't have to worry about having multiple versions of the same file.

Learn More About a File

There may be times when you want to know more about a file than its name, size, and modification date. In those cases, pull up an instant dossier by selecting the file and choosing File ▶ Get Info or pressing ⌘-I. From the Finder, you can also click the blue circle *i* icon in the toolbar.

The Info window that appears shows information about the file you selected, including the date it was created, when it was last modified, its location on your hard drive, the color label it's marked with, the application it opens in by default, the language files it may support (for applications), and who has permission to open it. It even provides a preview when appropriate.

Take a Peek with Quick Look

Quick Look allows you to immediately preview a file. Although it's actually systemwide—available in Mail, Spotlight's results window, and Time Machine—you'll end up using it most often in the Finder.

Quick Look lets you view a file without going to the

trouble of opening it in its related application. Instead, click the file once and press the spacebar (or Control-click the file and select Quick Look from the contextual menu). A new window will open and display the file's contents. This window is scrollable (for multiple-page documents), resizable, and movable. The double-arrow icon at the bottom of the screen switches the view to full-screen mode. If you're viewing an image, a camera icon lets you add the file to your iPhoto library (see "Take a Peek").

Better yet, you have full Finder control in this window and can use all the normal Finder menus and keyboard shortcuts. For instance, if you decide you'd like to open a document after checking it out in Quick Look, just press ⌘-O. To close the Quick Look window, press the spacebar again.

You can use Quick Look with nearly any kind of file. Text files, movies, Adobe Photoshop images, PDFs, Microsoft Office 2004 documents, image files, and even MP3s all show (and in the case of movies and audio files, play) in the Quick Look window. If you use a third-party program with a proprietary file format, however, you may not be able to use Quick Look on its files—at least not until its developer updates it to provide a Quick Look preview.
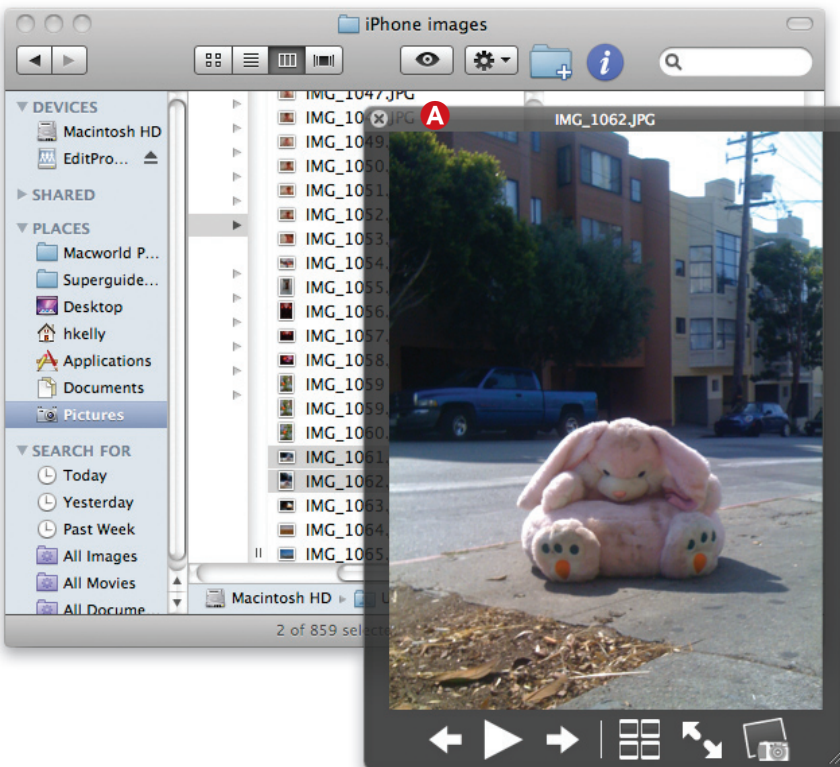
Take a Peek To quickly see a large version of an image, document, video, or PDF without launching an extra program, select it in the Finder and press the spacebar, or click the eye icon **A**.

The Dock

Access Important Files and Commands with the Click of a Mouse

Start up your Mac, and you'll see a thin, reflective shelf filled with icons at the bottom of your screen. (If you come from the world of Windows, you'll notice a resemblance to the taskbar you left behind.) This indispensable collection of shortcuts is called the Dock. You can use the Dock to quickly launch and switch between applications, see at a glance which applications are open and which open files are minimized, or access frequently used folders and files. But like most OS X features, it has many other tricks up its sleeve.

Deploy the Dock

The OS X Dock is your one-stop shop for opening and switching between programs, managing window clutter, and accessing important files. By default, the Dock sits at the very bottom of your screen, unless you've moved it or hidden it (see the "Customize the Dock" section later in this chapter for suggestions).

The Dock displays applications on the left side and minimized windows, stacks, and your Trash on the right (see "Meet the Dock"). Here's how to put the Dock's powers to work.

Add Programs to the Dock

You don't need to root around in your Applications folder every time you want to open a frequently used program. By putting those applications in the Dock, you can get to each with just one click.

The Dock comes prestocked with programs that Apple considers to be the most important. The Finder (represented by a blue face) is to the far left. You'll also see Mail, Safari, iChat, iTunes, System Preferences, and others. But you're not restricted to these.

Whenever you launch a program, its icon gets added to the Dock. When you next quit the program, that icon will vanish—unless you add it permanently. If you want a running program's icon to remain in the Dock even when it's not running, click and hold the program's Dock icon and select Options ▶ Keep In Dock from the pop-up menu.

To add an icon for a closed application to the Dock, open your Applications folder and drag the program's icon to any spot to the left of the Dock's divider bar. The existing Dock icons will shuffle out of the way to make room for the newcomer. When the icon is where you'd like it to reside, release the mouse button. Items added in this manner will remain in your Dock whether or not the program is running. You can move an icon at any time by dragging it to

another spot on the Dock. Note that if you move a running application to another spot on the Dock, it will become a permanent addition to the Dock without the need to use a menu.

Open, Close, and Control Programs

Once you've filled the Dock with your preferred applications, you can use it to execute basic commands like Open, Close, Force Quit, and more.

LAUNCHING APPLICATIONS Click once on any application's icon in the Dock, and the application will bounce once and then launch. (When an icon bounces multiple times it means a program needs your attention.) If you're not sure which application an icon represents, hover your cursor over the icon, and the application's name will appear above it.

The Dock can come in handy when you want to open a file in an application other than its default application. For instance, if you want to open an image in Photoshop instead of Preview, drag the file onto Photoshop's icon in the Dock and let go. However, if the application you've dragged the file onto doesn't recognize it (say, an image dragged onto Quicken by mistake), the file won't open.

A white dot with a blue halo appears underneath an application icon to indicate that the program is currently running. You can quickly switch between open applications by clicking on their icons in the Dock (to learn more about switching applications, see the *Working with Files* chapter).

CLOSING APPLICATIONS You can also use the Dock to close any program quickly. When you click and hold (the slow way) or control-click (the fast way) on any icon in the Dock, you'll open a contextual menu. If the program is running, you'll see the option to quit. When an application freezes, the contextual menu will also offer you an option to force-quit that program. (If you don't see it, Option-Control-click to manually access it.)

Meet the Dock The Dock gives you one-click access to applications such as iTunes Ⓐ, folders Ⓑ, and files. Keep track of which programs are running by looking for the white dots under icons Ⓒ. You can switch between active programs by clicking on their Dock icons. Drag files you no longer need to the Trash Ⓓ.

Quick E-mail Attachments via the Dock

Need to attach a file or picture to an e-mail message? The Dock can save you a couple of steps. Rather than switching to your e-mail program, opening a new message, and then searching for the attachment, simply drag the file from a Finder window onto the e-mail program's icon in the Dock. The program will open and begin a new mail message with the file already attached.

ACCESSING OTHER FEATURES In addition to the basic Open and Quit options, many programs offer other useful shortcuts, such as program-specific commands or a way to switch between open files, when you Control- or right-click their Dock icon.

For instance, when iTunes is running, its contextual menu lets you play, pause, and advance your music as well as rate songs. The contextual menu for Mail lets you retrieve your e-mail messages and start a new message or note (see "Look Inside"). In Word's menu, you can quickly switch between open documents. If you want to see where an item is stored, choose Options ▸ Show In Finder from the contextual menu and a Finder window will appear with the item highlighted.

Managing Windows with the Dock

If you have several different windows open for a single application (for example, if you've opened multiple Safari Windows), as well as windows for other programs, things can get a bit cluttered. The Dock can help here, too.

Click and hold on a Dock's icon and you'll immediately see all open windows for just that program. Choose the window you want, and everything else will slide back into place. This step is the same as accessing OS X's Exposé mode.

Use the Dock as Temporary Storage

If you don't want to quit a program but you'd like to hide one of its windows for a bit, you can use the Dock as a temporary holding space. For instance, you might have a document you need to refer to, but

you don't want it to clutter up your screen while you write something else. Or perhaps you have an open Web page showing live scores from a sports event— you want to occasionally see how your favorite team is doing, but you don't want the page hogging your entire screen.

In these cases, you can minimize the current window by clicking on the yellow button at the top left of the window, by double-clicking on its title bar, or by pressing ⌘-M. When you do, you'll see the window shrink down and appear on the right side of the Dock. To get the window back, just click it in the Dock.

If you don't like filling your Dock with lots of little windows, Snow Leopard also offers another option. You can now store minimized windows within the program's Dock icon. To change the fate of minimized windows, visit the Dock pane in System Preferences and turn on the Minimize Windows Into Application Icon option. Now, when you minimize an open window, it'll fly down to the Dock and disappear into the icon of its associated application. To get it back, you simply click and hold the application's icon in the Dock. The screen will dim, and you'll see all open windows for that program in Exposé mode; minimized windows appear as smaller icons toward the bottom of the screen. Click a minimized window to bring it out of the Dock.

Look Inside When you right-click the Dock's Mail icon, you'll get options to compose a new message as well as quick access to all open Mail windows.

Two Ways to Access Windows In Snow Leopard there are a couple of ways to access minimized windows quickly. When you click and hold an icon in the Dock, Exposé displays all open windows for that application (left). Minimized windows appear as smaller icons at the bottom of the screen Ⓐ. Alternatively, you can Control-click (right-click) the app's icon in the Dock (right); a diamond appears next to the names of minimized windows Ⓑ.

If you don't want to switch to Exposé, Control-click (or right-click) the application in the Dock and choose the window from a list. Minimized windows appear with a diamond next to their name (see "Two Ways to Access Windows").

Storing Files and Folders in the Dock

If you regularly need fast access to certain documents or files, you can place them on the Dock, too. First, drag a folder or file from the Finder to the right side of the Dock's divider bar, and then drop it into position. This is a great way to keep files for active projects close at hand. You can even store dynamically updated smart folders here (see the *Searching Your Mac* chapter).

PICK YOUR VIEW Snow Leopard gives you several ways of navigating through folders stashed in the Dock. When you click a folder, you'll get what is known as a *stack*—a visual representation of the folder's contents. Once you've clicked on a stack to open it, you can use the keyboard to navigate through it. To select a particular file, type the first couple of letters of its name. You can also move through a stack with your arrow and Tab keys.

There are three ways to view items in a stack: fan, grid, and list (see "Three Ways to Stack"). Fan view shows your files as a curving column of icons. This is a good option if the folder contains just a few items, or if your head tilts naturally to the right. If you have many items, a better option is the grid view, which gives you a pop-up window filled with icons. This option works particularly well with a folder of images, as the icon will show a preview.

If the grid gets too crowded, the list view is your best bet. It gives a neat, navigable column of all the file names and folders in that stack. You can even drill down into a stack's contents in list view by hovering your mouse over subfolders. By the way, you can drill down through stacks in grid view as well. Click a folder icon to switch the view to that folder.

To switch between these views, Control-click the stack's Dock icon and choose Fan, Grid, or List from the View Content As section. You can also control the sort order, selecting from Name, Date Added, Date Modified, Date Created, and Kind. For instance, you can make your Downloads stack a list sorted by date added but your Projects stack a grid sorted by name. You also have the option of viewing your stack as a folder or as an icon, which shows the icon of the most recent item in the stack.

OPEN MULTIPLE FILES If you want to open more than one item in a stack, just hold down the Option key; each time you click an item, it will open in the Finder while the stack remains open. If the Finder isn't the frontmost application, the windows will open in the background.

SHOW A STACK IN THE FINDER If you click and hold a stack, you can choose the Open In Finder command from the contextual menu to see all of the contents in one Finder window. To instead jump one level up—exposing the folder containing the stack items—hold down the ⌘ key as you click the stack.

Trash It

The Dock is also home to the Trash, which you use

Three Ways to Stack The items in a stack can be viewed as a fan **Ⓐ**, which is good for short stacks; grid **Ⓑ**, which shows neatly arranged icons; and list **Ⓒ**, which is the most functional and best for large stacks.

to delete things from your Mac. Click a file (or group of files) to select it, and drag it onto the Trash icon on the Dock's far right side. You can click this icon to see what's in the Trash. While you can't open files in the Trash, you can hit the spacebar and bring up Quick Look to view them. You empty the Trash by Control-clicking on its icon and selecting Empty Trash from the contextual menu. Once you do that, the files are gone for good.

The Trash icon has some non-trash functions as well. Once you're done listening to a CD or watching a DVD, drag its icon to the Trash. When you do, the Trash icon transforms into an Eject icon. Drop the disc icon on it, and the disc will pop out of your Mac. You can also unmount an iPod, a media card, a digital camera, or an external hard drive by dragging its icon to the Trash.

Remove Items from the Dock

If you use the default Dock programs all the time, having them there already is great. But if you don't,

they're taking up valuable space. You have two ways to get rid of unwanted items in your Dock.

The fun method is to click and hold the icon you'd like to remove, and then drag it off the Dock. When you release the mouse button, the icon vanishes in a puff of smoke. (The icons you see in the Dock are just pointers to the original items. So don't worry: removing an icon from your Dock does not remove it from your system.)

Try this trick with a running application (one with a glowing white dot below its icon), and you might think the method doesn't work—when you drop the icon off the Dock, the icon bounces back into its spot. But really, it did work. When you quit that program, its Dock icon will vanish.

You can also remove an item from the Dock by Control-clicking on the icon and selecting Remove From Dock in the contextual menu. Again, if the program is running, its icon will remain until you quit it. Other items vanish as soon as you select Remove From Dock.

Customize the Dock

The Dock, like most other OS X features, is open to change. In addition to choosing what applications and files you'd like to appear on it, you have a few other ways to personalize your Dock and make it fit the way you like to work.

Change the Size

Whether your eyesight demands larger icons or your limited screen space demands smaller ones, you do have some control over the Dock's size. To resize it, position your cursor directly over its divider bar. The cursor will change into a horizontal bar with arrows pointing up and down—this is the Dock-resizing cursor. Now click and drag—up to make the Dock bigger or down to make it smaller. (Press and hold the Option key while you do this, and the Dock will stick to one of several preset sizes that make your icons appear as sharp as possible.)

You can also do this via the Dock preference pane. Click the System Preferences icon in the Dock (it looks like three gears), and select the Dock button from the Personal section of the System Preferences window. Adjust the Size slider to your preferred size.

Set Magnification

When you pass your cursor over the Dock, the icon you're pointing at becomes bigger. If you've made your Dock tiny, you might find that this magnification is helpful, but it can be a distracting effect.

To disable it, click the Apple menu in the top left corner of your screen and choose Dock ▶ Turn Magnification Off. You can also disable it by opening the Dock preference pane and deselecting Magnification.

If you want to keep the magnification effect but just tone it down a little, open up your Dock preference pane again, and adjust the Magnification slider accordingly by moving it to the left.

Move the Dock

You can move the Dock to the left or right side of the screen. You'll find these options by going to the Apple menu and selecting Dock or by opening the Dock preference pane. You can also Control-click the Dock's divider bar, choose Position On Screen in the contextual menu, and then select the side you want. Note that when you move the Dock to one side, the

3-D shelf view goes away and you'll see the 2-D version instead.

Hide the Dock

By default, the Dock is always visible, but if you'd rather not see it until you need it, hide it. The Dock will pop into view whenever you hover your cursor at the bottom of your screen.

To hide your Dock, click the Apple or contextual Dock menu and choose Dock ▶ Turn Hiding On. You can also go to the Dock preference pane and select the Automatically Hide And Show The Dock option.

Master Minimizing

You can also customize how windows are minimized from the Dock preferences window. You can use the neat-looking Genie Effect (default), which makes it look like a window is being sucked into the Dock, or the faster Scale Effect, which just shrinks the window.

The Dock's Secret Menu

You can change many of the Dock's basic behaviors—including magnification, placement, icon size, and more—without ever leaving the Dock. To get to these settings simply Control-click the Dock's divider bar (the white, dashed bar separating application icons from files, windows, and the Trash). A contextual menu will offer a number of useful commands for controlling the Dock, including quick access to your Dock preferences (see "Quick Fix").
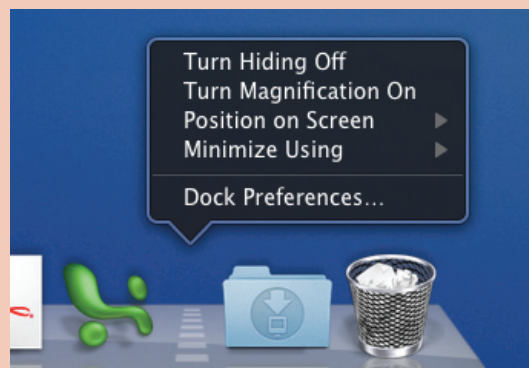
Quick Fix Control-click the bar that divides the Dock to reveal a superhandy, semisecret menu.

System Preferences

Customize Your Mac and Alter Important System Settings

No two Mac users are exactly alike. Thankfully, Mac OS X offers countless ways to customize your Mac's settings so they better reflect your personal tastes (including the colors you see and the sounds your Mac makes), and your setup's specifics (such as your network settings and security preferences).

These settings are easy to access. OS X stores them in a single program—the System Preferences utility. For people familiar with Windows, System Preferences is like the Control Panels item in the Start menu. It's your one-stop shop for everything from selecting a screensaver to controlling outside access to your Mac's files.

Working with Preferences

The System Preferences utility resides in your Applications folder. However, there are a couple of ways to access it more quickly. You can select System Preferences from the drop-down Apple menu or simply click the System Preferences icon in the Dock (it looks like a group of gears). Here are the basics on finding your way around System Preferences.

Access Your Preferences

Within the System Preferences window, you'll see rows of icons divided into general categories. Each of these icons represents a preference pane that provides access to a specific group of related settings—Appearance, Displays, Accounts, and so on. When people talk about the Sound preferences, for instance, they're referring to the preference pane that appears when you click the Sound icon in the System Preferences window (see "Sound Off").

When you click a preference pane's icon, the System Preferences window displays that pane's settings. In the Appearance pane, for example, are options for changing OS X's accent color, text-highlight color, scroll-arrow position, and more. Some panes include more than one screen. For example, if you click the Desktop & Screen Saver icon, the result-

ing screen will feature two tabs at the top—one for Desktop preferences and another for Screen Saver preferences.

After you've chosen your settings, click Apply (if required), and then the Show All button at the top of the window to return to the full list of preference panes.

To locate a specific preference fast, you can do a Spotlight search of all available system preferences. Press ⌘-F and type in a keyword—the System Preferences window will go dark and a glowing circle will appear around any matching results. You can also jump directly to a particular group of settings by choosing the preference pane's name from the View menu.

Note that not all Macs include the same system preferences. The System Preferences utility displays only the panes that work with your Mac's hardware. For example, if your Mac doesn't have a trackpad, the Trackpad pane won't appear. Likewise, if you don't have a drawing tablet connected, the Ink pane will not show up.

If you're looking for preferences for specific programs—such as Safari or iPhoto—you'll find those within the program itself. Open the application, click its name in the menu bar, and then select Preferenc-
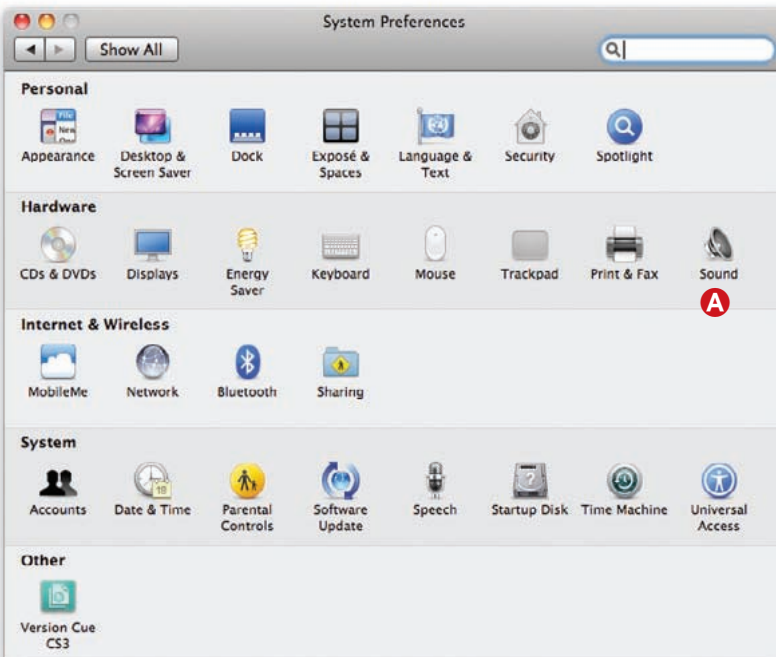
Sound Off Each icon in the System Preferences window (left) represents a preference pane that contains a group of related settings. For example, clicking the Sound icon **A** opens the Sound preference pane (bottom), which contains Input, Output, and Sound Effects tabs **B**. Click the tabs to switch between groups of sound settings.
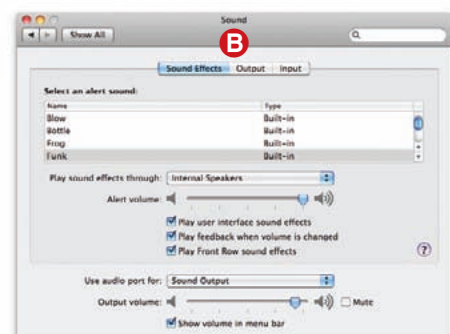
Find That Setting

If you're not sure where a particular setting is located, use the Spotlight search bar at the top of the System Preferences window. For example, to find the settings that affect how text is displayed, simply type **text** in the search bar. You'll be presented with a list of possible settings, including Enlarge Display Text, Font Smoothing, and Highlight Color. Click the desired setting, and System Preferences will highlight the pane that contains that setting and then open the pane for you.

You can also use the up and down arrow keys to see which pane corresponds to which setting in the list, without switching to the pane.

es. You can also usually access a program's preferences by pressing ⌘-comma (,).

Keep in mind that the Finder, although always running, is also a program, and you access its preferences in the same way. The Finder's preferences include settings for which items appear in the sidebar, whether or not filename extensions are visible, and whether or not your hard drive and discs show up on your desktop (for more on using the Finder, see *The Finder* chapter).

Customize Your Interface

By default, System Preferences groups preference panes into categories: Personal, Hardware, Internet & Wireless, System, and Other. Each section contains a group of related preferences. The Personal section, for example, includes settings for your account, while the Hardware section's preference panes let you customize how your Mac's hardware and attached

devices function. If you don't like having your panes organized by category, you can have them listed alphabetically instead—go to the View menu and select Organize Alphabetically (see "A Different View").

Install Additional Preferences

Because each preference pane is actually a discrete piece of software, third-party developers can create their own panes. For example, some mice come with preference panes that give you access to special features and setup options that aren't built into OS X. When third-party preference panes are installed, they appear in the Other category at the bottom of the System Preferences window.

Many third-party preference panes use an installer program that puts everything in the right places. Others are downloaded as a .zip archive or .dmg disk image to your Downloads folder, leaving you with a file called *Name*.prefPane. If this happens, simply double-click the .prefPane file, and OS X will install it for you.

When you're installing a third-party preference pane, OS X will probably ask you whether you want the pane to be accessible to all users or just to your own account. If you give all users access, the preference pane will be installed in the /Library/ PreferencePanes folder at the root level of your hard drive. If you restrict access to your user account, the pane will be installed in the Library/PreferencePanes folder in your Home folder.

Delete Preference Panes

Although you can't easily delete the preference panes that come preinstalled on your Mac, deleting third-party panes from the Other section is a simple task. To do so, Control-click (or right-click) the pane's

A Different View If you find the category groupings unhelpful, you can choose to have the preference panes listed alphabetically.

25
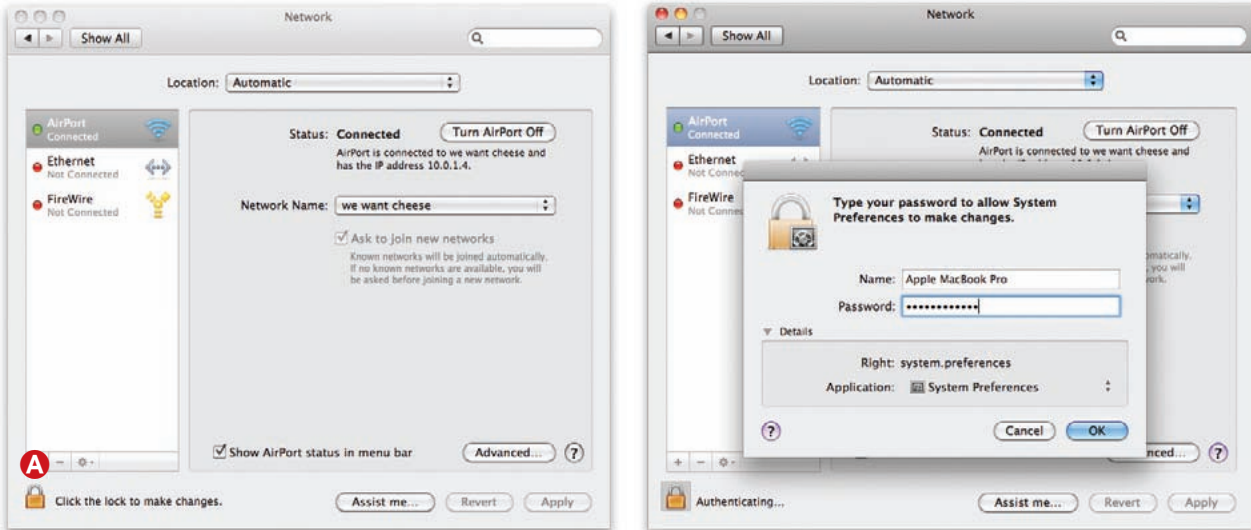
Lockdown Click the lock icon **A** to prevent users without administrative powers from changing the settings.

icon in the System Preferences window and choose Remove "Name" Preference Pane from the contextual menu. OS X will then move the corresponding .prefPane file from the PreferencePanes folder to the Trash. However, this won't remove any support files that the preference pane's installer may have installed on your system. To make sure you're getting all the files related to a preference pane, check the pane's installer (if it came with one) for an Uninstall option, and use that option if it's available.

After uninstalling a preference pane, you may need to restart your Mac or log out of your account for the change to take effect. This is because some preference panes include applications that run invisibly to do their work.

Secure Important Settings
Some preference panes—for example, those that contain important system-level settings—are locked by default to prevent unauthorized users from mak-

ing changes. These panes, which Apple calls secure preferences, include a small padlock icon at the bottom of the window.

To unlock a locked pane, a user must click the lock icon and then provide an administrative user name and password (see "Lockdown"). Clicking an unlocked padlock icon locks the pane. If you like, you can extend this security to all of your preferences. Go to the General tab in the Security pane and select the Require Password To Unlock Each System Preferences Pane option.

Troubleshoot Misbehaving Preferences
If preference panes go missing or appear in duplicate, or if the System Preferences program crashes repeatedly, follow these steps: Quit System Preferences (if it's open), open your user folder, and navigate to the /Library/Caches folder. Delete the com.apple .preferencepanes.cache file. The next time you launch System Preferences, it should work normally.

Customize Your System

Many preference panes are easy to navigate and figure out. Others you'll rarely if ever need to meddle with. Here are a few of the more helpful systemwide preferences you can customize and how to make them work best for you.

Keyboard

The Keyboard preferences pane has two tabs, Keyboard and Keyboard Shortcuts. In both panes there's a button at the bottom called Set Up Bluetooth Keyboard that will activate the Bluetooth Setup Assistant. If you have Apple's Bluetooth keyboard, each pane also includes the respective battery-level indicator. (To set up a Bluetooth Mouse, go to the Mouse preference pane.)

In the Keyboard tab there are general options for how your keyboard functions, including a button to change your modifier keys (Control, Tab, and so on).

In the Keyboard Shortcuts pane, you can enable and disable services—handy scripts that automate tedious tasks—and set up keyboard shortcuts. Shortcuts are grouped by category (Dashboard & Dock, Screen Shots, Universal Access, and so on) on the left; select a category and the relevant shortcuts are displayed to the right. You can also temporarily disable individual shortcuts by unchecking the boxes by each one.

The Services tab allows you to assign keyboard shortcuts to individual services and specify which services appear in the Services menu. For more information on how to use Services, see the *Working with Files* chapter.

Language & Text

Previously known as the International pane, the Keyboard & Mouse preference pane has four tabs: Language, Text, Formats, and Input Sources. The tab we're most interested in is the Text tab. This is where you go to set symbol and text substitutions.

Substitutions will automatically replace one text string with another as you type. For example, if you type (c) it will automatically become © in certain programs, including Pages, TextEdit, and iChat. Substitutions is similar to Office's AutoCorrect feature and utilities such as TextExpander (macworld.com/1672). Some programs require you to turn on Substitutions

from within that application. For most programs, you can do this by selecting Edit ▶ Substitutions, and then selecting Text Replacements from the submenu.

In addition to turning on or off existing text substitutions, you can add your own custom substitutions from the Text pane by clicking the plus sign icon below the list. When you're adding your own substi-

Sought-After Settings

Not sure where to start? Here's where to find some of the most popular system settings.

IF YOU NEED TO DO THIS...	GO TO THIS PAGE
Change your desktop background	Desktop & Screen Saver
Turn off the menu bar's translucent effect	Desktop & Screen Saver
Have your Mac go to sleep after a period of inactivity	Energy Saver
Configure your keyboard modifier keys or set up keyboard shortcuts	Keyboard
Set up right-clicking a multibutton mouse	Mouse
Configure your network settings	Network
Set up your printer	Print & Fax
Set up a MobileMe account	MobileMe
Turn on OS X's firewall	Security
Share files with other computers	Sharing
Change your user password	Accounts
Choose items to launch automatically when you log in	Accounts
Limit which programs other users can access	Parental Controls
Set the time and customize the menu-bar clock	Date & Time
Set how often OS X checks for updates	Software Update
Enable assistive features for people with special needs	Universal Access

Use a Photo Album as Your Screensaver

Want to turn your monitor into a digital picture frame when you're not working? You can set OS X to use the photos in an iPhoto album or just a regular folder as a screensaver. If you regularly use iPhoto's rating system to mark your favorite photos, you can really put this feature to work by setting up a smart album that looks for photos rated four stars or higher. Then use that smart album as your screensaver.

Step 1 Open System Preferences and select the Desktop & Screen Saver preference pane. Click the Screen Saver tab Ⓐ. Expand the Pictures item on the left and then scroll through the list until you find the iPhoto album you'd like to use Ⓑ. Use the Start Screen Saver slider Ⓒ to set how much time must elapse before the screensaver jumps into motion.

Step 2 Click a Display Style button Ⓓ to choose whether you see a traditional slideshow, a collage, or a fancy mosaic. Then click the Options button to set screensaver options Ⓔ, such as whether the images are randomly ordered or remain static or appear to move on screen. When you're done, click Test Ⓕ to see your new screensaver in action.
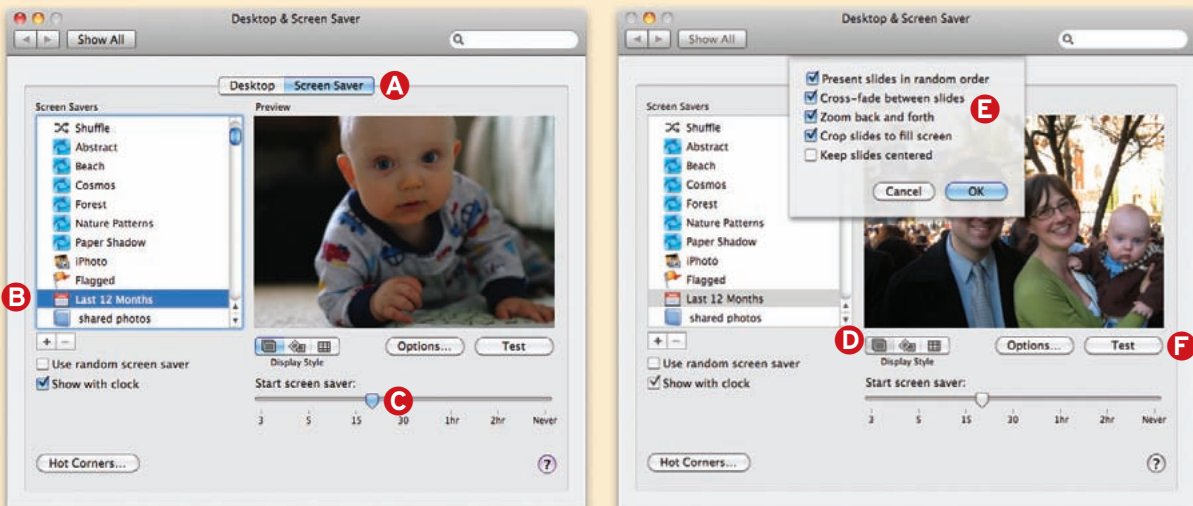
tutions, you can paste text from the Clipboard (⌘-P) instead of typing it. Pressing Option-Return instead of just Return inserts a line break in the substitution text.

Universal Access

The Universal Access preference pane is where you control the host of features Apple has included to make using a Mac easier for people with physical disabilities, such as hearing problems and impaired vision. For example, you can change the size and contrast of a system's display text, or convert stereo audio to mono audio in both channels for people who hear better through a single ear.

One of the most advanced features is VoiceOver, a screen reader that narrates whatever is on your Mac's screen. You control VoiceOver with the keyboard and gestures. When you first turn on VoiceOver in the Seeing pane, you will be prompted through a Quick Start tutorial. Featuring large text and narration, the tutorial shows you the basics of using VoiceOver commands and navigating the Mac with the keyboard and gestures. You can open the VoiceOver Utility from this tab of the Universal Access Pane and customize its settings. You can choose High, Medium, or Low verbosity levels, or dig in and customize 30 separate settings. You can additionally cut down on complex key combinations by assigning keys and gestures to launch an application, run an AppleScript or Automator action, or activate a VoiceOver command.
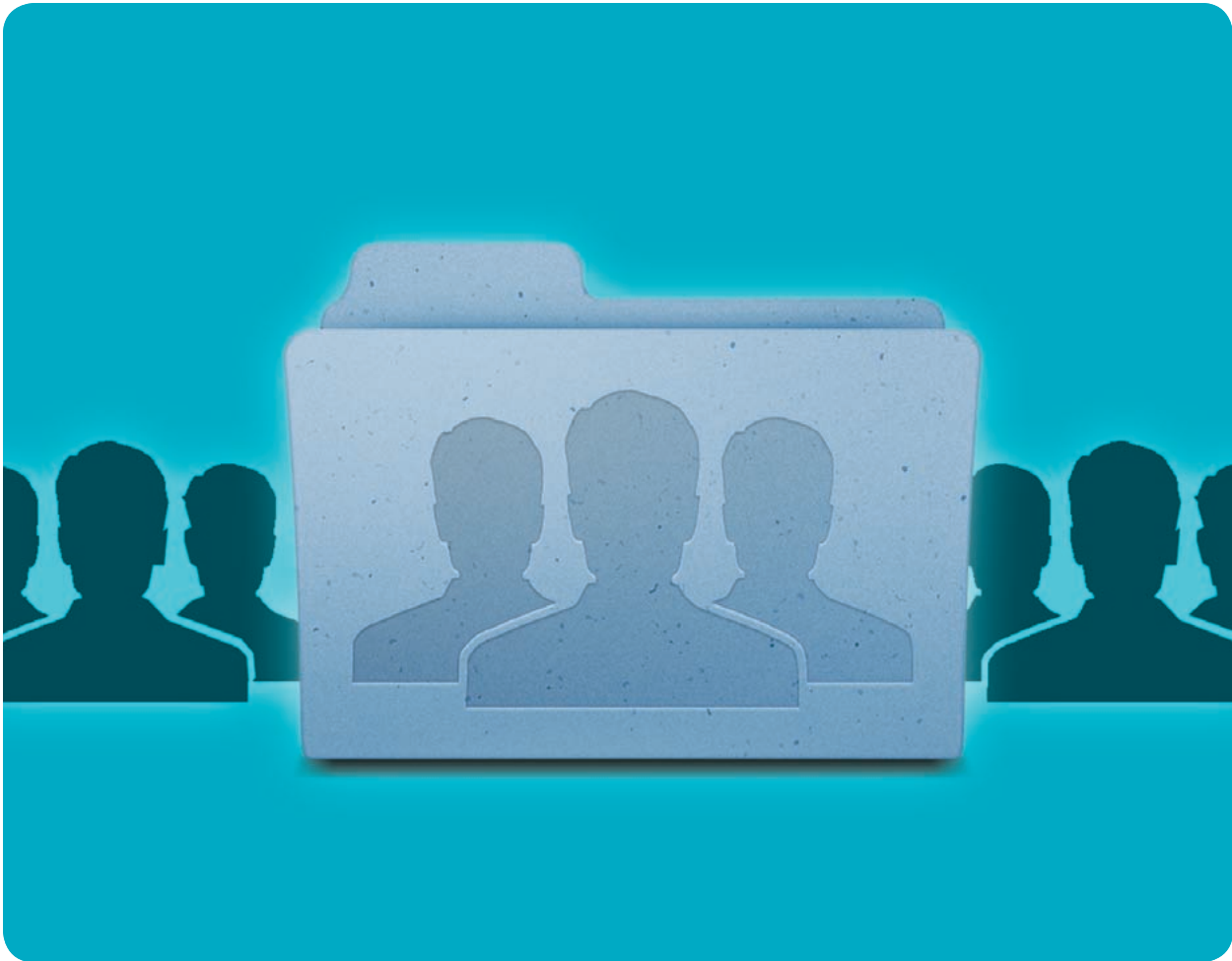
User Accounts

Protect Personal Files and Settings on a Shared Mac

Mac OS X lets you create separate identities—known as user accounts—on your Mac. User accounts are great for a group of people who want to work on the same computer but who have unique needs. Each user controls his or her own settings, desktop space, and system preferences. And each user controls access to his or her files.

If you're the only person working on your Mac, you may have just one user account. But you can create as many accounts as you need for friends, family members, colleagues, or even guests. And other users can't view or open your files, so your user account gives you privacy.

Types of Accounts

Your user account controls your entire working environment. Each account has its own Home folder, which holds the user's personal files and preferences, as well as e-mail accounts, passwords, and more. In fact, OS X offers several different types of accounts.

The Power of Admins

If you're the only user on your Mac, you have an administrator (or admin) account. Your Mac set up this account for you the first time you installed OS X. An admin account lets you install software in the root-level Applications folder, change preferences that affect the entire system, and create and delete other user accounts. You can have as many admin accounts as you want—in fact, all your accounts could be admin accounts. But all admin accounts have the power to install and delete files and applications, as well as to modify and remove other accounts, so be careful about who gets this access.

Managed Accounts

There are other types of user accounts that limit these powers to varying degrees.

STANDARD A standard account lets the user work with the Mac freely, install applications in his or her Home folder, and modify some benign System Preferences settings—the desktop pattern and alert sound, for example. However, a standard user can't perform the system-level tasks that admins can.

MANAGED You can restrict an account further by applying parental controls. These accounts are called *managed accounts*. You can choose exactly which applications managed users can run and which tasks they can perform in the Finder (see "Set Parental Controls" later in this chapter).

GUEST Another option is a guest account. When enabled, this account lets someone use your Mac temporarily without giving him or her access to your own account or requiring you to set up a fresh account. A guest account doesn't require a password and doesn't have administrator access (you can further limit what the guest account can do by applying parental controls). Once the guest user logs out, all data and settings in that account's Home folder are deleted—the account is wiped clean for the next guest user (see "Privileged User").

SHARING If you just want to be able to share files with someone on another computer, Snow Leopard also offers a sharing-only account. Someone using a sharing-only account can remotely access folders you designate (in the Sharing preference pane). But this type of user cannot sit at your Mac and log in—the account can only be accessed across a network.

Privileged User

It's not a good idea to give other users too much power over your system. That's why OS X offers several types of accounts. Here's how the options stack up.

ACCOUNT FEATURES	ADMINISTRATOR	STANDARD	MANAGED	GUEST
Can change all system preferences	●	○	○	○
Can change system preferences that affect his or her account	●	●	○	●
Can manage user accounts	●	○	○	○
Can install software for all users	●	○	○	○
Can install software for personal use	●	●	○	○
Can run all applications installed on the Mac	●	●	◗	●

● = yes. ○ = no. ◗ = only those selected by the administrator.

Creating Accounts

When you want to create, modify, or delete a user account, you start by selecting the Accounts preference pane from OS X's System Preferences. Make sure the lock icon at the bottom left is unlocked. If it isn't, click it and enter your password when prompted—you need to be an administrator to do this.

To create a new account, click the plus sign (+) below the list of current accounts (see "A New Beginning"). In the sheet that drops down, enter a user name, an account name (which doesn't have to match the user name), and a password (you'll have to verify the password by entering it again).

If the user is worried about forgetting the password, you can enter a password hint as well—OS X will display this hint if the user enters an incorrect password three times in a row. (If you've entered a hint for an account, the login screen will also display a Forgot Password button. When the user clicks this button, Snow Leopard will display the hint.) If you're concerned about security, you can test how secure the password is or get a suggestion for a new password by clicking the key icon to the right of the Password field (for more security tips, see the *Mac Security Essentials* chapter).

Finally, from the New Account pull-down menu, select which type of account the new user should have. When you've finished, click the Create Account button at the bottom of the sheet.

Change Your User Picture

In addition to choosing a name for your account, you can add your own picture, to make the account easily recognizable in the login window (a nice feature for young children). Select your account in the Accounts preference pane (you don't need to be an administrator) and click the current user photo. In the window that appears, select one of the available pictures or click Edit Picture to add your own. You can drag a picture from any folder in the Finder into the picture well, or click Choose to navigate through your files (see "Customize Your Account Photo" for instructions).

If you have an iSight or another video camera connected to your Mac, you can click the Take A Video Snapshot button to take a still picture. Click the Set button when you've finished, and this picture will be displayed in the login window and in iChat—it'll be the picture that your buddies see when you chat with them. (If you have a Mac with a built-in iSight camera,
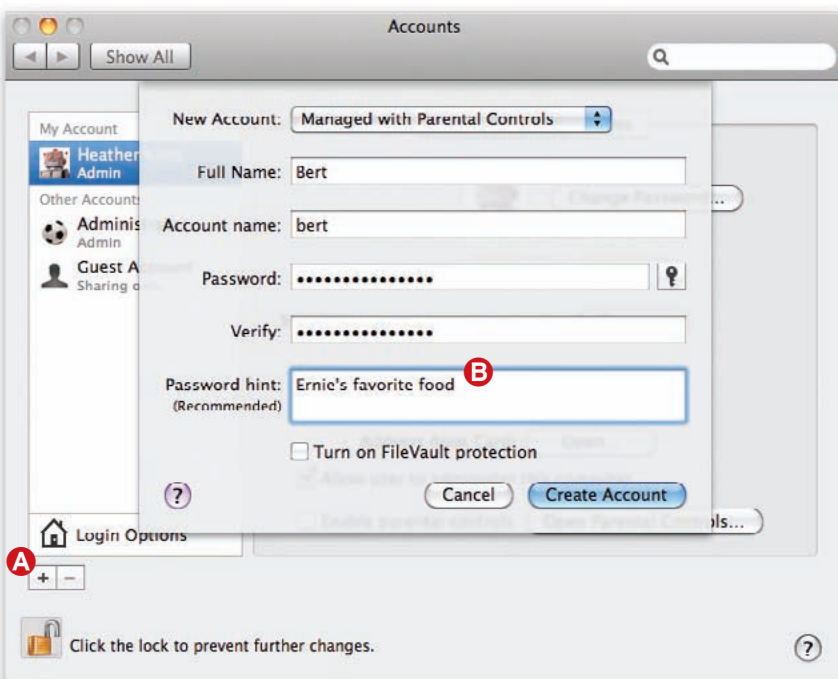
A New Beginning To create a new user account, click the plus-sign button **A** and fill in the necessary information. The password hint **B** will help jog the user's memory if he or she enters the wrong password three times in a row or clicks the Forgot Password button.

OS X will even prompt you to take a snapshot when you're setting up OS X and creating your first user account.)

Set Programs to Launch Automatically

Want to have your Web browser and e-mail program pop up as soon as you log in each morning? No problem. Select your account in the Accounts preference pane and click the Login Items tab. You can drag applications or files to the list, or you can click the plus-sign button and find the item on your hard drive (see "Start Me Up").

Alternatively, you can click and hold the Dock icon of any item in the Dock and choose Open At Login from the Options menu.

Log In

If you have only one account on your Mac, you'll log in automatically when you start up your computer. But if you have more than one account, OS X displays a login window with a list of available user accounts. To select an account, click it, enter the password in the Password field, and then click the Log In button.

You can choose to skip this process, even if you have multiple accounts, by selecting one account
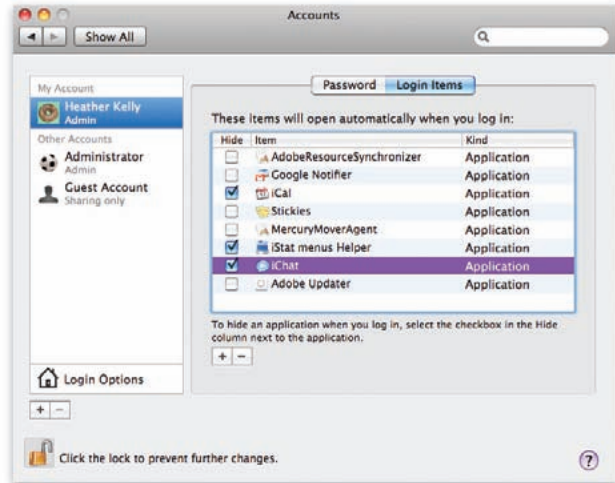
Start Me Up To add login items—applications or files that start automatically when you log in—just add them to the Login Items section of the Accounts preference pane. Many of the items listed in here were added automatically when we installed the application.

to be logged in to automatically. Open the Accounts preference pane. Click the lock icon to unlock it and enter your admin user name and password (if necessary). Click the Login Options button. From the Automatic Login pull-down menu, select the user you want to always log in as, and then enter the pass-

Customize Your Account Photo

Step 1 With the user account selected in the Accounts preference pane, click the current account photo Ⓐ and then select Edit Picture Ⓑ from the resulting screen.

Step 2 Drag an image from the Finder into the Im-

age pane, or click the Choose button to open a Finder window. Adjust the size slider Ⓒ to crop the image if you like. The square box Ⓓ indicates how much of the image will appear in the frame. Click on Set when you're done.
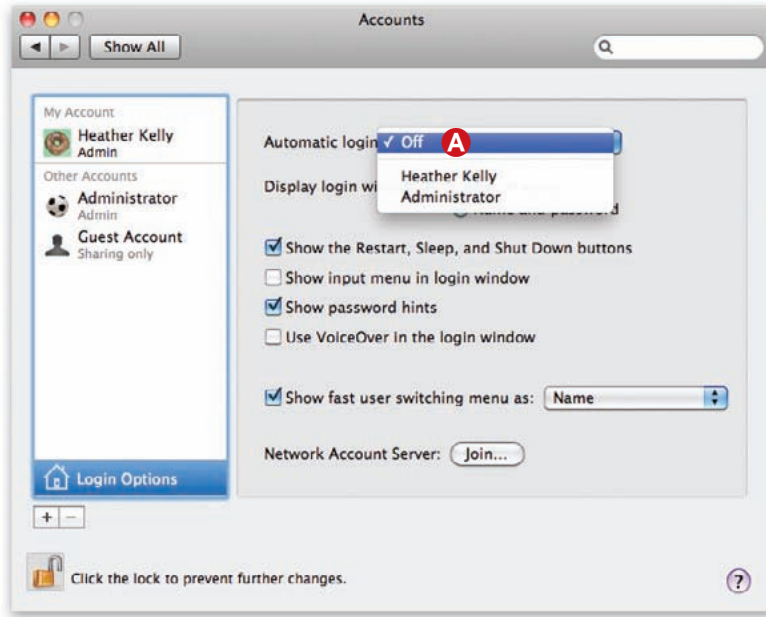
The Fast Lane If you select a user from the Automatic Login screen Ⓐ, OS X will automatically log in as that user whenever someone presses the power button. Be careful of setting this option, as it gives anyone easy access to your account.

word for that account in the sheet that drops down. The next time you start up your Mac, it will log in automatically to this user's account instead of displaying the login window (see "The Fast Lane").

Remember, however, that when anyone starts up your Mac, that user's files will be immediately available. While this might not be a huge risk at home—unless you don't want your kids or partner to see your files or access your e-mail account—it's more of a security concern at work.

Log Out

When you're finished doing your day's tasks, you can shut down your Mac, or you can log out, leaving the login window visible so another user can then log in. To do so, just select Log Out user name from the Apple menu (or press ⌘-Shift-Q). Then click the Log Out button that appears in a dialog box (or just do nothing, and you will be logged out automatically in one minute). This command also shuts down all your programs.

Work with Multiple Users

Once you've given everyone his or her own account on the Mac, you'll be able to work without worrying about someone else changing your desktop picture, logging in to your Facebook account, or accessing your files. But managing multiple accounts, including moving files and folders between users, requires some extra thought. Here's how to make it all run smoothly.

Share Files Between Users

OS X applies ownership and permissions to every file on your computer. Everyone can use some files, such as applications. But other files, such as those in a Home folder, can be accessed only by the file's owner. However, there are a few ways to share files with other users on your Mac:

THE PUBLIC FOLDER Each user has a Public folder inside his or her Home folder. Anything you put in your Public folder can be accessed by other users.

THE DROP BOX FOLDER Your Public folder also contains a Drop Box. Other users can drag files to this folder, but they can't see what's inside.

THE SHARED FOLDER Another option is to use OS X's Shared folder. You'll find it in the Users folder at the same level as your Home folder. Everyone can

Share iTunes between Users

Your music is stored on your computer's hard drive, but if you use Fast User Switching to work within multiple user accounts, your library may as well be locked in a vault. To solve this problem, open iTunes' preferences in the account where the library resides, click the Sharing icon, and enable the Share My Library On The Local Network option. In other user accounts, go to the same area of the preferences and enable Look For Shared Libraries. As long as iTunes is running in one account and sharing is turned on, you can connect from another user account as if you were sharing a separate machine on your network.

copy files to or from this folder (and see everything inside). However, you shouldn't work on files while they're in that folder, as you won't be able to save them—the files retain their original ownership until you copy them to one of your own folders. For example, if Alice copies a file to the Shared folder, and Paul wants to make changes to it, he'll first need to copy it to his desktop and give it a new name. After Paul has made changes, he can then copy it back to the Shared folder, where Alice can view it. If Paul has an administrator account he can delete Alice's files in the Shared folder, but he must enter his administrator's password before being allowed to do so (see "Sharing Is Caring").

Switch User Accounts

Let's say Alice and Paul have their own accounts on one Mac. Alice is busy surfing the Web, but Paul needs to send an e-mail from his account (which has all his settings and mail). OS X has a feature known as Fast User Switching, which lets you quickly change user accounts without logging out from the currently active account—so Alice doesn't have to lose her page while Paul pops into his e-mail program.

To activate Fast User Switching, click the Login Options button in the Accounts preference pane (first the lock icon and enter your password if necessary), and select the Enable Fast User Switching option (a

Sharing Is Caring Because Kelly is currently logged in to this Mac **A**, most of the folders in Betsy's user folder are off limits (note the red icons on Betsy's folders). To share files with Betsy, Kelly can place the files in Betsy's Public folder **B** or in the Shared folder **C**, which everyone can access. Kelly can place files in Betsy's Drop Box folder **D**, but only Betsy can see what's in there.

warning will pop up, and you'll need to click the OK button to continue). OS X will place a new menu item on the right side of the menu bar.

To control the appearance of this menu, return to the Login Options pane and click the Show Fast User Switching Menu As menu. You can choose Name (which shows the current user's full name), Short Name (which shows the current user's short user name), or Icon (a head-and-shoulders silhouette that takes up the least amount of menu-bar space of the three options).

To activate another account, simply click the Fast User Switching menu and select the name of the user (see "Switcheroo"). This opens the login window, where the user must enter his or her password. Unlike logging out and then logging in as a different user, using Fast User Switching lets the first account remain active as well. So when Paul has finished sending his e-mail, he can log out, or he can switch back to Alice's account so she can get right back to work without having to relaunch the programs she was using.

Retrieve Lost Passwords

If one of the users on your Mac forgets his or her password, you'll need to log in as an administrator to resolve the problem.

Although an admin can't discover a password, he or she can reset it. Select a user account in the Accounts preference pane and click the Reset Password button. In the sheet that appears, enter a new password, and click the Reset Password button. The user with the lost password can now log in with the new password and even change it later.
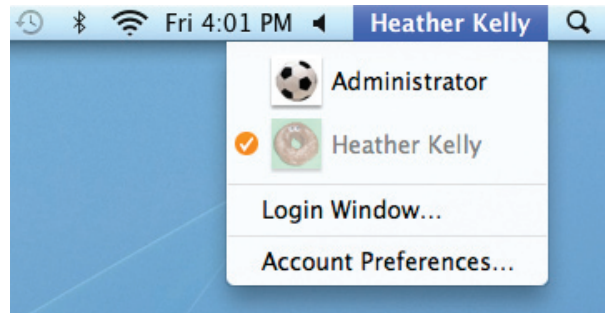
Switcheroo To quickly switch users without logging out, open the Fast User Switching menu and select a new user. When you enter your password, the image on screen will pivot to display the new user's desktop.

Delete a User Account

If you set up a user account for an intern or a house-guest and later decide to delete that account, you can choose to either save a copy of all the user's personal files or erase those files. From the Accounts preference pane, click the account you want to delete, and then click the minus sign (–). You'll be asked whether you want to save the user's Home folder as a disk image before deleting the folder; whether you want to keep the user's folder where it is; or whether you want to delete the Home folder without saving the files within. Make your choice and then click the OK button. If you've chosen the first option, OS X will create a disk-image file (a single file like the file you get when you download an application, with multiple files or folders inside) in a Deleted Users folder in your Mac's Users folder.

Keep in mind that you won't need to do this when someone logs in as the guest account. The account is wiped clean each time the user logs out.

Set Parental Controls

Kids can have a lot of fun exploring a Mac, but there can be pitfalls as well. To begin with, that child could become overwhelmed by the Mac's interface. He or she, if given too broad powers, could also delete important files and applications. And finally, if allowed to do so, that child could come face-to-face with some of the less seemly sides of the Internet. Snow Leopard helps protect both your child and your computer's data by allowing you to create accounts with specific limitations.

The key to creating these accounts is the Parental Controls setting. For example, you can control access to certain system settings and programs, manually select the people with whom your kids can exchange e-mail and chat messages, set time limitations for computer use, and identify which Web sites users can visit. These types of limitations are useful not just to parents, but also teachers, IT departments, and businesses that offer public computer stations.

Getting Started

To turn on parental controls, you'll need to have a non-administrator account already set up in the Accounts preferences pane (you can't restrict admin accounts, so make sure you don't give admin powers

Control Access from Afar

Don't want to make a trip to your son's room each time he needs access to a blocked Web site or wants to add a friend to his iChat list? When setting up his parental controls, click the gear icon at the bottom of the user list and select Allow Remote Setup. You'll now be able to manage these controls from another computer. With this option enabled on a Mac, that Mac's non-admin accounts will appear in the Parental Controls user list on other Macs on your home network, allowing you to configure those accounts' Parental Controls settings over the network—a convenient option in a lab or home setting.

to any accounts you want to control). When setting up a new account, select Managed With Parental Controls from the Account pull-down menu. To add parental controls to an existing account, click the account name and turn on the Enable Parental Controls option. You can apply parental controls to any non-administrator account, including the guest account.
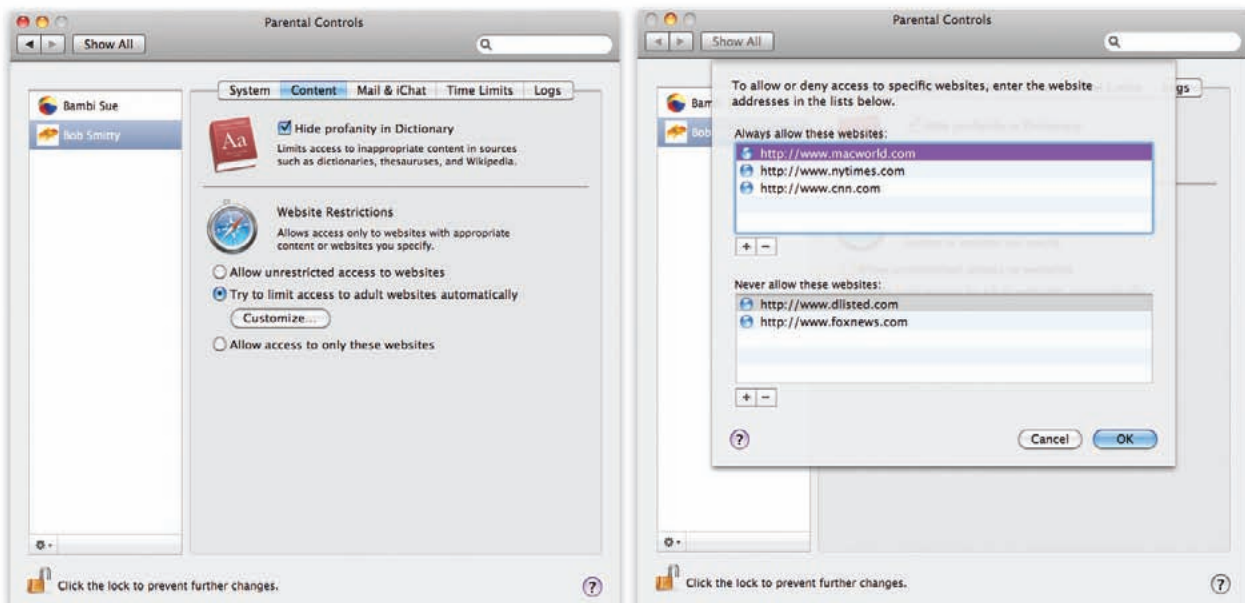
You Can't Do That Parental controls let you establish which Web sites your children can visit (left). Select the Customize button to give the OK to certain sites (right).

Once you've turned on parental controls for an account, open the Parental Controls preference pane, and select the account name from the column on the left. The Parental Controls settings for a particular account are divided into five screens: System, Content, Mail & iChat, Time Limits, and Logs.

Control the System

The System screen lets you control the appearance of the Finder, select which programs are accessible, prohibit burning CDs or DVDs, and prevent changes to printer, Dock, and password settings.

If you're setting up your Mac for young children, the Use Simple Finder option is a good starting point. It presents a very limited interface to the user: the Dock contains three folders (Applications, Documents, and Shared), and the user can work only with the applications you choose. To set up this list, click the Applications disclosure triangles for the group of applications you want to manage—iLife, iWork, or Internet, for example—to reveal a list of available applications. Select the applications you want the user to have access to (and deselect those you don't if they're selected).

On the other hand, if you want to restrict what program the user can open but don't want to use the simplified interface, select the Only Allow Selected Applications option. By default, this option bars the user from all areas of the Mac except applications; you choose whether to allow additional options. For instance, you can let the user modify the Dock, administer printers, and burn CDs and DVDs. As with the Simple Finder, you can allow any or all applications; click the disclosure triangles to see the programs available on your Mac.

Limit Content

The Content screen includes controls for Safari and Dictionary to limit what type of content your kids come into contact with (see "You Can't Do That").

The Hide Profanity In Dictionary option simply prevents this user from viewing certain words. You have no control over which words Dictionary blocks.

Safari's parental controls give you basic control over what your kids can access when surfing. OS X includes a content filter that intercepts Web pages on the fly and determines if each is "suitable for kids." If you select the Try To Limit Access to Adult Websites Automatically option, Safari will restrict access to any pages it deems unsuitable. To restrict additional sites
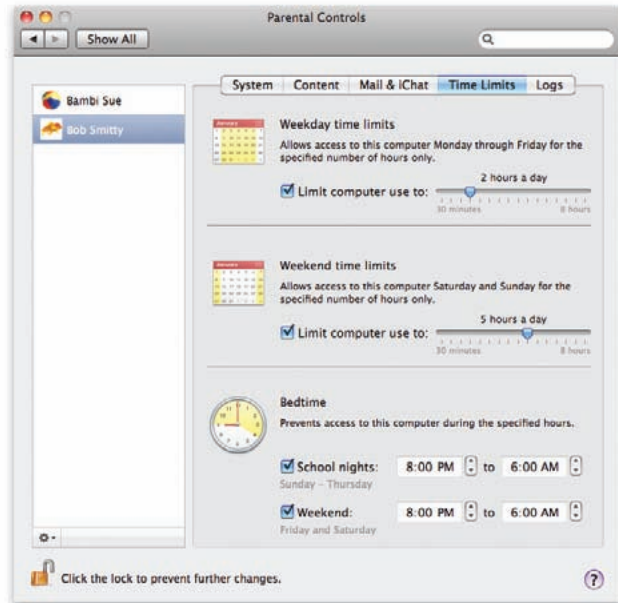
Limiting Computer Use Snow Leopard lets you enforce bedtimes and restrictions on computer usage by setting up time limits.

or expressly allow access to certain sites, click the Customize button. This list of allowed sites overrides Snow Leopard's standard content filter for these sites, but uses the filter for all other sites.

To restrict Web access to only those sites that you explicitly approve of, select the Allow Access To Only These Websites option. Then click the plus-sign button and enter the URLs (and names) of sites you want to allow.

Manage Mail & iChat

If you're worried about your kids receiving sleazy spam or exchanging e-mail messages with strangers, you can set up white lists of trusted e-mail correspondents. You can add e-mail and IM addresses by clicking the plus-sign button. If you select the Send Permission Emails To option, Apple's Mail app will send a message to you so you can authorize e-mail messages to or from people not on the white list. That's handy if your child is working on a school project and needs to send and receive messages from new people, for instance.

Set Time Limits

Want to make sure your daughter isn't chatting with friends when she should be studying or sleeping? The Time Limits screen lets you restrict when and for how long each user has access to the Mac (see "Limiting Computer Use").

Transfer Settings

Setting up parental controls for multiple accounts? If the accounts are going to have the same settings, first configure one of the accounts. Then click the gear icon at the bottom of the accounts list and choose Copy Settings For *Username* from the pop-up menu that appears. Finally, select another account and then choose Paste Settings To *Username*. This applies the first account's Parental Controls settings to the second account, saving you the trouble of having to configure each separately. Even if you don't plan on configuring each exactly the same way, you can still use this technique and then go back and make the necessary changes to each account; assuming you're at least configuring the accounts somewhat similarly, this will still save you a lot of work.

You can set separate time limits for weekdays and weekend days, and you can also restrict usage during certain hours. For example, you can restrict an account to two hours per day of use during the week and three hours on weekend days, and block access completely from 8 p.m. to 7 a.m. on school nights and from 10 p.m. to 8 a.m. on weekends. (Unfortunately, you can't set up multiple ranges during the same day—for example, to exclude computer time from 8 p.m. to 7 a.m. and from 9 a.m. to 4 p.m.)

Keep Track with Logs

Just setting up a restricted account may not be enough to give you peace of mind. To remain vigilant about who your kids are interacting with and what sites they're visiting, you can use the Logs screen. From here you can monitor the activity of a controlled account, including a list of all visited Web sites, any blocked sites that the user attempted to access, programs used, and anyone with whom the user chatted using iChat. A pop-up menu lets you restrict the log view to the current day or the past week, month, three months, six months, or year. You can also group the log display by date or by Web site.

Keep in mind that any user on your Mac who has administrator status can change settings and view logs in the Parental Controls pane. Although this is not likely to be an issue in a home setting, where it might be desirable for two or more adults to be able to keep an eye on controlled accounts, it could be a drawback in other situations—for example, if you're using parental controls in an office or educational setting. This is another reason you should give administrator status to accounts only when absolutely necessary.

Working with Files

How to Open, Save and Manage Your Documents

O nce you know your way around the Finder, the next challenge is managing the files you create, moving between applications, and beginning to work with them. Luckily for you, your system is teeming with productivity-boosting features like keyboard shortcuts, customization options, and helpful automation tools. These will help you make better and more productive use of OS X. We'll show you how to open and save files, manage unwieldy windows with Spaces and Exposé, and automate your Mac by building your own systemwide services.

Open and Save Files

No matter which applications you use, you'll spend a lot of time in OS X opening and modifying files. For the most part, this is a fairly simple process. But what if you want to change which application opens the file? How can you be sure that a Windows user will be able to open the files you create? We've got the answers to these questions and more.

Open a File

Opening files is easy—just double-click one in the Finder, or choose File ▶ Open in the appropriate application and navigate to the file you want. You can also drag a file to the application you'd like to open it in on the Dock or in the Finder.

Preview a File

Sometimes you want to view a file without going to the trouble of opening it in its related application. In Snow Leopard, there are two ways to do this.

USE QUICK LOOK The first is to use the Quick Look feature. To do this, click once on the file you'd like to get a better peek at and press the spacebar. A new window will open and display the file's contents. This trick works with nearly any kind of file, including text files, movies, images, videos, PDFs, and even MP3s. If you decide you'd like to open a file while checking it out in Quick Look, press ⌘-O. To close the Quick Look window, press the spacebar again.

If you have more than one file selected, Quick Look will show the first file in the selection. You can then use the left and right arrow keys to move through your files. Alternately, click the four-panel icon in the Quick Look toolbar (or press ⌘-Return) to view an index page showing thumbnails of every selected file.

USE THE FINDER You can also preview most files directly from their Finder icons in the icon, column, or cover flow Finder view. Flip through a PDF or text document, listen to an MP3, or preview a movie, all by clicking its icon.

Learn About a File

When you save a file, OS X stores not only the file's contents but also information about the file—such as its permissions, its modification date, and which ap-

plication to open it with. To see this information, click the file in the Finder and then choose File ▶ Get Info (or press ⌘-I). Click the disclosure triangle next to the Open With header to see the file's default application.

Change a File's Default Application

Is a file not opening in the program you wanted? To open a file in an application other than the one assigned to it, Control-click or right-click the file in the Finder and select Open With from the contextual menu. You'll see a list of applications compatible with that file type. The most common match will be on top of the list. To choose an application that's not on the list, select Other and use the Choose Application dialog box to locate the appropriate app (see "Opening Statement").

You can also choose to always have an application other than the default app open a particular type of file. For example, if you want to open PDF files with Adobe Acrobat Reader instead of Apple's Preview (the default), choose a PDF file in the Finder and select File ▶ Get Info (or press ⌘-I). In the Open With section of the Info window, select Acrobat Reader from the pop-up menu, and then click the Change All button. Now whenever you double-click a PDF file, OS X will open it in Acrobat Reader.
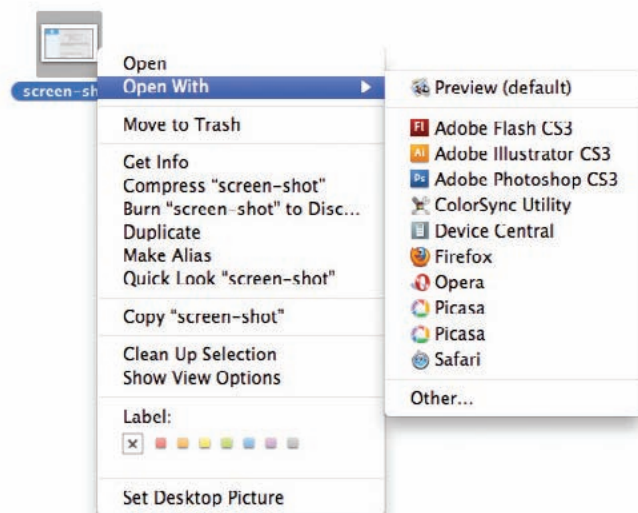
Opening Statement To open a file in an application other than its default app, Control-click the file and select the Open With menu.
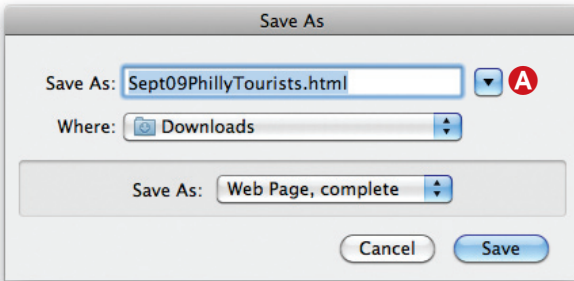
The Long and Short of It If OS X's simplified Save As dialog box (left) doesn't offer enough options for you, click the blue triangle **A** to reveal more options (right). You can switch between column view **B**, list view, and icon view, and navigate to anywhere on your hard drive in a Finder-like interface. You can even create a new folder **C** to hold your saved document.
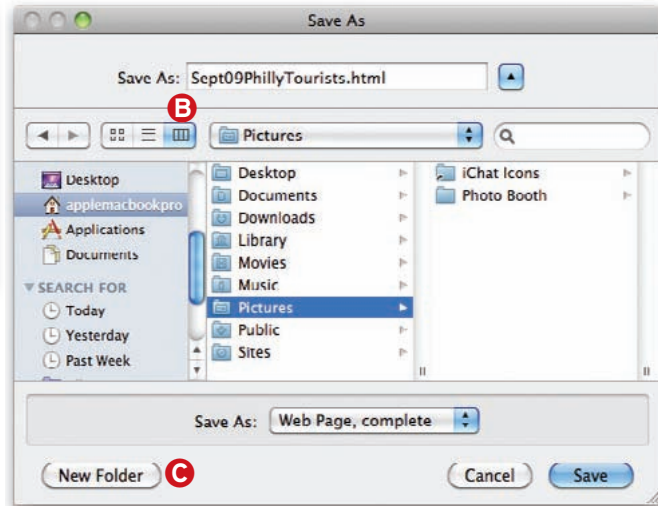
Save a File

When it comes to picking a place to save your files, it's mostly up to you. Apple gives you a strong hint that it would like you to save your documents in particular locations, as evidenced by the Documents, Movies, Music, Pictures, Public, and Sites folders within your user folder, also known as your Home folder. But you're welcome to create a folder just about anywhere you like—on the desktop or at the root level of your hard drive, for example—and drop your files into it.

You do sometimes have to respect Apple's folder suggestions. For example, if you want to share files with another user, you should place those files in your Public folder, the only folder in your user folder that other users can access. However, you should not save files in folders used by OS X—the Library and System folders, for example.

The contents of these folders are for the system's use, and you should tinker with them only if you know what you're doing. (For more on how OS X's folder system is set up, see the "Get Oriented" section in *The Finder* chapter.)

When you're ready to save an open file, go to File ▶ Save As. The Save dialog box may not seem to offer many options for where to save your file (see "The Long and Short of It")—click the Where pull-down menu, and you'll see just a handful of options, including mounted volumes, folders that appear in a Finder window's sidebar, and the folders you've accessed most recently. To save the file to one of these locations, just select it from the list and click Save.

If you want to save your file to a different location, click the blue triangle next to the Save As text box.

This switches the dialog box to its expanded view, which offers many more ways to navigate to specific locations on your Mac's hard drive. In the expanded view, the Save dialog box more closely resembles a standard Finder window. It even displays the Finder's sidebar. You can use the expanded view to navigate through your system just as you would in the Finder.

The expanded dialog box contains a search field, a quick way to track down a buried folder. When you enter a search term and press Return, the Mac will start searching for all related items on your computer. You can limit or expand your search to specific parts of your system—for example, you can search your entire Home folder, or just the currently selected folder—by clicking a location in the gray toolbar that appears below the Search field.

There is also a New Folder button. This is handy when you're working on the first document of a new project and would like to create a folder to hold all the project's files. Just navigate to where you want this new folder to be (in the Documents folder, for example), click New Folder, and give the folder a name. Click Create and the new folder will appear in the location you specified. Then just select the newly created folder in the Save dialog box to save your file within it.

Name Your Files

Before naming your file, keep these limitations in mind: OS X prohibits file names longer than 256 characters. File names can't include colons (:) or begin with a period (.). You should also avoid using a forward slash (/), because OS X will interpret this character as a separator in a file path (the file path

Locate Missing Downloads

If you used Safari to download an application or file but aren't sure where it went, try your Downloads folder. You'll find it in your Home folder. This is where Safari stores files by default. Snow Leopard also places a link to your Downloads folder in your Dock. If you still can't find it, return to Safari and open the Downloads window (Windows ▶ Downloads), which lists every file Safari has recently downloaded. Scroll through the list until you find the application, and then click the magnifying glass located to the right of that entry Ⓐ. A new Finder window will open with the downloaded file highlighted. (For more Safari advice, see the *Get Started With OS X Apps* chapter.)
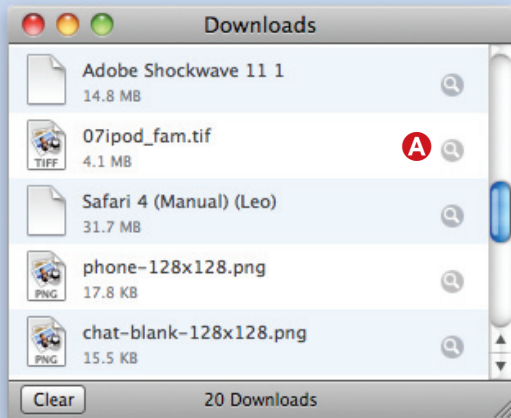
/Users/*youruserfolder*/Documents/mydocument.doc, for example, indicates that a file called mydocument .doc is stored in your user folder's Documents folder).

If a Windows user will be viewing your document, you'll need to take further precautions when naming files. Windows won't accept file names containing commas (,), question marks (?), or any of the following characters:

\/ : * < > |

Work with Extensions

File extensions are the three letters that follow the period at the end of file names—.doc, .txt, and .mp3, for example. A file extension tells the Mac (and other computers) which format the file is in. For instance, the .doc extension tells a Mac and a Windows PC that the file can be opened by any application compatible with Microsoft Word files.

A .jpg file extension denotes a common type of graphics file.

OS X doesn't always display a file's extension, but the extension is there. To view a file's extension, select the file and press ⌘-I to produce the Get Info window, and then click the triangle next to the Name & Extension heading if necessary. In most cases, you'll see the file's name followed by an extension. If you'd like the extension for a file to always appear as part of the file name, make sure the Hide Extension box is unchecked (see "Hiding the Extension").

When you're dealing with files that will remain on a Mac, you don't need to worry about file extensions. Macs will know what to do with them. But if a file will eventually make its way to a Windows PC, make sure its file extension is visible. Windows sometimes has trouble recognizing files that don't have visible file extensions.

Meet the Menu Bar

The menu bar at the top of your screen changes to include the menus for the application you're currently using. So the options you see when you're using Microsoft Word will
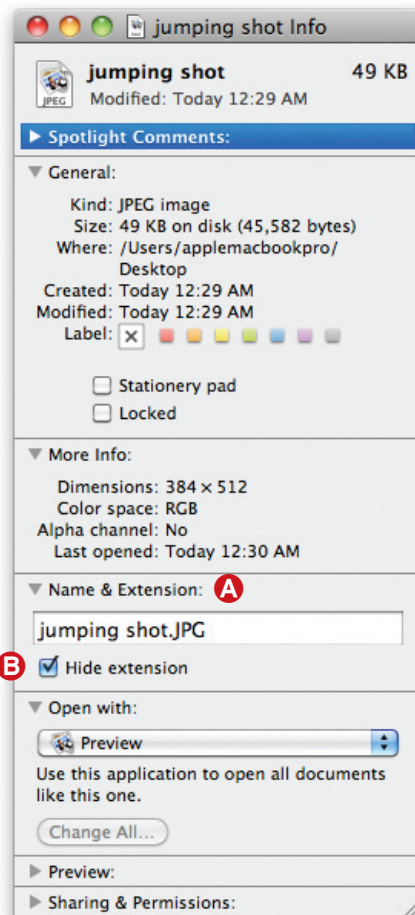
Hiding the Extension By default, extensions are invisible. To see a file's extension, select it in the Finder, press ⌘-I, and open the Name & Extension section Ⓐ of the Info window. Be sure to turn off the Hide Extension option Ⓑ before sending the file to a Windows user.

differ from those you see when you're using iPhoto. But no matter what application you're in, you'll find that a few helpful tools appear consistently.

APPLE MENU The small gray apple icon **A** always appears in the top left corner of your screen. More than just a reminder that you're using an Apple computer, this icon contains a menu with a number of useful commands, including Shut Down, Restart, Sleep, and Log Out, as well as options to get important information about your system and access System Preferences and Dock settings, and links to recently used applications.

APPLICATION MENU The application menu **B** always has the name of the current application. When you click it, you'll see program-specific options such as the application's preferences, controls for hiding or quitting the application, and an About item that shows the software's version number (as well as additional software information in some cases).

Use the Document Window's Shortcuts

Regardless of which program you're using, you'll see that document windows have a few consistent features. These can be used as valuable shortcuts.

CLOSE BUTTON Clicking the red button **C** will close the currently selected window. In most cases, this will not close the application itself.

HIDE BUTTON Clicking the yellow button moves the frontmost window to the Dock.

EXPAND BUTTON Clicking the green button will expand the frontmost window to full size. Clicking it a second time will return the screen to its previous size.

DOCUMENT ICON Most application windows also include the name of the current file and a small file icon in the title bar **D**.

You may take this for granted, but there's useful information here. If the document icon is grayed out (or if a black dot appears in the red close button), it means that you have unsaved changes. If you Control- or right-click the document name, you'll see its file path. Here's an even better trick: as long as the file icon appears in full color—meaning there are no unsaved changes—you can use it as a proxy for the file itself. This means you can click the file icon and drag it to another folder on your hard drive to change its location (Option-drag to copy the file instead of moving it).

Navigate Applications

A re you feeling overwhelmed by all the open application windows on your screen? OS X offers several ways to quickly cut through the clutter and move between different programs.

Exposé

One of the biggest computing productivity killers is having to pause to search through different windows and applications to find the one piece of data or button that you need. Keeping everything as organized and uncluttered as possible can cut out much of this frustration. OS X also gives you a one-click way to see all of your open windows in a single view, or to hide them all so you can temporarily access the desktop. The feature, which is called Exposé, uses three keyboard shortcuts to quickly move windows around on screen so you can better see overlapping windows.

INVOKE EXPOSE Pressing the F9 key shrinks all of your windows in open applications so they can be seen simultaneously. These small windows are aligned on a grid to make them easy to scan quickly. Scan your screen and find the window you want (see "Navigate the Grid"). Minimized windows are lined up at the bottom of your screen as slightly smaller previews. Press ⌘-1 to rearrange the windows alphabetically or ⌘-2 to group windows by application.

PICK AND MOVE BETWEEN WINDOWS To bring a specific window to the front, place your cursor over it until its file name appears, and then click it. You can also use your arrow keys to pick which window you want (it will have a blue outline), then press Return.

To move between windows in the same application, press the F10 key. All open application windows in the currently active application will slide into view while windows from other applications fade into the background. To hide all open windows so you can see your desktop, press F11. Although Exposé uses F9, F10, and F11 by default, you can change these keyboard shortcuts in the Exposé & Spaces preference pane. You can assign each Exposé action to a mouse button or to a corner of your screen so you can activate it by moving your mouse into that corner.

Thanks to Exposé's integration with the Dock it's easy to move files between different programs and windows. For example, if you drag an image onto the Pages icon in the Dock and hover the cursor there for a moment, Exposé will display all the open Pages windows. Drag the image over a document to which you want to add it and hover the cursor for another moment, and that window will come to the foreground, allowing you to drop the image right on your target. Once you get the hang of it, this partnership can really speed up your work, especially on systems with smaller displays (such as MacBooks).

Application Switcher

An even slicker method is to hold down the ⌘ key while pressing the Tab key once. This reveals the Application Switcher in the center of your screen. With the ⌘ key held down, press the Tab key repeatedly until the application you want to switch to is high-
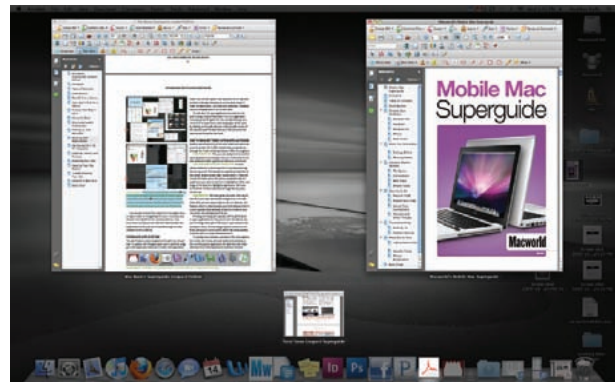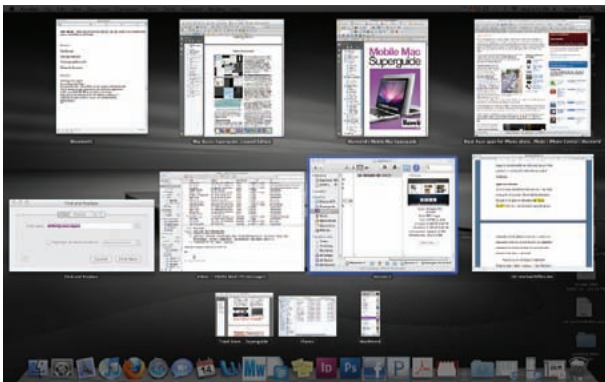
Navigate the Grid Press F9 to reveal all open windows (left) and F10 to reveal all open windows of just the active application, in this case Adobe Acrobat (right). When you place your mouse over one of the windows a blue outline appears. Pressing F11 will hide all open windows so you can see the desktop.

lighted. When you let go of the keys, the high-lighted application will move to the front. To move backward through the list, press ⌘-Shift-Tab.

If you ⌘-Tab to highlight a program with no open windows, press and hold the Option key, and then release the ⌘ key followed by Option, the program will open with a new window. If the program has a docked window—but no other open windows—this trick will spring that window free from the Dock.

You can also activate Exposé's Application Windows mode *after* pressing ⌘-Tab. (This won't work with the F9 key on your keyboard, though.) Keep the ⌘ key pressed, release Tab, and then press either the up arrow or the down arrow. This will switch you into Exposé's Application Windows mode for the currently selected application in the ⌘-Tab Application Switcher. At this point, you can release the ⌘ key, too, leaving no keys pressed.

Spaces

Among your best weapons in the fight against window clutter is Spaces, OS X's window-management tool, which lets you create virtual workspaces, each acting as a discrete desktop.

CREATE WORKSPACES You turn on Spaces by opening the Exposé & Spaces pane in System Preferences, clicking the Spaces tab, and placing a checkmark next to the Enable Spaces option (see "Defining Your Space"). You can choose to create as few as two or as many as 16 workspaces by adding rows and columns of individual workspaces, which line up in a grid format. The organization of these workspaces doesn't affect how you work within each one; it affects only how you switch between them. (Spaces keeps your desktop and Dock the same across workspaces; you can't have different Dock contents, different items on your desktop, or a different desktop picture in each workspace.)

ADD AN APPLICATION TO SPACES You can choose from one of several ways to add a program or window to a workspace. The easiest way is to simply launch the program; it will appear in the active workspace.

If you always want to use a program in a particular workspace, you can permanently assign it to that space via the Spaces preferences—click the plus-sign (+) button beneath Application Assignments, select the desired program, and then click Add. (Alternatively, you can drag the program's icon into the list.) Then, from the pop-up

TIP

Activate Quick Look in Exposé

If you keep tons of windows open or if many of your programs use relatively small windows, you might find it hard to distinguish between windows when you use Exposé's Application Window mode. Snow Leopard helps you out by displaying the title for every window, but you can also use Quick Look with Exposé active.

Select the window you want by pressing an arrow key until you reach it or by hovering over the window with your mouse (the selected window will be outlined in blue). Then press the spacebar. That will zoom you in on the selected window, as with Quick Look in the Finder, but you'll remain in Exposé mode.

menu to the right, under Space, choose which workspace you want that application to appear in. From that point on, whenever you launch that program, Mac OS X will automatically switch to the appropriate workspace and open the program.

Note that if you assign a program to a particular workspace and then manually move it to a different workspace, that doesn't change the program's
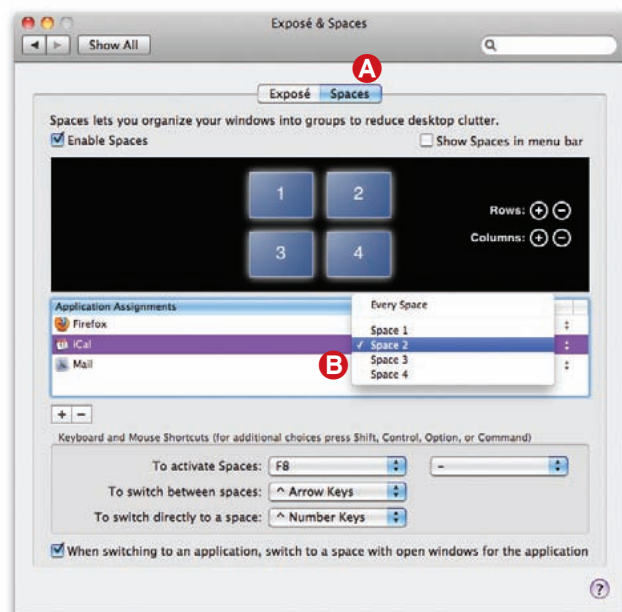
Defining Your Space Use the Exposé & Spaces preference pane to turn on Spaces Ⓐ and define where each application lives Ⓑ.

Hide an Application

You don't have to quit a program just to get it out of your way. To quickly hide the application you're currently using, go to the application menu and choose Hide *applicationname*. You can also Option-click anywhere on an exposed portion of the Mac's desktop to do the same thing. To make the application—and any open windows—reappear, click the application's icon in the Dock.

To hide all of the open applications except the one you're using, choose Hide Others from the application menu (or press ⌘-Option-H). You can also hide just one window of an application, while keeping all others open by clicking the yellow button in the top left corner of the window. This will shrink the window and move it to the Dock.

assigned workspace; after quitting the program, the next time you launch it, the program and all of its windows will again appear in the assigned workspace.

Whichever method you choose, note that error messages, floating dialogs, and notification displays (for example, third-party iTunes controllers) appear on the active workspace, even if they pertain to a program in a different workspace.

MOVE BETWEEN SPACES You can switch between workspaces in a number of ways. The first is to use the assigned hot key (F8 by default, although you can change it). When you press this, you'll get an Exposé-like, bird's-eye view of all your workspaces. The layout corresponds to the relative positions of the workspaces. Click one of the workspaces—or use the arrow keys to select one and then press Return—to switch to it.

You can also use the arrow keys to move between workspaces and then press the spacebar or Return to display the selected workspace, or simply type a workspace's number to display it instantly (workspaces are numbered sequentially from left to right, starting in the upper left corner). To move directly to another workspace, hold down the Control key and type its number. To cycle from one workspace

to the next, hold down Control and press an arrow key. (These keyboard shortcuts are also configurable in the Exposé & Spaces pane.) Whenever you switch between workspaces, a small, visual map of your workspaces will appear on the screen, showing which direction you're moving in and which workspace you're switching to.

REARRANGING SPACES You can also rearrange workspaces—for example, to keep your most frequently used spaces close to one another. Just activate Spaces' overview with the F8 key, click any empty space in the desired workspace, and then drag it to a different location. The other workspaces will shift out of the way to accommodate the moved one. Note that you can move a workspace only to an existing workspace location; you can't move it to a new row or column without first adding either a new row or column in System Preferences.

MOVE ALL OPEN WINDOWS TO A NEW SPACE In addition to letting you move between workspaces, the arrow keys have other powers in Snow Leopard's version of Spaces. Want to collect the open windows from the currently selected workspace and move them to another workspace? Press F8 to activate Spaces and then hold down the ⌘ key prior to pressing an arrow key. For example, say you've got the upper left workspace selected in overview mode. Press ⌘–Right Arrow, and all its open windows will move right one workspace. If you hold down the Option key instead of the ⌘ key, pressing an arrow key will then swap the currently selected workspace with the one in the direction of the chosen arrow key. For example, with the upper left workspace selected, pressing Option–Down Arrow will swap open windows between that workspace and the one immediately below it.

Move All Program Windows at Once

What if you want to move all of an application's windows to another space? Sure, you can drag them one by one, but that's a pain. Instead, hold down the Shift or ⌘ key before you click and hold a window. Then, still holding down that key, drag one window of a program; all that program's other windows will follow.

Automate with Services

One of the easiest ways to be more productive is to automate repetitive tasks. OS X offers a couple of ways to do this. One is to build your own workflows in Automator, OS X's easy-to-use scripting tool. If that seems like a lot of effort, don't worry—your Mac already knows how to perform many useful tasks. The secret lies in the Services menu, which lives in the application menu of OS X and third-party programs.

Get Started with Services

Services are automated scripts that perform common operations on files or text. The Services menu resides in a program's application menu. For instance, you can select a file in the Finder, then navigate to Finder ▶ Services ▶ New Email With Attachment to attach the file to a new e-mail message, just waiting for addressing and delivery.

Want to quickly create a Stickies-style note? From a program that supports text (such as TextEdit, Safari, or Preview), highlight some words and select *applicationname* ▶ Services ▶ Make New Sticky Note. This launches Stickies and creates a new note containing your selected text—all in one step.

The Services menu is contextual, meaning it will show only those services that make sense for whatever you have selected (see "Just What's Relevant"). For example, if you select an image file in the Finder and then open the Services menu, you'll see only services related to working with images. Those relevant services are grouped by function (Text, Searching, and so on).

In Snow Leopard, Mac users have complete control over what appears (or doesn't appear) in their Services menu. In the Keyboard Shortcuts tab of the Keyboard preference pane there is a Services section (see "Manage Your Services"). There, you'll see a list
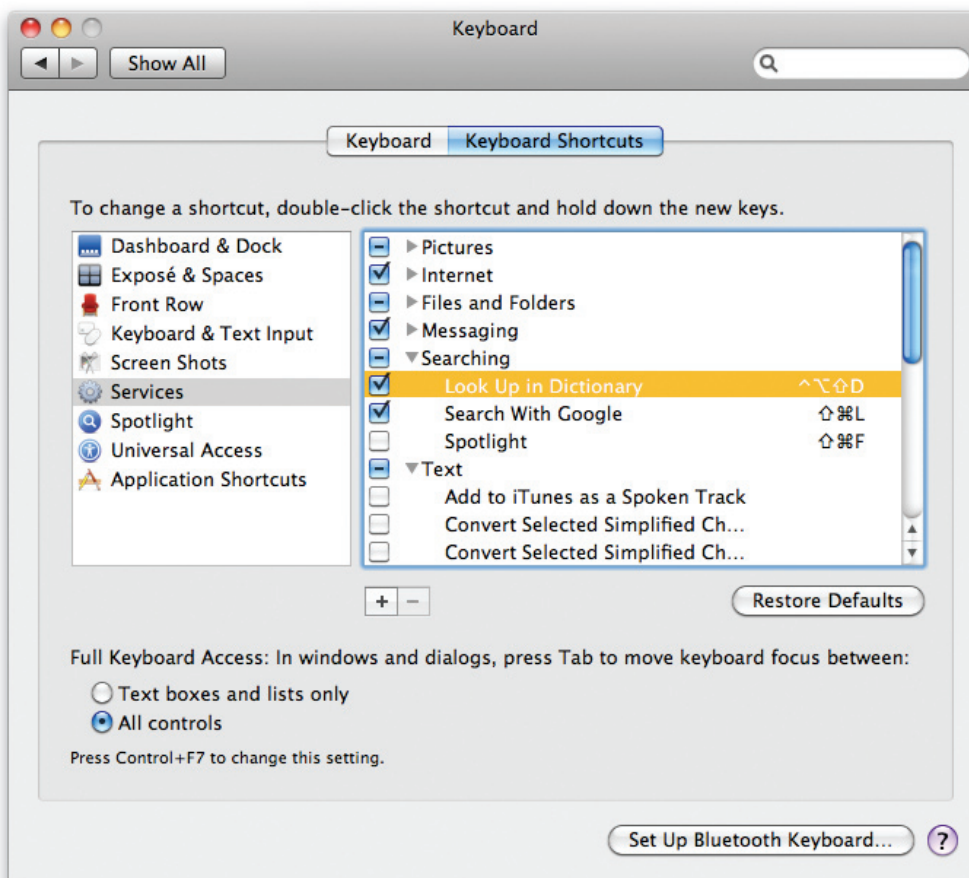
Manage Your Services Use the Keyboard Shortcuts tab of the Keyboard preference pane to enable and disable services and assign your own shortcuts.

of every service installed on your Mac, along with checkboxes to enable those you want and disable those you don't, and an option to assign keyboard shortcuts to them.

Third-Party Services

If Snow Leopard doesn't offer a service you'd like to have, but you'd rather not spend your time creating it yourself in Automator, you can wait for third parties to do it for you. Services are typically associated with just one application, and when you install that app, you get its services as well. You can also download application-specific services from anyone who cares to offer them.

You can find a large selection of services online; a good place to start is at the Mac OS X Automation Website (macworld.com/5286). There you'll find services (many accompanied by movie demos) that work with Finder, the Media Picker, PDF files, photographs, movies, the Internet, and more. You can download them all for free, and you can open them in Automator and see exactly how they were written.

Some of the services provided by third-party applications may disappear from the Services menu when you upgrade your OS to Snow Leopard. If that happens, you need to manually re-enable the missing services, using the Keyboard preference pane. There you'll see a list of every service installed on your Mac, along with checkboxes to enable those you want and disable those you don't, plus an option to assign them keyboard shortcuts.

Skip the Contextual Menu

In addition to appearing on the Services menu itself, Snow Leopard's services are also supposed to appear on the contextual menu that pops up when you Control-click (or right-click) a selection. Unfortunately, due to an apparent bug in 10.6, this doesn't always work. It turns out that these contextual menus will work for services provided by third-party applications (once you've re-enabled them). And it'll work for some Apple-provided services—specifically, those listed in the System/Library/Services folder, which are independent of any specific application. You won't, however, see services for many other apps on these contextual menus.

More significantly, even when they do work, these menus don't show you all the services that are appropriate for a given selection. If you open the Services menu itself, you'll have many more services
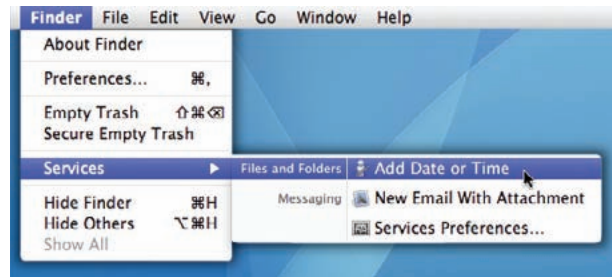
Just What's Relevant The retooled Services menu now shows you only those services that are relevant to what you're doing.

to choose from. In practical terms, this means that—at least until Apple squashes this bug—you should use the Services menu, not any contextual menus, to make sure you have access to all the services available for a particular selection.

Build Your Own Services

You can use the Automator to create a service that will extract the text from one or more PDFs selected in the Finder. This service will then place the extracted text into a new text file, save it, rename it, and move it. All of this will take only a few minutes to create; you can then access the service from the Finder's contextual menu, or via a keyboard shortcut.

STEP 1: GET ORIENTED The Automator interface is divided into four sections (see "Get Acquainted"). The leftmost column lists general categories of actions and variables arranged in libraries. Click a Library entry, and the actions or variables included in that collection will appear in the second column. Below these columns is a brief description of the selected item. The large work area on the right is where you'll build your workflow. To create it, you'll drag actions one by one from the second column to the bottom of your workflow. The workflow will mimic what you'd do by hand.

STEP 2: SET YOUR STARTING POINT When you launch Automator, you're greeted with a drop-down pane that lets you choose from a number of workflow templates. Select Service, then click Choose.

This will open an almost blank template. At the top, you'll notice a thin section with two pop-up menus and a checkbox; you use this area to define what type of information your service works with, which applications it works in, and whether the action it takes replaces the selected text.

Click the first pop-up menu and set it to PDF Files

Incoming Data Before you build your service, use the menus at the top of the workflow pane to tell Automator what type of data you'll be working with.

(see "Incoming Data"). Set the second pop-up menu to Finder, as that's where the service will be activated. Since you're working with selected PDF files, not selected text, the checkbox won't be clickable.

STEP 3: EXTRACT TEXT FROM PDFS Because the service will launch only after you've selected one or more files in the Finder, you don't need to tell Automator how to find the files it'll be working with; they'll be passed in when you launch the service. Instead, your first action will be to pull the text from the PDFs. Select the PDFs entry in the Library column, then drag the Extract PDF Text action into the work area on the right side. Set the options on this action as you prefer—for example, you might choose Plain Text output to get rid of any formatting, and then add a page header. You can leave the destination set to Desktop (the service will move the file later), and keep the output file name the same as the input name (the extension will differ, so that won't create any conflict).

STEP 4: RENAME FILES After extracting the text, the next step is to rename the file. In the Library column, select Files & Folders; then drag Rename Finder Items into the work area on the right, below the existing Extract PDF action.

When you drop the workflow, a dialog box will appear asking if you want to first copy the items before renaming. Since you'll be renaming a file you just created (and which you can easily re-create), there's no point in making a copy, so click Don't Add.

Modify the action as you wish; in this case we've added the creation date at the front of the file name, included leading zeros, and set the date separators as dashes. The end result will be a series of files that are automatically sorted by creation date, even when viewed in alphabetical order.

STEP 5: MOVE FILES The last step is to move the file to its final destination. In this case, that's to a folder named Extracted PDFs on the desktop. In the Files & Folders column in the Library, drag the Move Finder Items action to the bottom of your workflow.
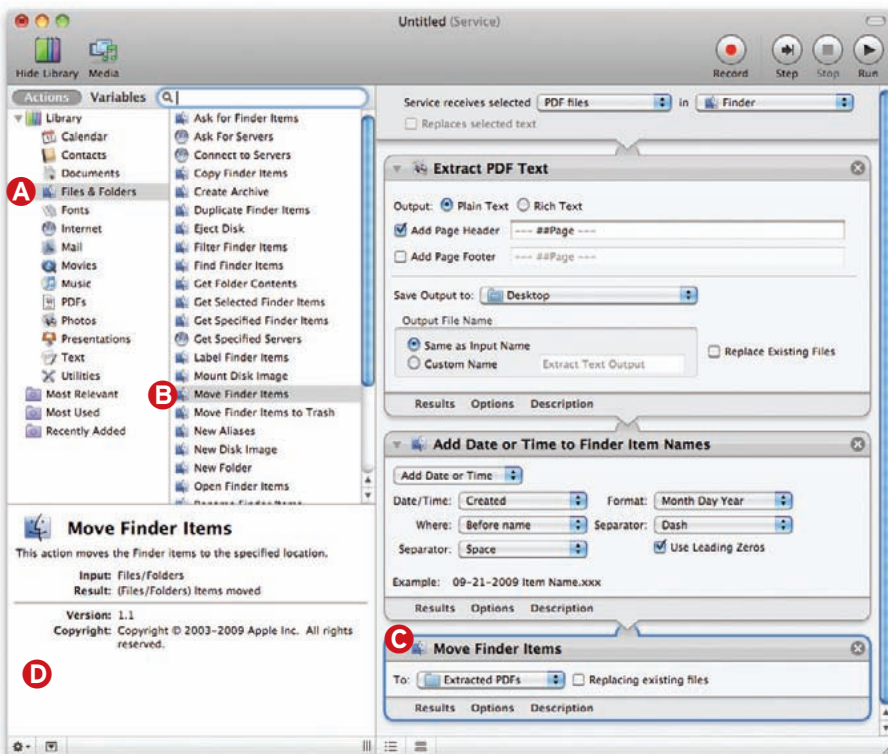
Get Acquainted To build your workflow, click a Library item **A** to open relevant actions, and then drag the appropriate action from the Actions column **B** to the work area **C**. The information pane **D** offers a description of the selected action.

Test a Service

Because services require that you have made a selection in another program before running your workflow, you can't test them from within Automator as you write them. Instead, you must temporarily add an action at the beginning of the service that grabs the item you want. For example, to test the Extract Text From PDF service you built previously, you would need to add the Get Specified Finder Items action (from the Files & Folders section) to the beginning of the workflow. Once you're sure everything is working, simply delete or disable the unneeded action.

26-11-Mac911-IRIS.pdf

Easy Access Once you've built your service, you can access it by Control-clicking one or more PDFs in the Finder.

Click the To pop-up menu and navigate to the folder where you'd like to save the files; select Other if it's not one of the predefined destinations. Click the target folder once, then click the Choose button to set that folder as the destination.

STEP 6: SAVE IT When you're done with your workflow, select File ▸ Save, give your new service a memorable name (Extract Text From PDF, for instance), and click Save. That's it. You've just created a new shortcut for your Mac.

STEP 7: USE THE SERVICE Once you've created your service, using it is as simple as could be. In the Finder, select one or more PDFs, then Control-click the selection to display the contextual menu (see "Easy Access").

Scroll to the bottom of the contextual menu and select Extract Text From PDF (or whatever you named the service). If you prefer, you can also access the service from the Finder application menu (Finder ▸ Services ▸ Extract Text From PDF).

Wait a second or two (or longer, if you've chosen a huge PDF), then navigate to the destination folder (named Extracted PDFs in this case). There you'll find one text file for each PDF you had selected, each containing the text from that PDF.

Printing

The Ins and Outs of Setting Up and Troubleshooting a Printer

Despite all the talk about our "paperless future," prints are still very much a reality for most Mac users. Whether we're adding photos to our family albums, creating newsletters, or sending off business documents, many of us rely on our printer for everyday tasks.

Snow Leopard makes the process of hooking up a new printer easier than ever, thanks to its ability to download printer drivers on an as-needed basis. But there are still plenty of things that can go wrong with your printer connection.

The Basics of Printing

Not sure where to start with your new printer? Here's what you need to know to get it connected, to access its settings, and to share it with others.

Setting Up a New Printer

Unless you tell it otherwise, Snow Leopard automatically figures out what printer models you've previously used and installs drivers for them. By default, it also installs drivers for printers it detects on your local network, as well as for printers Apple deems popular—commonly owned printers from major manufacturers. With this collection of drivers installed, chances are you'll be able to use any printer you come across.

Despite these efforts, it's still possible that you'll someday attach a printer that OS X has never heard of. If you've got an Internet connection at that moment, you shouldn't have much trouble: Snow Leopard will automatically download and install the drivers it needs. You can also manually install printer drivers using the software that came with your printer, or by checking the manufacturer's Website for updated software.

Once you have the drivers, you'll want to add the device to your Mac's list of available printers. Make sure the printer is turned on, open System Preferences, and select Print & Fax. Click the plus sign button (+) on the bottom-left side of the window to launch the Printer Setup Utility. Your newly installed printer's name should appear in the Default list. Select it and click the Add button. The printer will now appear in the Print & Fax preference pane, as well as in your applications' Page Setup and Print dialog boxes.

To make this printer the default printer (if you have more than one), select it from the Default Printer drop-down menu in the Print & Fax window (see "Pick Your Printer").

Printing Documents

To print an open document, choose File ▸ Print (or press ⌘-P), select your printer from the Printer pull-
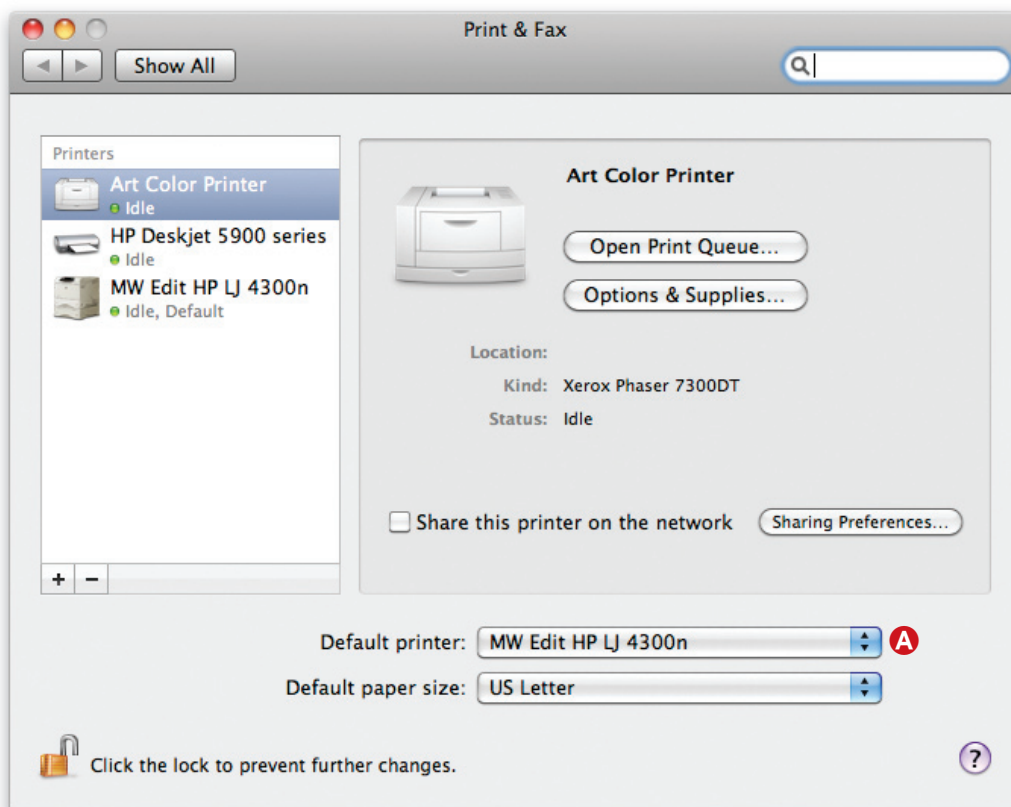
Pick Your Printer To manage your printers, open the Print & Fax preference pane. If you have more than one printer on your network, choose the one you use most from the Default Printer menu **A** to ensure that you always print to it.
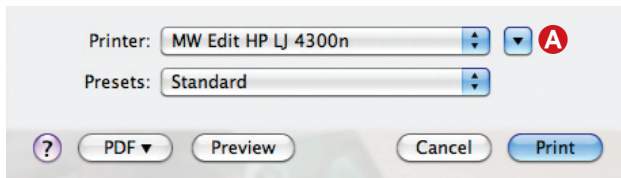
More Options If you only see a small Print dialog box like the one above when you go to print, click the downward arrow Ⓐ. You'll get an expanded Print box (right), with many more options, including a preview of the file, options to print only certain pages, and a menu to access additional printer settings Ⓑ.
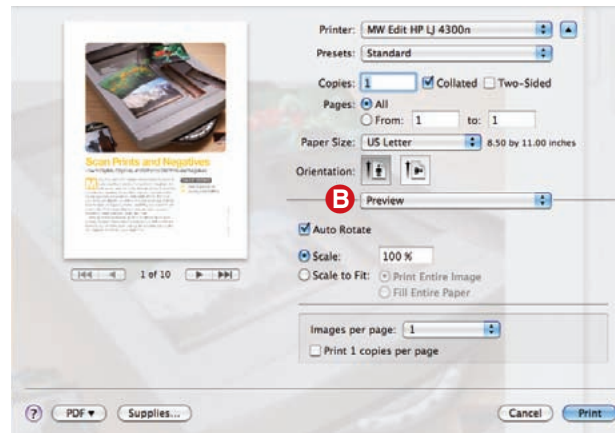
down menu in the resulting Print dialog box, and then adjust the settings if necessary—the page range and the number of copies, for example.

If you don't see options for setting the number of prints or page range, you'll need to expand the Print dialog box. Do this by clicking the downward arrow to the right of the Printer pull-down menu. You'll get a much larger dialog box that includes a preview of your documents and additional options.

To change the paper size, page orientation, or scale of printed pages, use the Page Setup dialog box (go to File ▸ Page Setup) to do so before printing.

In one of Snow Leopard's less-publicized improvements, the Print dialog box now does a better job of showing you when your supplies are running out. If your printer's ink levels are low, a low ink warning now appears in the Print dialog next to the Supplies button—even with an AirPort-connected printer. If you click the warning icon, a display appears that shows the current levels of each individual cartridge.

Controlling Your Queue

When you print a document, the printer icon will appear in your Dock. If you click this icon you can see your printing queue—the list of current print jobs being processed by your computer (see "Queued Up"). You can monitor the status of active print jobs, as well as control them, in this window.

A row of icons on the top of this window allows you to delete, hold, or resume a specific job. If you'd like to stop all jobs in your queue, just click the Pause Printer icon.

Accessing Image-Quality Settings

Some printers give you the option of fine-tuning your prints for better photographic output or improved

performance. If yours does, you can access these settings from the Print dialog box. You'd be surprised at how much your prints will improve if you simply tell your Mac whether you're using glossy, matte, or plain paper.

First, make sure that your specific printer is selected in the Printer pull-down menu. In some Apple programs like iPhoto, you can select your paper type from the Presets menu and your paper size from the Paper menu. If you're printing from an application that uses the standard OS X Print dialog box, you can access your printer's image-quality settings by clicking the settings pull-down menu (by default it usually says Copies & Pages or the current application's name) and selecting which setting you would like to customize (see "More Options"). You should find options for print quality, speed, and so on. When you're done, click Print.
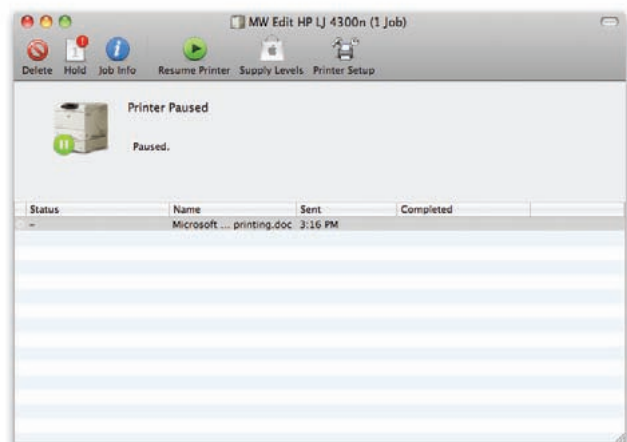
Queued Up If nothing is coming out of your printer, check the printer's queue to see if there's a problem. You can also use this tool to pause or delete errant prints.
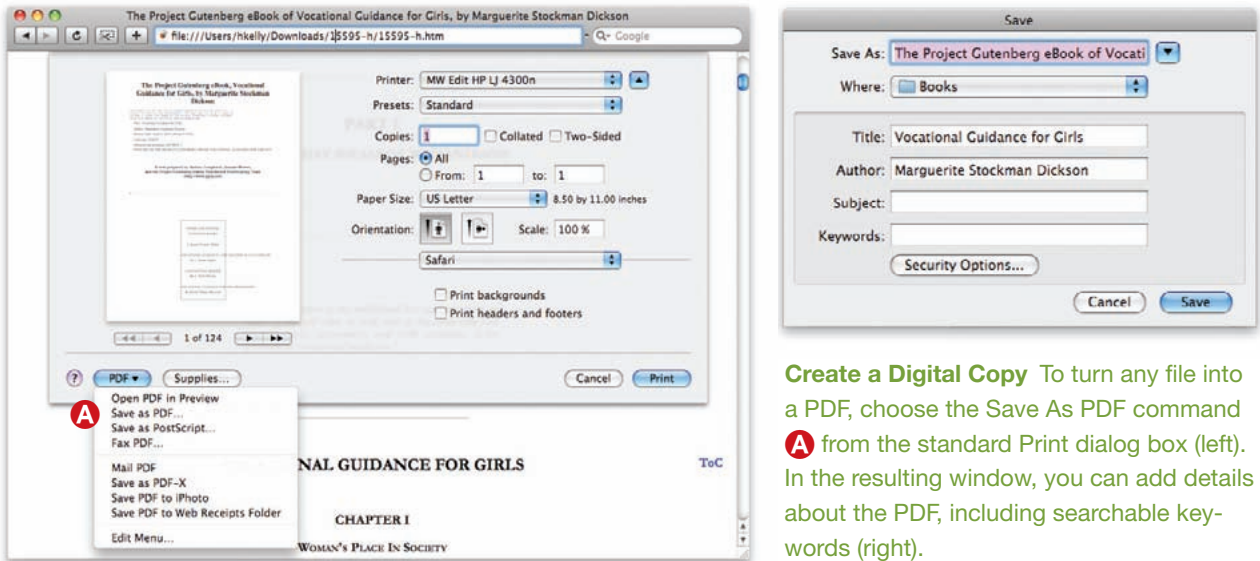
Create a Digital Copy To turn any file into a PDF, choose the Save As PDF command Ⓐ from the standard Print dialog box (left). In the resulting window, you can add details about the PDF, including searchable keywords (right).

Sharing a Printer

If you have a printer connected to your USB port, you can share it with other Mac users on your network. To get started, launch System Preferences, select the Sharing pane, and turn on the Printer Sharing option in the Service list. At that point, you'll see two windows: Printers and Users. Place a checkmark next to the printer you want to share from the first window. Then use the Users window to specify how much control you'd like to give other users.

With Printer Sharing turned on, other Mac users should be able to access the printer by opening his or her Print & Fax preferences, clicking the plus-sign button, and choosing the printer from the list of default printers.

"Printing" a File as a PDF

Printing isn't the only thing you can do from the Print dialog box. If you'd rather keep an *electronic* copy of a Web site, a completed form, or any documents that contain special formatting, a better option may be to create a PDF. A PDF file preserves text and graphics in a format that can be viewed on any computer but not altered. OS X makes it easy to create PDF files. With a document open in any application, choose File ▶ Print. In the Print dialog box, click the PDF button and choose Save As PDF from the pop-up menu (see "Create a Digital Copy"). Give the PDF file a name, specify a location, and then click Save. You can now open the PDF file in Preview or any other PDF-compatible application.

Solving Printer Problems

Printing a document is usually one of the easiest things you can do on a Mac. Simply select File ▸ Print, and you're pretty much done. That is, unless your printer refuses to print. Restocking the printer's paper tray will often solve the problem, but when obvious solutions like that don't work, figuring out what to do can be a time-consuming task. If your printer completely stops printing, the best thing to do is to start with the basics.

Check Your Default Printer

First, check that the printer is on and is plugged in to both the power outlet and your computer. If you have more than one printer connected to your Mac or the network, check that your intended printer is the one selected in the Printer popup menu of the Print dialog box. If it's not, simply select the correct printer from the pull-down menu and try again.

If the Print dialog keeps reverting back to the unintended printer on subsequent trips to the Print dialog box, open System Preferences and select the Print & Fax preference. Switch the Default Printer pull-down menu to the correct printer.

Check Your Supplies

Make sure you have paper in the paper tray. Typically, you'll see an alert on either your Mac's display or the printer's LCD panel. But check the paper supply even if no error message pops up on your screen.

Inkjet printers are also notorious for not printing when even one of their multiple ink cartridges is empty. How do you know if a cartridge needs replacing? In Snow Leopard, you should see a warning message in the Print dialog box next to the supplies button. You can also select your printer in the Print & Fax system preference pane, and then click the Options & Supplies button. Switch to the Supply Levels pane (see "Supply Levels"). If you only see a message that says "Information not available," check to see if there is a separate utility you can launch instead. Some printers come with their own management software, which you probably installed when you first set up the printer. If not, check the company's Web site.

By the way, a message that says you're low on ink may be incorrect. The problem may be that the print head's nozzles are clogged. To check for this, and hopefully fix the problem, clean the nozzles with the
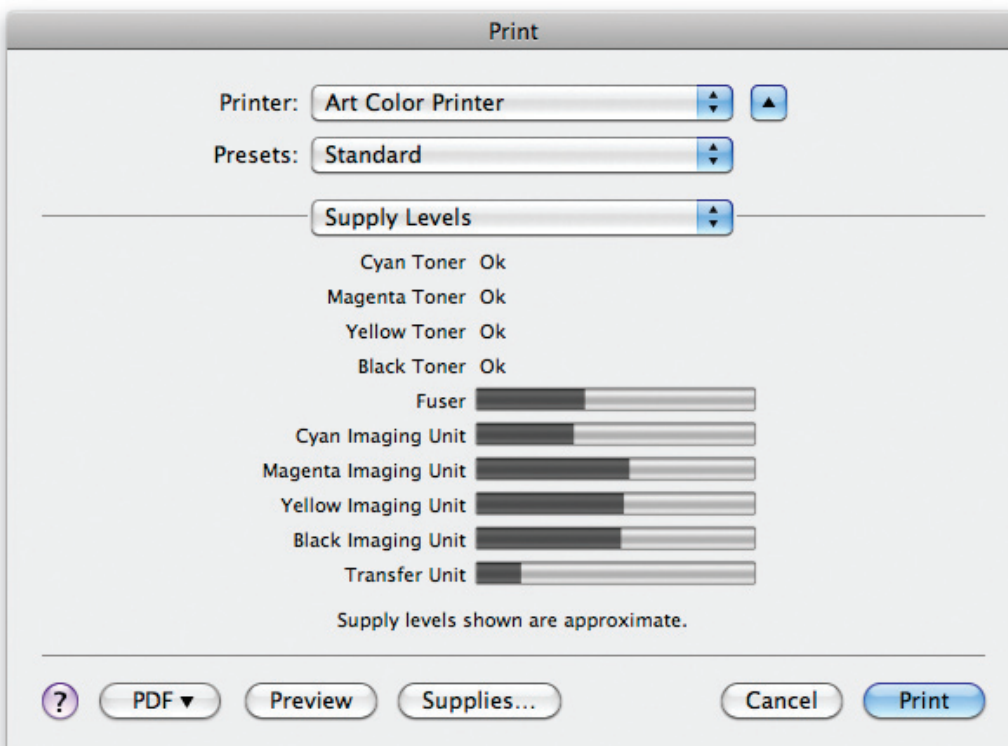
Supply Levels
You can often use the Print & Fax system preference pane to take a peek at a printer's ink or toner levels. However, not all printers support this option. You may need to look for the utility that came with your printer.

appropriate feature in the printer's utility. (The manual that came with your printer should provide details.)

Replace the Driver

If you're still having trouble, the problem may be with your printer driver. The easiest thing to do is replace the driver and start fresh.

Shut down your Mac, turn off the printer, and unplug the USB cable. Now plug it back in, turn on the printer, and restart your Mac.

Next, open your Print & Fax system preference, select your printer in the list (if it appears), and click the minus-sign button. When you're asked whether you want to delete the printer, click OK. To replace the printer, click the plus-sign button. In the window that appears, select your printer and click Add.

Check Network Connections

If the printer is a shared printer, you have some other easy checks: Go to the Mac where the printer is connected and make sure that the Mac is turned on and not asleep. Next, confirm that the Printer Sharing option is enabled in the Sharing system preference. Finally, check that the Share This Printer option is enabled for the printer in the Print & Fax system preference.

If none of this has any effect, and your printer is connected over a wireless network (such as via an AirPort Base Station's USB port), make sure your computer and the printer are on the same network. It's possible that your Mac somehow joined a different wireless network (such as your neighbor's password-free Wi-Fi).

Keep in mind that printer utilities for cleaning the print head may not work if your printer is connected to your Mac over a wireless network. To use these tools, you may need to temporarily connect your printer directly to one of your Mac's USB ports.

Take a Look at the Queue

Instead of a freshly printed page sitting in your printer tray, all you see is the Dock icon for your printer bouncing up and down. What now? That Dock icon represents your printer's queue (in other words, the list of jobs waiting to print). You might also see a yellow triangle with an exclamation mark on the icon. This alert shows that the printing process has gone awry. To find out more, click the Dock icon. The Queue window should open and, with luck, contain a message that describes the cause of the printing failure. If the message refers to your paper tray or ink levels, follow the aforementioned instructions for resolving those problems. If the message offers other clear advice (such as to click Resume), follow it.

Otherwise, select the name of the print job in the Queue window and click Delete in the toolbar. If other, older print jobs are also listed, delete them as well. If you don't recognize the print job listed, click the small arrow to the left of its status. You'll get a preview of the document. When you're done, the status message in the Queue window should say "Printer Ready."

As an extra precaution, turn your printer off and back on again. This "resets" the printer, potentially correcting any trouble at the printer's end. Now go back to your application and try printing once more.

Get Started with OS X Apps

How to Get Up and Running with Safari, Mail, iChat, and More

A new Mac comes with more than 40 applications installed: standards such as programs for checking your e-mail, surfing the Web, and managing contacts; creative tools for editing photos, listening to music, and designing Web sites; smaller aids for looking up definitions, writing notes, and checking the weather; and more. You can also install additional applications from Apple and third-party developers such as Adobe and Microsoft to add features that don't come built-in.

Although taking you step by step through everything Snow Leopard's built-in programs can do would take up an entire book on its own, here are the basics you need to know to get started with the most essential apps—as well as information on installing or deleting additional software.

Installing, Deleting, and Updating Programs

Although Apple supplies you with most of what you need to get started with your Mac, there's a thriving community of software developers ready to fill in what's missing. (For some of our favorites, see the *Worthwhile Add-ons* chapter.)

Installing New Software

New software can come in a couple of different formats:

FROM A DISC Most software you purchase on a disc—a CD or DVD—will come with an installer application. Just double-click the installer, and it will walk you through the steps for installing the software.

Instead of an installer, some discs display an icon of the program along with a note that tells you to drag the icon to your Applications folder. To quickly put the software in the right place, click the clear oval button in the upper right corner of the disc's window. This exposes the window's sidebar, where you'll see the Applications folder. Then just drag the application's icon to this folder.

FROM THE WEB Many companies now let you download new software right from their Web sites. This type of software often comes in the form of a *disk-image*—a file with a .dmg file extension. This is like a virtual hard drive. Just double-click the .dmg file, and a picture of a virtual removable drive will appear on your desktop and in the sidebar (see "Image Is Everything"). Note that if you've set Safari to open downloaded files automatically (by selecting the Open "Safe" Files After Downloading option in Safari's General preferences), Safari will mount the disk image for you.

Now double-click the disk image, and you'll find your application or its installer inside. You can install the application the same way you would install an application that came on a disc. When you're done, eject the disk image by clicking the eject arrow next to its name in the Finder window's sidebar or by dragging it to the Trash.

You'll occasionally come across an installer that isn't a .dmg file. Instead, it will have a .zip or .sit

Image Is Everything An application downloaded from the Internet will usually appear on your desktop as a .dmg file **A**. When you double-click this file, the Finder will mount a disk image **B**, in which you'll find the program's installer **C**. In many cases, you can simply drag the program icon into your Applications folder. If you can't see the sidebar, click the clear button **D** to reveal it. Click the eject button **E** when you're done to eject the disk image.

extension. These are compressed files that must be expanded. The Mac will automatically expand .zip files when you double-click them. The expanded file will appear as a new folder or file, in the same place as the .zip file. To expand .sit files, you'll need a copy of SmithMicro's free StuffIt Expander (macworld.com/1625).

CLEANING UP Once you've installed an application downloaded from the Web, you may wonder what to do with the installer program. If it's a freely available installer—a piece of shareware, for example, or an update that you can download again later from the publisher's Website—you can toss it into the Trash.

However, you may want to hang on to some installers. For instance, if you've purchased a piece of software on the Internet and can download that software only for a limited time, keep the installer in case you need to reinstall the software later. You might even want to burn it onto a CD for safekeeping. Hanging on to your installers also makes sense if you have a slow Internet connection. You'll likely want to avoid repeating a six-hour download.

Where to Install Applications

By default, OS X stores applications in the Applications folder at the root level of your hard drive (the area of your hard drive that you see when you double-click the hard-drive icon either on your desktop or in the Finder's sidebar). Applications stored here are available to anyone using your Mac—even someone working in a different user account. You can use parental controls to restrict apps for certain users.

You can also store applications in the Applications folder inside your user folder (this is the folder that's represented by a house icon). Only those logged into this account can use an application stored in this folder (for more on user accounts, see the *User Accounts* chapter).

For the most part, though, you can put applications anywhere you like—the Mac will launch applications you've placed on the desktop, for example, or stored somewhere else on your hard drive. However, we recommend keeping them in the root-level Applications folder so they're easy to find. And if an installer places files in the Applications folder, you should leave them there—some applications and application suites (Microsoft Office, for example) expect to find certain support files in this folder. If you move them, the applications may not run properly.

Certain types of applications—preference panes, for example—aren't installed in your Applications folder. Instead, you'll be instructed to copy the app to a specific location. This might be a folder within a Library folder, for example. Be sure to follow the instructions in any Read Me or How To Install documents, which are often included with the download.

Deleting Software

When you want to uninstall a piece of software, check the original disc or download package for an uninstaller (or find out whether the installer has an Uninstall option). If it has one, use it. In most cases, however, you can delete an application simply by dragging it to the Trash and selecting Empty Trash from the Finder menu.

Unlike Microsoft Windows, which scatters countless support files and drivers in different places on your hard drive, OS X stores most support files inside the application bundle. (Although an application looks and acts like a single file, it's actually a collection of files.) So when you delete an application, all of these files also get deleted.

The exceptions to this are preference files, which almost all applications create and which are stored in a Library folder. However, these files do no harm if you leave them where they are. A few programs also store other kinds of support files; these, too, can usually be left where they are.

If you really want to get rid of everything, you might try a shareware program called AppZapper ($13; appzapper.com), from Austin Sarner and Brian Ball. Many people have found AppZapper effective for deleting both applications and their ancillary files. A free demo of the program lets you delete up to five applications.

Updating Software

Making sure that you're always using the most recent versions of your applications—both from Apple and from other companies—is a very smart thing to do. These updates usually include bug fixes and may even add new features to your software and hardware. However, some caution is prudent—especially when installing upgrades to the operating system itself. It's a good idea to check Mac-related Websites to make sure other people aren't experiencing problems with the update before installing it on your own Mac.
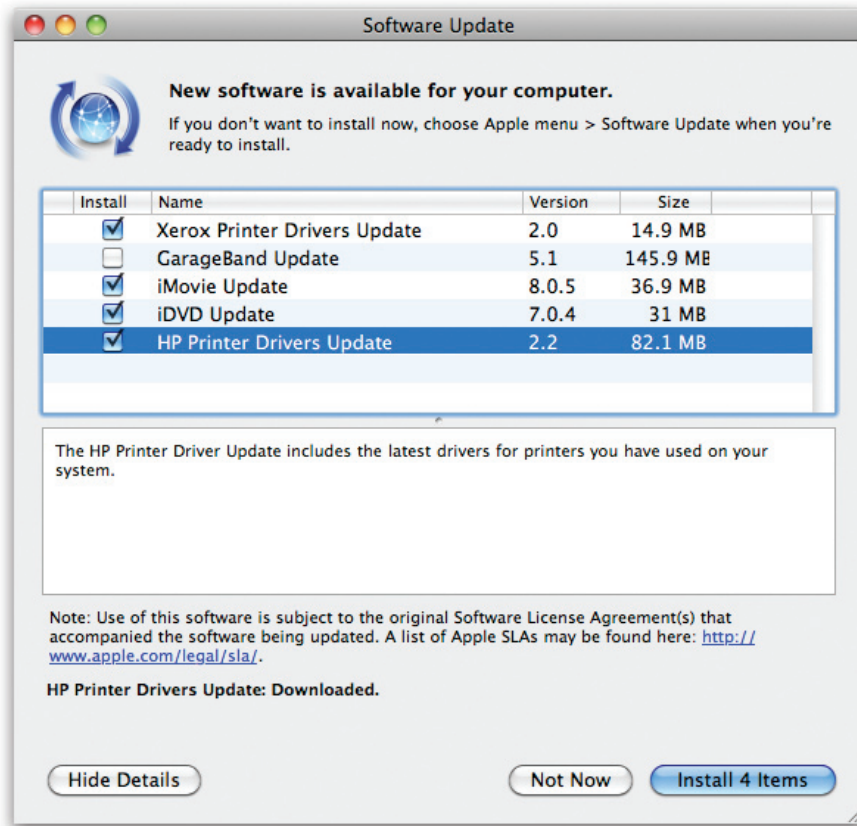
APPLE SOFTWARE To stay up-to-date with Apple's applications, use the Software Update program. To access it, open System Preferences (from the Dock or the Applications folder) and select Software Update. Open the Update Software tab, and click Check Now to look for new releases.

Unless you deactivate the Check For Updates option, Software Update will regularly check with Apple over your Internet connection to see whether updates for any Apple software are available. When it learns that updates exist, it presents a list of them (see "The Latest and Greatest").

NON-APPLE SOFTWARE Updates to applications that are not distributed by Apple won't appear in Software Update. Some programs do check for updates on their own—Microsoft Office, for example, includes a stand-alone application that automatically looks for updates via your Internet connection (most applications that offer automatic update searching let you turn the feature off).

Many other applications don't automatically check for updates but do offer a command—found either in the application menu or in the application's Help menu—that checks for updates.

If neither of these options is available, you can check for updates on your own. Two Websites, VersionTracker (www.versiontracker.com) and MacUpdate (www.macupdate.com) list most Mac applications created in the past several years and provide links to those applications' updates.

Safari

As many of us get a rapidly increasing amount of our news, information, and entertainment from the Internet, a Web browser has become an absolute necessity. Apple's Web browser is called Safari.

Accessing Your Top Sites

By default, when you launch Safari or open a new browser window, you'll see Safari's Top Sites page.

The Top Sites page shows a grid of webpage thumbnails, making it easy to visit a site with a single click. By default, Safari watches which pages you visit most often, and dynamically updates the Top Sites page based on the usage statistics (see "Top of the Heap").

You can also add your own sites to Top Sites. Just open two Safari windows, one showing the Top Sites page, and one showing the page you'd like to add to Top Sites. In the Top Sites window, click the Edit button. In the other window, just drag the icon of the site you want to add (this appears on the left side of its address in the URL bar) into the Top Sites window. Drag it exactly where you'd like it to appear, then drop it.

By the way, Safari will also let you know which of your top sites have updates by displaying a peeled-back corner with a white star.

You can also pin your top sites in place, so that they'll always be in the same spot when you load the Top Sites page. To do this, click the Edit button, and

then click a site's pin icon to stick that site in its current location. While in Edit mode, you can also rearrange the Top Sites thumbnails by dragging (this will pin them to the new location), and delete unwanted pages by clicking the X icon on each page.

Change Your Home Page

If you don't want the Top Sites page to open whenever you launch a new window, you can change the behavior. Open Safari's General preferences and choose a new option from the New Windows Open With Setting. You can opt to have windows open to a specific Web page, an empty page, a set of bookmarks, and more.

Open Multiple Pages

Like most applications, Safari lets you have multiple windows open simultaneously. Just select File ▶ New Window to open a new browser window; each can display a different Web page.

To open a link in a new browser window that will appear *behind* the current window, hold down ⌘-Shift as you click the link.

Use Tabbed Browsing

Too many open windows can clutter your screen and cause confusion. Thankfully, Safari offers a solution: tabbed browsing. Tabbed browsing lets you open pages in separate tabs that appear just below Safari's Bookmarks bar. To switch from page to page, click the appropriate tab (the name of the page appears on its tab).

You can enable tabbed browsing from Safari's preferences. Then when you ⌘-click a link, the link will open in a new tab. To create a new tab and immediately switch to it, hold down ⌘-Shift as you click a link. And even though you've enabled tabbed browsing, you can still open new browser windows. In fact, each Safari window can have multiple tabs.

Use Bookmarks

Bookmarks give you a way to save frequently visited sites without searching or typing the address in each time. With bookmarks, your preferred news, blogs, and networking sites are just one click away.
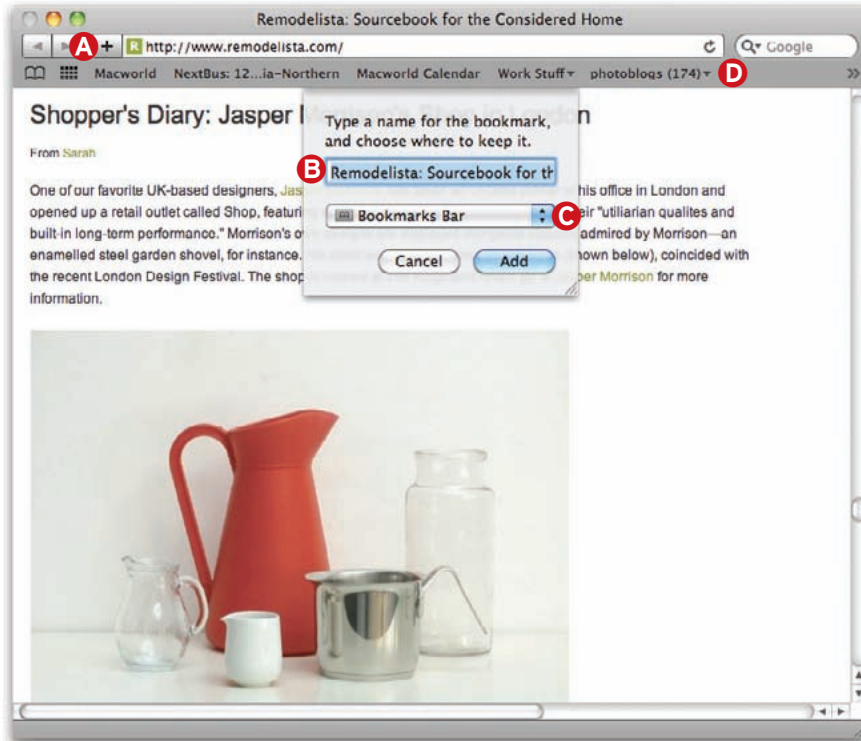
Top of the Heap   The Top Sites page shows previews of your most-visited Web pages.

ADD A BOOKMARK To get started with bookmarks, travel to the site you want to bookmark, and choose Bookmarks ▶ Add Bookmark (or click the plus sign to the left of the URL). In the dialog box that appears, enter a short name for the bookmark and select where you'd like to store it (see "Back for More"). You can add it to the Bookmarks bar (which appears at the top of every browser window), to a Bookmarks folder (which you access by selecting Bookmarks ▶ Show All Bookmarks), or to the Bookmarks menu (the pull-down menu that appears when you click Bookmarks).

DELETE A BOOKMARK To delete a bookmark, open the Bookmarks window by choosing Bookmarks ▶ Show All Bookmarks or by clicking the Bookmarks icon in the Bookmarks bar (it looks like an open book). Then select the bookmark you'd like to delete, and press the Delete key.

GET ORGANIZED If you have a lot of bookmarks, you may find it useful to organize them into collections. To do this, open the Bookmarks window (Bookmarks ▶ Show All Bookmarks) and click the small plus-sign button at the bottom left corner. Give the collection a name. You can then drag bookmarks from other locations into this collection. To organize further, add subfolders to collections by clicking a collection's name and then clicking the plus-sign button below the Bookmark column.

If you have a collection of bookmarks that you access more often than others, you can put it within easy reach by dragging it into the Bookmarks bar. When you do, a folder icon for the collection will appear in the area below the URL field. Click that folder to see a pull-down list of the collection.

BOOKMARK MULTIPLE TABS If you have multiple tabs open that you'd like to go back to later, you can save them as a group of bookmarks. Safari makes it easy. All you need to do is select Bookmarks ▶ Add Bookmark For These Tabs, and then name the bookmark.

Save a Web Page

To save a copy of a Web page you're currently viewing, choose File ▶ Save As, and select Web Archive from the Format pop-up menu in the resulting sheet. This creates a page that you can view without being connected to the Internet. If you click any of the page's links, Safari will attempt to establish a connection to the Internet.

This is useful, for example, if you want to save the confirmation details of an online transaction or want to preserve a page that may change.

RSS Feeds

A favorite feature of news junkies, RSS feeds are easily set up in Safari. RSS feeds are automatically
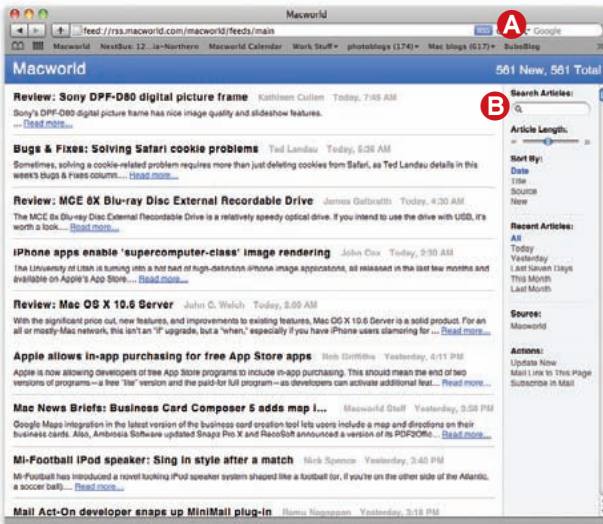
Feed Me Safari lets you view an RSS-savvy site's headlines. Click the RSS button **A** to view the page's feed. The options to the right **B** will help you find just the stories you're interested in.

generated news feeds that you subscribe to.

If Safari can find an RSS feed for a site, an RSS button appears in the address bar. Click this button, and the page changes to show you the site's headlines (see "Feed Me").

You can use the options on the right to choose how much of the article is visible in the list, how the list is organized, and how far back in time the articles go. You can then bookmark the page to quickly access the RSS feed at any time.

Search the Web

To the right of Safari's URL field, you'll see a text field that lets you submit a Google search query. As you type in the URL field, Safari displays a drop-down menu with three sections (assuming you're already viewing a Web page when you use the Google search box). The top section displays suggested searches from Google, based on what you've typed so far.

The second section displays recent searches that you've run, and the last section (really just one line) shows you how many matches for your search term exist on the currently loaded page. If you select this last entry, Safari will dim the screen and highlight the items on the page that match your search terms.

Search Your Browsing History

You remember seeing a recipe online a few days ago

that involved cranberries, but you have no idea which site it was on. Safari can help. Safari lets you search your history by keyword. That means it will search the URL, the title bar, and, most important, the actual content of the pages you've visited.

You can access the history search field from the Top Sites view, from your Bookmarks pane, or by selecting History ▶ Show All History. When you click the search box, you get a view of Web pages identical to the cover flow display in iTunes or Mac OS X's Finder (see "Search the Past"). Type a term in the search box, and Safari whittles down the number of displayed pages to match your results.

Go Back

Inside the Google search field, you will sometimes see a little orange arrow button. This represents Safari's SnapBack feature. It appears not only in the Google search field (if you've clicked a Google search result) but also in Safari's address field (when you click a link).

The SnapBack button lets you quickly return to your point of origin. In the Google field, clicking the button takes you back to the last Google results page you accessed. (To view the last ten Google searches you initiated in Safari, click and hold the magnifying-glass icon in the Google search field.)

When the arrow appears in the address field, clicking it returns you to the first page that you opened in that window. You can also designate another page to act as your SnapBack page. To do so, load the page you'd like to return to and choose History ▶ Mark Page For SnapBack.
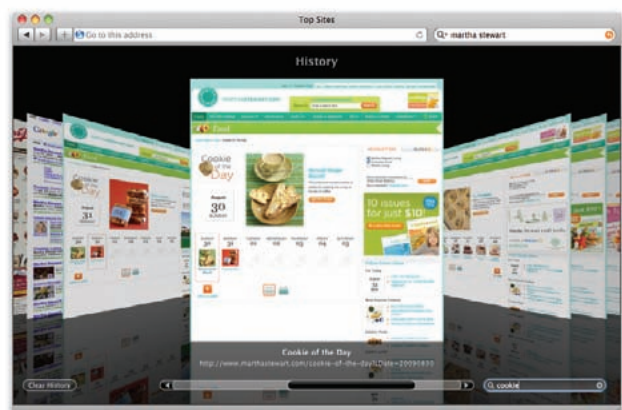
Search the Past A search of your history in Safari displays cover flow–style results.

Mail

Just about everyone uses e-mail these days. In fact, many of us have multiple e-mail accounts to keep track of—one for work and one or more for personal use. Apple's aptly named Mail program helps you not only check those accounts, but also organize messages and fight spam. In fact, Mail has come a long way since its first release and is now a very capable e-mail manager.

Not sure where to start? Here's how to tackle some of the most common Mail tasks.

Set Up Your Account

The first time you launch Mail (click the stamp icon in the Dock), it will prompt you to create a new account. A setup assistant walks you through this process, asking for any necessary information. Apple's account setup allows many people to start using Mail by simply typing in an e-mail address. Mail is aware of all the major ISPs' IMAP, POP, and SMTP server settings. For example, it knows the settings for 30 of the most popular e-mail services, including MobileMe, Yahoo, AOL, Gmail, Verizon, AT&T, and Comcast. After you type in your e-mail address, Mail takes care of everything else for you.

If you've entered information for an e-mail account that Mail can't automatically configure, you'll

May I Assist You? Mail's Accounts assistant walks you through the settings you need to configure a new e-mail account.

have to set up the accounts manually. For example, to manually set up a POP account—the kind of account offered by most Internet service providers (ISPs)—you'll be asked for the name of the ISP's incoming (POP) and outgoing (SMTP) servers. Mail gives you clear examples of the information you should enter, so you won't get confused. If you need further help, check your ISP's Website.

If you need to add another account—so you can check a second e-mail address, for example—choose File ▶ Add Account to launch the New Account assistant. You can also access this assistant by opening Mail's Accounts preference pane (go to Mail ▶ Preferences, and clicking Accounts). Click the plus-sign (+) button in the bottom left corner of the window to add a new account (see "May I Assist You?"). You can use Mail's Accounts preference pane to also make changes to an existing account.

Send a Message

Select File ▶ New Message (or press ⌘-N). Enter the recipient's e-mail address in the To field, enter a subject, type your message, and then click the Send button at the top of the New Message window.

To address an e-mail to multiple recipients, you can place a comma between each address in the To field. But if you often e-mail the same group, there's a much easier way: use Address Book to create an e-mail group. Open the Address Book application and click the plus-sign button at the bottom of the Group column to create a new group—for example, a group that contains everyone in your family. You can then drag contacts from other groups or add a new contact by clicking the plus-sign button at the bottom of the Name column. (Alternatively, select all the names that you want to be in the group and then select File ▶ New Group From Selection.)

The next time you need to send an e-mail to the entire group, open a new message window, and enter the group's name in the message's To field. As with individuals, Mail will try to automatically complete names that are in your address book and recent e-mails, meaning you only have to type the first few letters of a name or group.
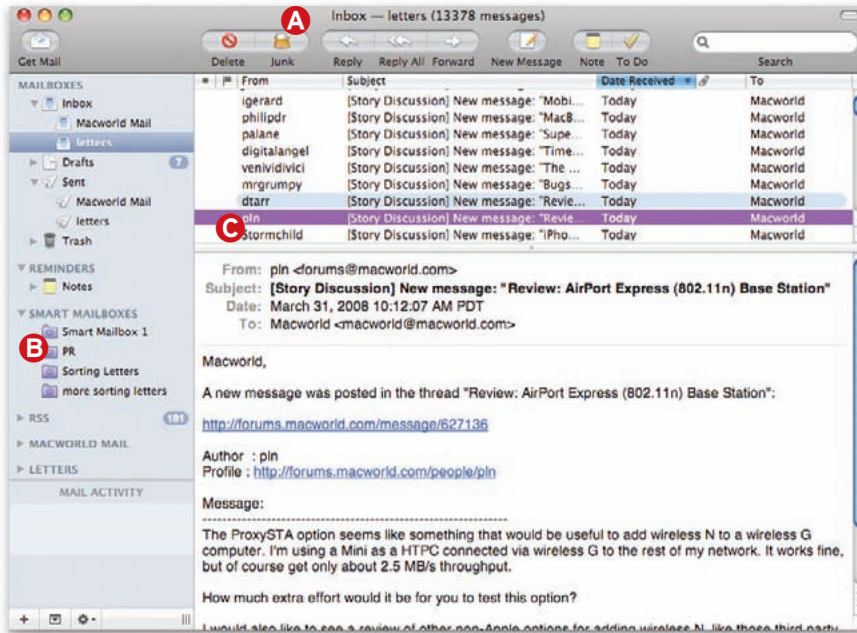
Mail Call OS X's Mail app lets you check your e-mail accounts, reply to messages, and manage incoming mail. Its junk-mail filter learns how to detect possible spam messages and automatically places them in the Junk mailbox Ⓐ. You can organize messages in folders or create smart mailboxes Ⓑ, which search for messages that meet criteria you set. When you click an e-mail in a mailbox's message list Ⓒ, Mail highlights other messages related to that thread. You can choose to have messages open in a pane just below the message list or in a separate window.

Check Multiple Accounts

If you have one account provided by your employer and another that you use at home, you can use Mail to check both at the same time. Open Mail's Accounts preference pane, click the first account you'd like to check, and then click the Advanced tab. Turn on the Enable This Account option. Do the same thing for each account you want to check. The next time you click the Get Mail button, Mail will download messages from every enabled account.

Check One Account

If you've enabled multiple accounts, but you just want to check one of them, choose Mailbox ▸ Get New Mail and select the account you'd like to retrieve messages from.

RSS

Safari isn't the only place where you can check up on the latest headlines. Apple also includes a way for users to check RSS feeds in Mail. When you choose File ▸ Add RSS Feeds, you can locate feeds you want to keep track of. New items in the RSS list show up similarly to new mail messages, with the total number of unread stories displayed on the folder. Clicking an RSS item opens a new window with a short teaser. Click the Read More button to open the full story in Safari. The new RSS tab in Mail's preferences lets you choose your default RSS reader, and specify how often Mail checks for new stories and when older items are deleted.

If you want to keep track of stories that mention specific topics, such as San Francisco or Apple, you can use Mail's Smart Mailbox feature to filter your RSS feeds even further. Choose Mailbox ▸ New Smart Mailbox and set the first condition to Message Type Is RSS Article. Then set up additional conditions as appropriate. For example, you might set the second set of conditions to read Entire Message Contains Snow Leopard to round up any RSS articles about Apple's newest operating system.

Manage Junk Mail

By some estimates, spam now accounts for 80 percent of all e-mail sent. Mail's Junk Mail filter (in Mail's preference pane) can weed out many unsavory messages, but there's plenty you can do to help.

NEVER RESPOND TO SPAM Don't click an unsubscribe link in a spam message. Don't write to tell a spammer to leave you alone. Don't even use your e-mail program's Bounce command to fake out junk senders. When you respond to an unwanted message, you let spammers know that your address is valid.

TRAIN YOUR JUNK-MAIL FILTER It's not enough to activate Mail's Junk Mail filter. You must correct it every time it makes a mistake—if all bad messages are marked as junk and all good messages are marked as not junk, your filter will be more accurate. (To change a message's designation, Control-click and choose Mark ▸ As Junk Mail or Mark ▸ As Not Junk Mail.)

DON'T VIEW IMAGES Spammers can tell that you've read their messages by using a Web bug, a

small graphic that your e-mail client downloads when you display a message with HTML formatting. To thwart Web bugs, turn off the display of HTML graphics. Open your Viewing preferences and deselect the Display Remote Images In HTML Messages option. If you receive a legitimate HTML-formatted message, you can easily download the images by clicking the Load Images button in Mail.

Add Information to iCal and Address Book

One convenient feature of OS X is that you don't have to leave Mail and open your Address Book to add new contacts. Instead, open an e-mail from the person you'd like to add. Control-click his or her name and select Add To Address Book from the contextual menu, or just press ⌘-Shift-Y.

Mail also simplifies the process of getting other important contact information and event details out of e-mail messages and into your address book or calendar. The feat is accomplished with *data detectors*, which automatically identify snippets of text that you can perform an action on. For instance, if someone sends you an e-mail with an address in the body, hover your mouse over the address and Mail will highlight the text with a gray box. Click the arrow that appears to the right of the text and Mail gives you the option of adding that address to a new or an existing contact in Address Book. You can also choose to view a map of the address. This is a great time-saver for people who like to keep their Address Book up-to-date.

Clicking a date or time will give you the option of creating a new event in iCal or opening the date in question so you can check your schedule (see "Fill It In").

What's more, Mail's data detectors are smart about gathering up information. If you opt to create a new contact from someone's address, Mail will search the e-mail for any other relevant contact information as well, including the sender's name, e-mail address, phone numbers, and so on. If you've chosen to add information to an existing contact, you'll see the new information in green. If everything looks correct, click Add To Address Book to confirm and the information will be automatically entered for you.

Organize Your E-mail

Like most e-mail programs, Mail lets you create folders (called mailboxes) to organize your e-mail messages. To create a new mailbox, click the plus-sign

button at the bottom of the mailbox list (or choose Mailbox ▸ New Mailbox). This opens the New Mailbox dialog box.

If you're creating a new mailbox for a POP account, select On My Mac from the Location pop-up menu. Provide a descriptive name for your mailbox in the Name field and click OK. You can then drag e-mail messages from your Inbox into the new mailbox. If you're using IMAP, select the name of the account to create mailboxes that live on the server.
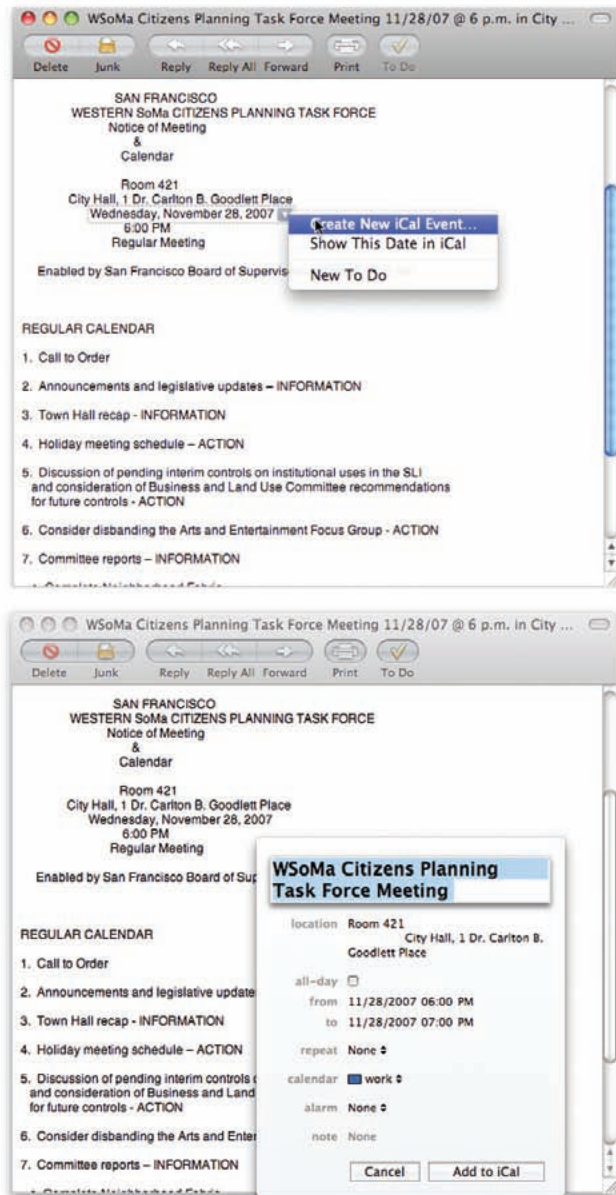
Fill It In When Mail detects a date in your e-mail message, it gives you the option of creating a new event in iCal (top). It then opens a small iCal window that can be filled in (bottom).

Then they'll be available from any computer you check that account from.

Use Smart Mailboxes

Dragging one message at a time into a mailbox can be tedious. A much easier option is to set up a *smart mailbox*—a mailbox that searches for messages that meet certain conditions and then automatically groups those messages. For example, you could have a smart mailbox that looks for messages from a particular Address Book group, or messages that contain attachments.

The best part is that smart mailboxes don't actually move messages from their original location; they simply point to the message. So the same message can appear in multiple smart mailboxes.

To create a smart mailbox, choose Mailbox ▶ New Smart Mailbox. In the sheet that appears, use the pop-up menus to set up a condition. For instance, if you have your siblings in an Address Book group

called Family, you could choose Sender Is Member Of Group Family. You can add more conditions by clicking the plus-sign, or delete conditions by clicking the minus sign.

Delete Messages

When you delete a message in Mail, there are a couple of options for how it's treated, depending on how you've set up your account. Open Mail's Accounts preference pane and click the Mailbox Behaviors tab to view your account's Trash options.

You can use these options to have Mail store deleted messages in the Trash folder in the list of Mail's mailboxes. You can also choose how often those messages are permanently deleted—never, after one day, after a week, after a month, or when you quit Mail.

Once messages have been permanently deleted from the Trash, they're pretty much gone.

Connecting to an Exchange Account

Microsoft Exchange is the most common groupware server for businesses, allowing workers to share calendars, contacts, and e-mail. But connecting to an Exchange server from a Mac has historically been problematic. That's no longer the case; Snow Leopard now supports Exchange 2007. That means you can sync iCal, Address Book, and Mail with Exchange 2007 servers, without resorting to third-party apps.

That said, Snow Leopard's support does not extend to older versions of Exchange. The minimum version supported is Update Rollup 4 for Exchange Server 2007 Service Pack 1 (macworld.com/5349) or later. If your Exchange administrator hasn't been keeping pace with the updates, you may need to give him or her a nudge to patch your server with the supported minimum version.

Configuration

The easiest way to connect Snow Leopard's versions of Mail, iCal, and Address Book to an Exchange account is with Exchange 2007's Autodiscover feature. For that to work, your Exchange administrator needs to enable Autodiscover. You can then open the Accounts pane in Mail and enter your Exchange e-mail address and password, and Snow Leopard will automatically discover your server information. Unless you deliber-

ately clear the checkboxes for automatically setting up Address Book contacts and iCal calendars, these will be configured using the same settings.

If Autodiscover is not enabled on your Exchange server, don't fret; you can enter the server's name manually. The configuration process works over both a corporate network and the Internet. If your internal and external DNS settings point to the same server name, Mail works seamlessly through the SSL port (which is usually configured by a network administrator setting up Outlook Web Access).

If your server has different names for internal and external connectivity, you can specify them by going to Mail ▶ Preferences ▶ Accounts, selecting the Advanced tab on your Exchange account, and entering the correct server names.

Putting Exchange to Work

Once you add an Exchange account, you'll start receiving e-mail messages in Mail and be able to view Exchange contacts in Address Book and Exchange calendars and tasks in iCal. iCal will even perform tricky tasks like scheduling meetings based on the free or busy status of invitees; it will suggest the next available time slot when everyone will be available. You can accept or decline meeting invitations right from Mail.

Address Book

Address Book is Apple's program for creating, sorting, and storing personal contacts. The Address Book window is divided into three panes. From left to right, there's a list of groups (you can gather contacts into as many groups as you want), a list of contacts within a selected group, and then the selected contact's information.

Add a Contact

To add a contact to your address book, click the plus-sign button under the Name column, and enter your contact's information. Address Book also offers a Notes field for jotting down miscellaneous information—the name of your boss's dog and her favorite restaurant, for instance.

Work with Groups

Groups are a handy way to communicate with all the members of your book club, orchestra, or volunteer fire brigade. You can also set up *smart groups*, groups of contacts that match conditions you set up. For example, you could create a smart group that automatically includes anyone in the same zip code or all of your foreign contacts.

Address Book and Other Programs

A variety of Apple applications rely on Address Book. For example, the e-mail addresses you access in Mail are stored in Address Book. On the other side, you can use Mail to send an e-mail message to all the members in a group by dragging (or typing) the group's name into the message's To field.

Address Book is also where iChat stores your buddies' contact information. You can open Address Book from iCal to invite contacts to an event. And if you have an iPod or iPhone (other than the shuffle) connected to your Mac, you can sync your Address Book contacts with it and take them on the road.

Getting to Know You Address Book provides a host of fields for entering personal information.

Keep Notes

Mail's Notes feature means you won't have to e-mail yourself reminders ever again. When you click the Note button in the toolbar (or press ⌘-Control-N), a New Note window appears. Notes can handle colored text, graphics, and attachments, so you can keep everything you need to jot down close at hand, such as electronic flight confirmation details for an upcoming trip or directions to a friend's house.

All notes appear in the generic Notes mailbox. However, you can create additional mailboxes to further organize your notes—for example, keeping notes related to a work project in one mailbox and notes about the kids' schedules in another. You can also group notes into smart mailboxes or folders and access them via IMAP from a Mac, a PC, or an iPhone.

Create To-do's

Mail's To Do feature makes it easy to stay on top of important tasks. If an e-mail message or note contains action items, such as deadlines for a project or a reminder to pick up your daughter after school, Mail lets you designate these as to-do items. You can create to-do items by highlighting text within a note or message and clicking the To Do button in the message or note's toolbar. You can also make a to-do item from scratch by clicking the To Do button at the top of the main window (or press ⌘-Option-Y). You can set a due date, an alarm, and a priority. You can also assign the item to an iCal calendar.

Like notes, to-do items appear in their own mailbox. They also appear in iCal's To Do pane. This integration is great because it doesn't force you to switch back and forth (or require that you remember to add something to your calendar later). When you mark something as completed in Mail, it's marked as completed in iCal. The reverse is also true. You can send to-do items to others via e-mail. And because notes and to-do's are stored along with e-mail messages, you can access them from anywhere that you can access your e-mail.

iCal

Apple's calendar application, iCal, helps you manage your schedule. Just like a paper calendar on the kitchen wall, iCal provides space for jotting down one-time events or recurring ones. You can view those events in Day, Week, or Month views.

Create a New Event

To add an event to iCal, press ⌘-N or double-click the desired day (see "Make a Date"). In the resulting window, enter an event name, set the time—or turn on the All Day option for events that don't have a specific time—and add any additional details you'd like. If you're worried about forgetting your meeting, you can set a text or audio alarm to go off before the event (you can choose how much warning the alarm gives you, ranging from days to minutes beforehand). You can even attach files to the event, so you don't forget your agenda, for example. Click Done to close the window and add your new event to the calendar.

Edit Events

If you want to edit an event already on the calendar, double-click its title to open an editable Info pane. (If the pane that pops up doesn't let you edit its contents, open iCal's Advanced preferences and turn on the Open Events In Separate Windows option.)

Manage Multiple Calendars

Unlike paper calendars, iCal lets you create multiple calendars—for instance, a work calendar, a home calendar, a calendar that lists the year's holidays and birthdays, and yet another calendar for your pet chinchilla.

To create a new calendar, click the plus sign in the bottom left corner of the window. A new entry will appear under the Calendars heading (if you don't see it, choose View ▶ Calendar List).

You can assign any color you want to a calendar—to help you distinguish its events from another calendar—by selecting the calendar's name and pressing ⌘-I. Click the colored pull-down menu and choose a new color from the list, or choose Other to designate your own color.

Now, when you create a new event, you can assign it to a specific calendar by opening the Calendar pull-down menu in the edit pane.

Stay Organized

iCal also offers a To Do list (which integrates with Mail) where you can check off items as you complete them. To display this pane, choose View ▶ Show To Do List.

If you want to share your schedule with the rest of the world, feel free to publish your calendar to your MobileMe account ($99 per year; apple.com/mobileme) or to a private server.
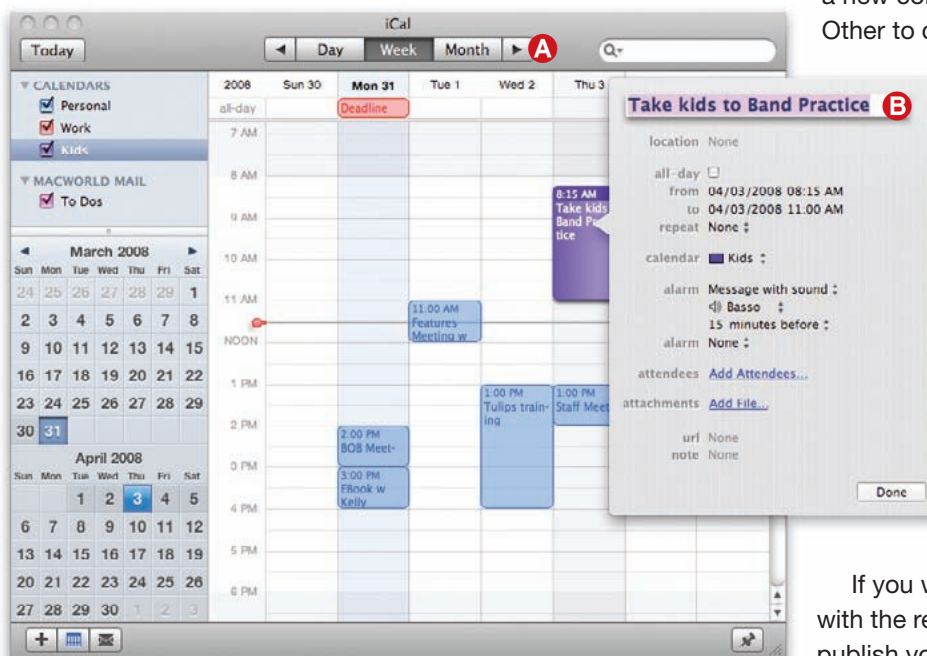
Make a Date iCal helps you keep track of your schedule. You can switch between Day, Week (shown here), and Month views **Ⓐ**. Enter the details of your appointments in iCal's Info pane **Ⓑ**. You can also keep track of to-do items.

iChat

Want to chat face to face with someone on the other side of the world? iChat is an instant-messaging client that lets you fling messages back and forth in real time. It's an easy way for coworkers or friends to communicate from across an office or across the country.

Get Started

To use iChat, you'll need an account. To get a free screen name that you can use for iChat, open iChat's Accounts preferences and click the plus sign button. In the dialog box that appears, click Get An iChat Account to be taken to Apple's Website. Alternately, you can sign up for a free AIM (AOL Instant Messenger) account at aim.com.

iChat lets you set up buddies (people you regularly chat with or would like to chat with), and then it shows you when they're available (see "A Quick Chat"). To add a buddy, click the plus sign at the bottom of your buddy list (or go to Buddies ▶ Add Buddy) and enter his or her screen name. To start a chat, just choose a buddy who's logged in to iChat or another compatible instant-messaging client, double-click your buddy's name, start typing, and press the Return key to send your message. Your buddy types a reply, and you're on your way.

Typing isn't all iChat can do. If a buddy's name has a telephone icon by it, that means you can have an audio chat, like a phone call, over iChat. A video camera icon means your buddy is able to have a live video chat.

Share Files

You can also use iChat to share files. Just drag a file into iChat's text field and press Return, and when your buddy accepts the file, it's on its way. This is particularly useful when you want to send a file that exceeds your ISP's file-size limit (many ISPs allow you to send files no larger than 10MB, for example).

Carry on Multiple Conversations

If you're chatting with multiple people at once, you can cut down on confusion by using tabbed chats. Open iChat's Messages preference pane and enable the Collect Chats In A Single Window option.

Now when you start a second conversation, your chat window will automatically expand and display the name and icon of each buddy you're conversing with in a blue-tinted pane to the left of the message window. While you're chatting with one person, new replies from others will show up as speech bubbles
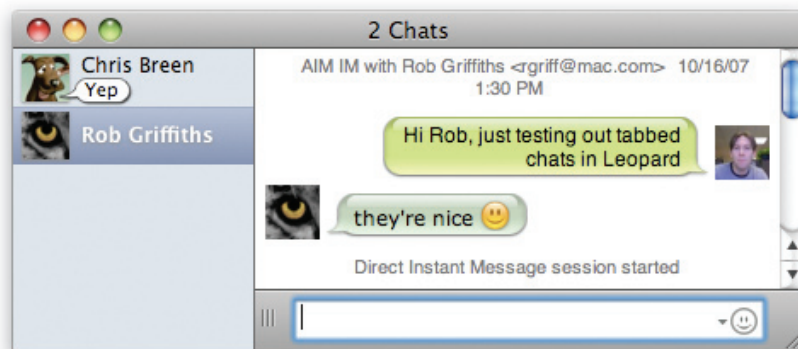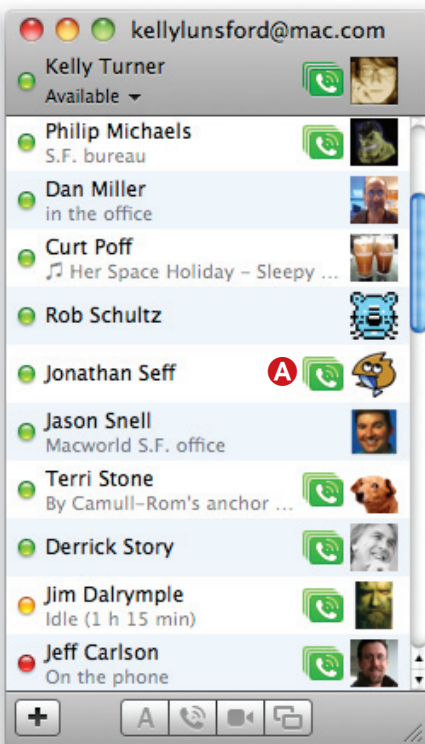
A Quick Chat iChat lets you see whether your buddies are online (left) and whether they are available for an audio **Ⓐ**, video, or text-only **Ⓑ** chat. If you're chatting with more than one person at a time, you can consolidate the conversations into a single chat window (right).

next to their icons in the side pane—clicking a person causes his or her bubble to vanish and brings you into an active chat with that person.

Group Chats

iChat offers more than one-on-one chats. You can initiate group text chats that include as many participants as your computer can handle—a fast Mac can handle over a dozen participants.

To create a group chat, choose File ▶ New Chat, click the plus-sign button at the bottom of the Participants list, and then choose the people you want to invite to the chat. When you type a message, an invitation will be sent to the entire group. That same fast Mac and a brisk broadband connection will allow as many as ten people to take part in an audio chat, or as many as four people (including you) to join a video chat.

Share Photos, Videos, and More

Want to show off your vacation photos or give a Keynote presentation over video chat? To help you share visual information with others, iChat provides iChat Theater. This feature lets you display an iPhoto slideshow, a Keynote presentation, a QuickTime movie, or anything else that works with Quick Look as part of your video chat.

To get started, choose Share A File With iChat Theater or Share iPhoto With iChat Theater from iChat's File menu. Select one or more files or an iPhoto library, event, or album, and then click Share.

More than a Chat You can share slideshows and presentations with others using the iChat Theater feature.

You'll be prompted to invite someone to a video chat to complete the setup. If you are already engaged in a video chat, you can also drag a group of files into the iChat video window and drop them on the Share With iChat Theater section. A Quick Look preview of the files will appear on your desktop—closing it removes the file from iChat Theater.

iChat also features a Screen Sharing feature. Right-clicking a buddy's name brings up options that allow two iChat participants to share and control one of the participants' Macs, all the while communicating via an audio chat. You can even display the other Mac's screen in full-screen mode, and switch between your own screen and the remote screen with a single click.

Preview

Need to open an image file but don't want to add it to iPhoto or use an image editor? Preview is the program to use. Likewise, Preview lets you view and edit PDF files without needing Acrobat.

Annotate PDFs

Want to add comments to a PDF your coworker sent? In Preview you can add notes, highlight and strike through text, add text boxes, and use ovals, arrows, or rectangles to call attention to specific sections of the page. You can even add links to other pages in a document or to Websites. Best of all, other PDF readers—including both Mac and Windows versions of Adobe Acrobat Reader—can view all of these annotations.

To get started, open a PDF and click the Annotate button at the top of the window. A small toolbar appears at the bottom of the window with all of the annotation options (see "Mark Up").

Delete or Rearrange PDF Pages

When you open a multipage PDF in Preview, you may find that you want to delete extraneous pages or change the order of pages. You can do this easily: press ⌘-Shift-D to display the sidebar if it's not visible, and then select a page and press Delete. To move a page, select it and drag it to the desired location. You can even add blank pages if you want: select the page *after* which you want to add a blank page, and then choose Edit ▶ Insert Blank Page.

If you're working with a large PDF and find the sidebar difficult to navigate, choose View ▶ Sidebar ▶ Contact Sheet (or press ⌘-Option-1). The main document window will disappear and you'll get rows of thumbnails, making it easier to move pages around. Use the zoom slider to fit more or fewer thumbnails to a row.

Merge PDFs

What if you have two PDFs, and you'd like to make a single document or move pages from one file to another? No problem. Open both PDFs and make sure the sidebar is visible. Drag a page from one document's sidebar to another, and drop it in the
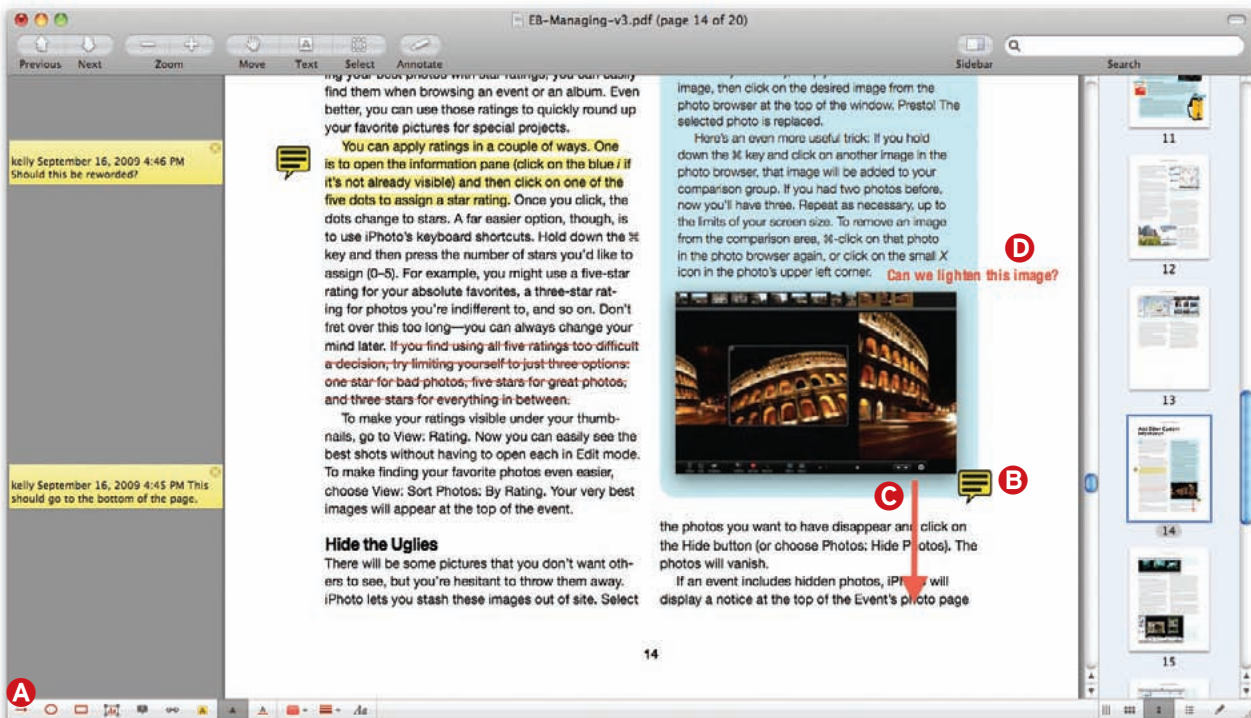
Mark Up You can use the Annotate toolbar **A** to add notes **B**, arrows **C**, text **D**, and more to your PDFs.

appropriate location. To add an entire document, you can drag the file's proxy icon (the icon in the title bar) to any location in the other document's sidebar.

Crop and Resize Images

Say you need to quickly resize or crop an image to send to a friend or post on your blog. There's no need to open an image editor—Preview's image-editing features can do the trick. To crop an image, open it and then click the Select button in the toolbar (if you don't see a square on this button, click and hold it and choose Rectangular Selection). Click and drag to create a rectangle around the area you want to crop. As you drag the mouse, you'll see the pixel dimensions for the current selection—handy if you're trying to fit a specific size.

Once you've made your selection, choose Tools ▶ Crop or press ⌘-K. If you like what you see, save the file; if not, press ⌘-Z to go back to the original image.

You can then resize your image and even change its resolution. Choose Tools ▶ Adjust Size to enter a width or height in pixels, inches, or other units (choose the unit you want from the pop-up menu to the right of these fields). To maintain the image's proportions, make sure to select the Scale Proportionally option. To make an image smaller without losing quality, keep Resample Image selected.

Adjust Image Color and More

Programs such as Apple's iPhoto offer tools to adjust image color, brightness, and exposure, but what if you simply want to adjust a single image without adding it to your iPhoto library, or you don't have

the iLife suite? Open the image in Preview and then choose Tools ▶ Adjust Color (see "Pretty Pictures"). The tools in this palette let you tweak your picture's color balance, brightness, saturation, and sharpness, and even add a sepia tone. Move the different sliders to see, in real time, what your picture will look like if you save your changes. For pictures that are too dark or overexposed, try clicking the Auto Levels button to see if that fixes them.

Print Multiple Images per Page

It's a shame to waste a lot of paper printing a handful of images one to a page. While many programs let you print a bunch of images on a page, they typically require multiple steps to do so. Preview has a printing trick that does it automatically. First, put all your images in a single Preview window. If you already have one image open, display Preview's sidebar and then drag the other images from the Finder to the sidebar. If you don't have any images open, you can open them at once by dragging them all onto Preview's icon in the Dock or in the Finder.

Next, select all the images in the sidebar by clicking one and then pressing ⌘-A. Now choose File ▶ Print Selected Images, or press ⌘-P. In the dialog box that appears, choose the number of images you want on each page from the Images Per Page pop-up menu. (Don't see this? Reveal more options by clicking the disclosure triangle to the right of your printer's name.) You can choose to have multiple copies of each image if you check the Print *N* Copies Per Page option; otherwise, each image is printed once.

QuickTime Player

QuickTime Player is Snow Leopard's tool for playing back audio and video files. Double-click a compatible video file to launch it. In the window that appears, you'll see your video, overlaid with the title bar (with the file's name and the close, minimize, and maximize buttons) and the playback controls.

Once you begin playing a movie, the title bar and controls fade away (after a few seconds if your cursor is over the video, or immediately if you move your cursor away from the video). What you're left with is a video playing in a borderless window with slightly rounded corners.

Controlling Playback

Within the control toolbar, you'll find a play button and reverse and forward buttons that rewind or fast-forward video, respectively, at 2x, 4x, or 8x depending on how many times you click them. At the bottom is a slider for scrolling through a movie, with your current time placement in the video to the left of the slider, and either the time remaining or the total length of the video to the right (to toggle between the two choices, you click the time). On the left side is a volume slider. On the right are a button to access chapters (it appears only if the file has chapters), a Share button, and a button to toggle in and out of full-screen mode.

Sharing Options

The Share button offers a pop-up window with choices for encoding and sending your video to iTunes, to a MobileMe Gallery, or to YouTube. If you choose the iTunes option, you can pick iPhone & iPod, Apple TV, or Computer as output options, displaying the resulting file size for each. You can select only one, and if QuickTime determines your file isn't large enough to create an Apple TV or Computer version, the options are grayed out.

The final choice under the Share pop-up is Trim. Select it and QuickTime changes the control window to display thumbnails of your video on a timeline. From there, you can drag the ends in to shorten the video to a smaller clip. You can't use the feature to remove unwanted portions—commercials, say—from a video and retain the rest, however.

Play It Again Use the floating toolbar to control your video's playback in QuickTime Player.

Screen Recording

One big addition to QuickTime in Snow Leopard is that it now lets you capture video of your Mac's screen—useful for showing a family member how to do something in OS X, for example.

Select File ▶ New Screen Recording and a floating window appears. To pick your settings, click the small white triangle in the lower right corner. A pop-up window appears, letting you choose an audio source, the quality (medium or high), and where QuickTime should save the movie.

When you're ready, click the red button to begin recording. When you're done, simply stop the recording—either by clicking the Stop Recording menu-bar item or by pressing ⌘-Control-Escape.

Front Row

For a theater-like experience when watching DVDs or listening to music, check out OS X's Front Row. This app lets you navigate the media content on your Mac—including music, music videos, TV shows, movies, photos, and podcasts—in a full-screen interface. What's more, you can use an Apple Remote to make selections, so you don't even have to get up from the couch. To have Front Row automatically launch when you insert a DVD, open the CDs & DVDs system preferences and make sure that the Open FrontRow option is selected in the When You Insert a DVD menu.

Image Capture

I mage Capture may be one of OS X's best-kept secrets. This photo-savvy program does a great job of grabbing a quick shot from your camera, controlling scanners, and more.

Once you fire up the application, you can connect anything from an iPhone to an SLR, browse images on the memory card, then download only the ones you want. You can have multiple devices connected at once and choose among them, and even share their images with others on your network.

Keep iPhoto in Its Place

If you've been annoyed by iPhoto launching every time you plug in your digital camera or iPhone, you can fix the problem in Image Capture.

Launch Image Capture, connect your device, and make sure it is highlighted in the left column (see "Many Devices, One Program"). Now choose what you want to have happen from the popup menu at the bottom of the column. Image capture will list all of the available photo programs; selecting one will set it as the default application for the camera. This means

the program will launch when you plug in the device. You can also choose to have nothing happen when the camera is plugged in.

What's even cooler is that you can set different actions for different devices. If you want iPhoto to launch when you connect your compact camera, for example, but don't want anything to pop up when you plug in your iPhone, Image Capture will take care of it.

Grab a Quick Shot

Have you ever come home from an event and wanted to quickly e-mail one of two photos from the day? Connect your camera or card reader and launch Image Capture, if it's not already open. You'll see thumbnails of all the images on your camera.

Click the shot you want, use the Import To pop-up menu to specify where you want it saved, and then click the Import button. (Don't be tempted by the glowing, blue Import All button; that downloads the entire camera roll.) You'll get the full-resolution photo—along with any metadata and GPS coor-
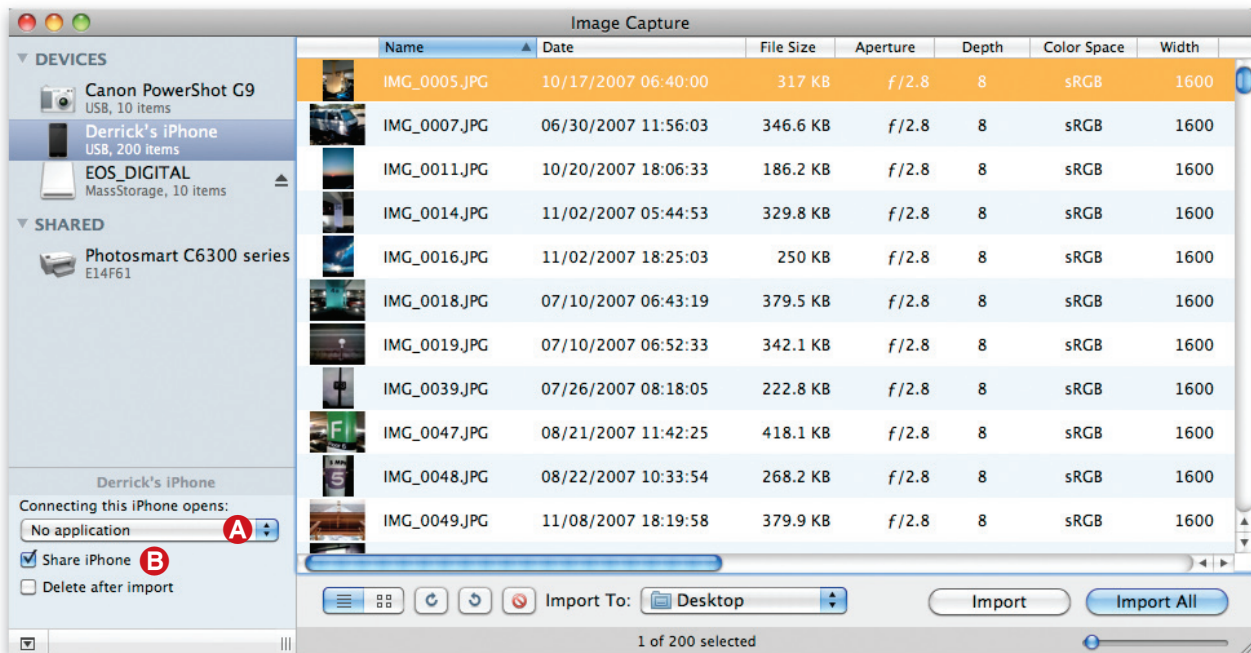
Many Devices, One Program In the latest version of Image Capture, you can set different default applications Ⓐ for each camera (or choose to have no default application, as shown here), iPhone, or compatible device. Turn on the Share options Ⓑ to share the device's photos with other Snow Leopard Macs on your network.
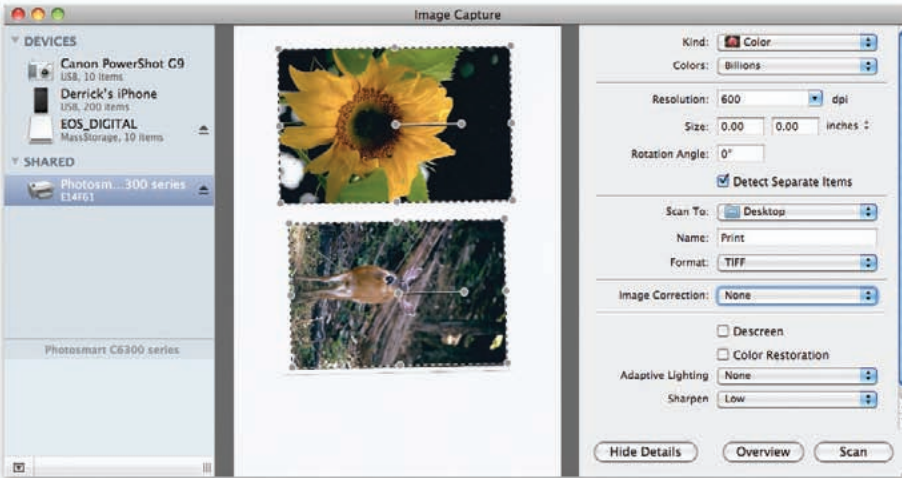
Scan It You can use Image Capture to control a scanner attached to your network. Here we're scanning two images at once. When Image Capture is done, we'll end up with two separate image files.

dinates—in the destination you chose. If you want multiple images, ⌘-click the ones you want and choose Import. This is also a great way to download your iPhone videos, which appear alongside the still photos in Image Capture.

Sort Your Pictures

Having trouble finding the shot you want? Image Capture lets you change how you sort the images on your device. To access this feature, click the list view icon at the bottom of the Image Capture window. You'll now have access to a whopping 17 columns of data, including Name, Date, File Size, Aperture, Shutter Speed, ISO, and Focal Length. Click any of these columns to organize your pictures by that criterion. Click a second time to reverse the order. Once you've sorted your photos the way you want, you can switch back to icon view; your pictures will retain the order.

Speed Up Scanning Tasks

In OS X 10.6, Image Capture will let you control a compatible scanner—even if it's located elsewhere on your local network. If you're connecting over a network, the scanner will appear under the Shared item in the lefthand column. To start a scan, click the device's name. You can place a couple snapshots on the flatbed surface. Image Capture works with

the scanner's software to detect separate images when scanning. Simply turn on the Detect Separate Items option and then press Scan. When the scanner is finished, you'll get a preview of your snapshots, each outlined with a border. To refine your scanner settings—including resolution, color, size, rotation, and file format—click the Show Details button. You can even apply image correction and sharpening. Once the final scan is complete, you'll end up with individual files for each snapshot.

Share Devices Over a Network

If you have multiple Macs running Snow Leopard on your network, you can give each of them access to a USB-connected camera or memory card using Image Capture. To share your images over the network, connect your iPhone, card reader, or compatible digital camera to your Mac, open Image Capture, and then turn on the Share Camera option at the bottom of the lefthand column (if you don't see it, click the small upward arrow).

Next, go to another Mac on the network, open Image Capture, and your device should appear under the Shared heading. You can then browse thumbnails and download any full-size image you want. Unfortunately, it doesn't appear that you can access shared files from previous versions of Image Capture; everyone must be using Snow Leopard.

Smaller Programs

Most of us use a Web browser and e-mail program every day. But there are plenty of less essential apps that prove handy from time to time. Here are a few worth noting.

Dashboard
Dashboard is a neat OS X feature that makes basic computing tasks easy and quick. It can save you the step of launching an extra application or heading out on the Web to look up a bit of information.

Think of Dashboard like an alternate Finder desktop. To launch it, click its Dock icon (a black, circular gauge) or press F12. Your desktop will dim and a collection of mini-applications called widgets will appear. These applications cover the range from calculators, games, and weather reports to search tools and front ends for more-complex apps. There's also a world clock, a stock ticker, an iTunes controller, and more.

Once you've switched over to the Dashboard layer, click the plus-sign icon in the lower left corner to call up the Widget Bar, where you'll see an alphabetical, graphical list of all the widgets installed on your Mac. Some widgets will have a small *i* in the corner. Click this to bring up additional settings for that widget.

Apple makes it easy to add more widgets to the Dashboard. When you click More Widgets (either from the Dock or from the Dashboard layer) you'll be taken to Apple's Dashboard widgets page. There you'll be able to check out and download additional widgets (all of which are self-installing).
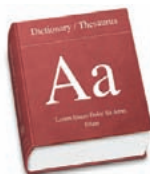
Dictionary
Snow Leopard ships with a handy Dictionary program that includes not only a standard dictionary, but also a reference of Mac-related terms, a thesaurus, and more.

You can navigate to Dictionary pages you've previously viewed via the back button in your toolbar. In this way—and in many others—the Dictionary is more like using a browser than perusing a dictionary. For example, nearly every word you see in Dictionary functions like a hyperlink; click that word, and you'll be taken to its dictionary entry.
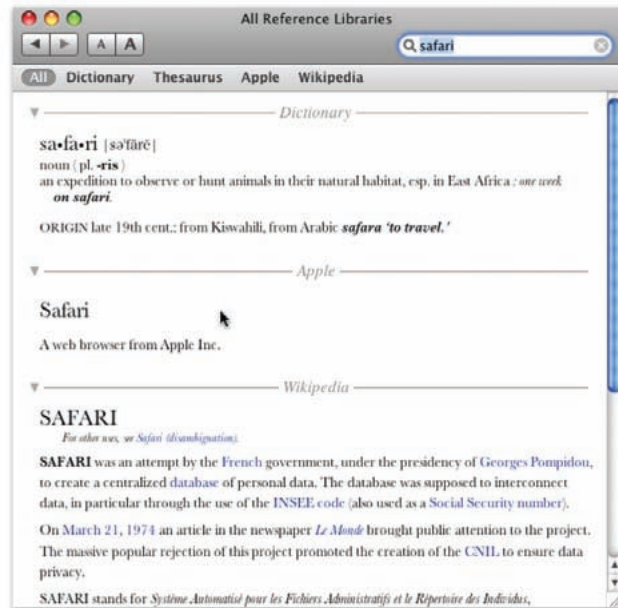
Word! OS X's Dictionary lets you use multiple sources for your queries.

Also adding to the browser-like look is a bookmark bar, just as you would find in Safari. Each bookmark represents your different dictionaries; click one, and you'll exclude all of the others.

While searching for just the right word, you can scour specific dictionaries according to your preference settings, or you can search all of them at the same time to get a comprehensive page of results. Perhaps most interesting, though, is the ability to search the online, user-edited Wikipedia. You'll need to have an Internet connection to use this feature, but all of your Wikipedia searches happen right in the Dictionary program, not your browser. This is very quick and handy, and it elegantly turns this simple dictionary program into an amateur encyclopedia.

If you don't want to launch Dictionary, you can also access its power by typing a word into Spotlight's search field (the definition will be one of the search results) or via a Dashboard widget.

Font Book
When you have a lot of fonts, finding a specific one can be hard. You can use Font Book to classify fonts in many ways, including by project, kind (Classic, Fixed

Width, and so on), or end destination (such as a Web-site). You can also control which fonts are available in a particular application.

You can preview a typeface in Font Book and install or disable it (or an entire type family) by clicking a button at the bottom of the Font Book window. Want to compare the typefaces of several fonts side by side? Open the Font Book application, ⌘-click each font you want, and then select File ▶ Print. You'll get a nicely formatted preview of not just each font, but also each *face* of each selected font. Or click the Preview button in the Print dialog box to see the document without printing.

Write Stuff TextEdit isn't as powerful as Microsoft Word, but when you choose its Rich Text Format, it does offer basic formatting and style options.

Stickies

Need to leave notes for yourself but don't have a scrap of paper handy? The Stickies application is like a pad of virtual adhesive notes.

You can place a new note anywhere on your OS X screen, and then add text as well as type or drag in URLs from your Web browser. You can even give different notes a different color or make them translucent. If you want access to Stickies but don't want to clutter up your screen, you can also store them in Dashboard.

Text Edit

If you need to write a letter or read a document, Apple's text editor, Text-Edit, is here to help. While TextEdit doesn't offer the wealth of bells and whistles that you'll find in a dedicated word

processing program such as Microsoft Word, it does get the job done. For the most design flexibility when creating documents, select Make Rich Text from the Format menu. This format offers more control over how the document looks; you'll find alignment controls (for right- or left-aligned, justified, or centered text), tabs, indent controls, settings for editing line spacing, and customizable styles (see "Write Stuff").

You can also create tables and embed images in Rich Text documents. TextEdit supports Apple's built-in spelling checker, which checks for spelling errors as you type. Best of all, TextEdit can open most text documents you throw at it—including Web archives and Microsoft Word documents. And you can save your TextEdit document in Word or HTML format.
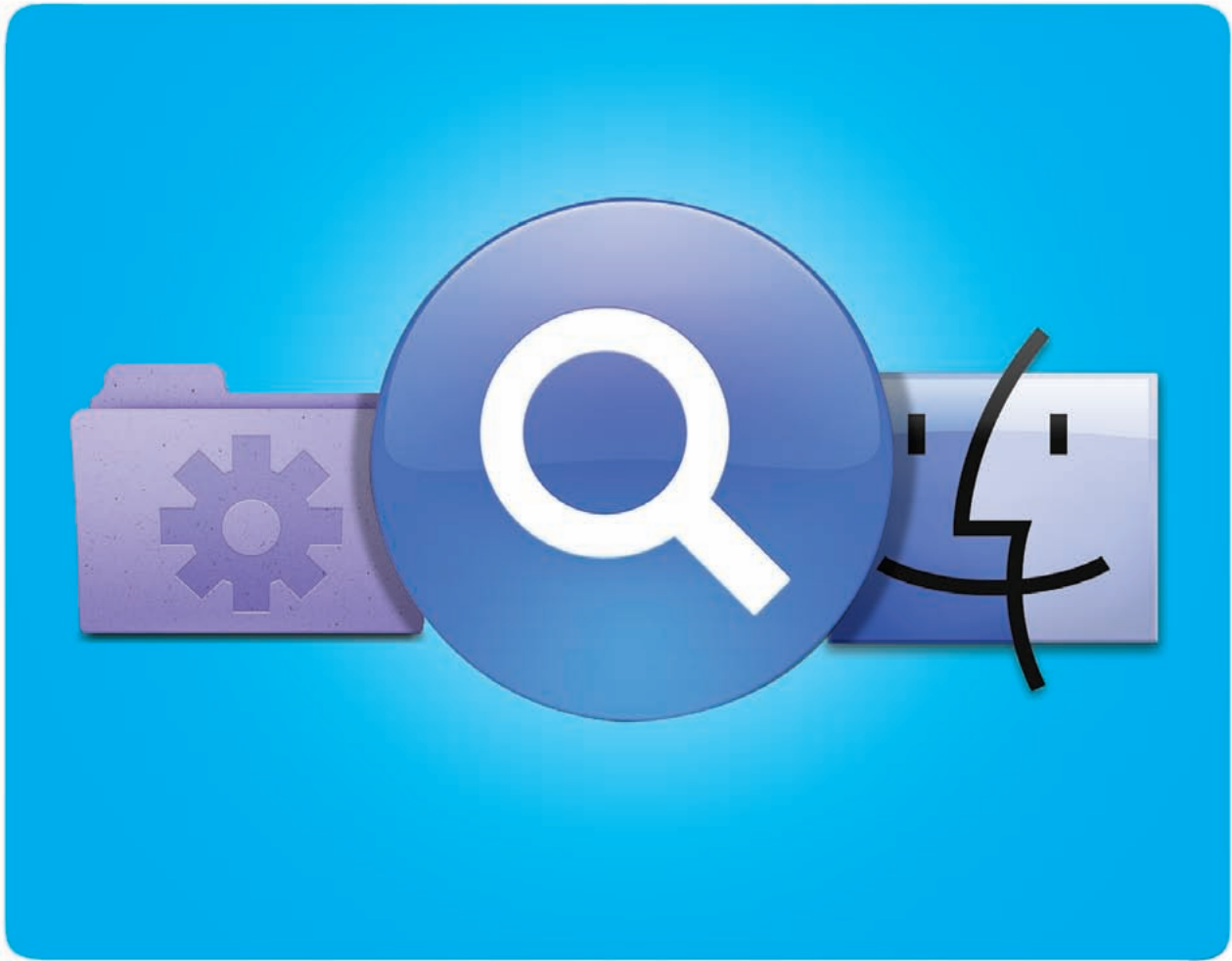
Searching Your Mac

Use Spotlight to Track Down Files, Messages, Events, and More

First introduced in Tiger, Spotlight provides a quick and easy way to locate and open files, documents, and even applications scattered around your Mac's hard drive. With Spotlight, you can quickly track down the e-mail message you sent to your friend Jim about the latest Brad Mehldau album, find out when you last saw your eye doctor, or locate a Microsoft Word document whose name you've forgotten, simply by searching for a unique word or phrase. Spotlight searches PDF files, bookmarks (in Safari and some other Web browsers), Address Book contacts, applications, preference panes, music files, movies, and more. You can even save a search and then run it again later to see what new files match your search criteria.

Spotlight is an indispensable tool for finding anything you seek on your Mac. All you need to do is learn its tricks.

Using the Spotlight Menu

Although you can access Spotlight's searching power from many parts of OS X—including Mail, Preview, iCal, and other programs—most Spotlight queries start in the Spotlight menu.

How Spotlight Works

Spotlight isn't a single application or menu item. Instead, it works behind the scenes—popping up in many different places throughout OS X.

When you first start up a new Mac, Spotlight indexes your system. This means that it scans your files and creates a database containing their names, their content, and other information about them.

From then on, every time you add a file to your Mac—when you create a new word processor document, receive an e-mail, or save a bookmark, for example—Spotlight immediately indexes that file, adding information about it to the database. And it doesn't stop there. If you modify a file and save it, Spotlight sniffs it out and records the changes; if you delete a file, Spotlight jumps into action and removes its information from the database.

By the way, if you have multiple users on your account, you don't have to worry about them using Spotlight to access your private files. Spotlight looks out for your privacy. If another user is logged in on your Mac and runs a Spotlight search, he or she won't get any of your files as results—assuming those files are tucked away in your Home folder (see the *User Accounts* chapter for more on setting up user accounts). In addition, you can exclude certain folders from the Spotlight index by changing Spotlight's system preferences.

Starting a Basic Search

To start a new search, click the Spotlight icon on the right side of the menu bar or press ⌘-spacebar to call up the Spotlight menu, and then type in one or more words—don't worry about capitalization (see "Meet the Spotlight Menu"). Spotlight starts presenting matches as soon as you begin typing, looking for those search terms in your files' names, content, and hidden information called *metadata.* As you fill in more of your search query, Spotlight will update its results.
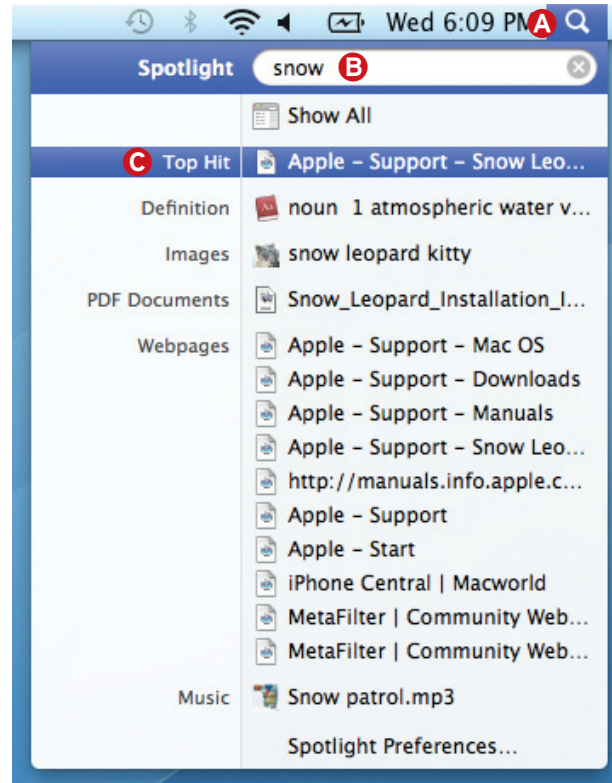
Meet the Spotlight Menu   Click the Spotlight icon **A** in the OS X menu bar to access the search field **B**. As you type, Spotlight suggests possible results, marking its best guess with the Top Hit heading **C**.

The Spotlight menu sorts results into categories such as Documents, Folders, Images, and Messages, as well as other, more application-specific groupings like Contacts (if you use Apple's Address Book or Microsoft Entourage), Events & To-Do's (from iCal), and Web pages (Safari bookmarks and history). Within each group, results appear according to when they were last viewed or saved, so the things you've worked on recently will pop to the top of the list. The menu also highlights the Top Hit—the result that Spotlight considers most relevant.

If the item you're searching for turns out to be the Top Hit, you can open it by pressing Return. To launch a different file, use the arrow keys to navigate to it, or click it with your mouse. (For a list of keyboard commands, see "Spotlight Shortcuts.") Some results open an application rather than an individual file. For example, clicking an event displays the

particulars in iCal, while selecting a contact shows the details in Address Book (or Entourage if that's your contact manager of choice). Some programs are extra smart when it comes to Spotlight queries. If Preview is your default PDF reader, for example, selecting a PDF in a Spotlight search both opens the document *and* highlights the first occurrence of the word. Preview's sidebar will also show a list of other pages where the search term appears, if applicable.

Changing Spotlight's Preferences

If you'd like to prioritize certain types of files over others, or if you want to exclude certain sections of your computer entirely, you can do so by choosing Spotlight Preferences from the bottom of the Spotlight menu (or navigating to the Spotlight pane in System Preferences). Here are a few of your options:

SET CATEGORIES The Spotlight menu displays categories according to the order in which they're set in the Search results section of Spotlight's preference pane (see "Fine-tune Results"). You can drag categories around to alter the order in which they appear, or choose to not display certain groups at all by unchecking them in the list.

EXCLUDE LOCATIONS You've got lots of files on your Mac, but that doesn't mean you want Spotlight to search them all. You may want to keep some of your more sensitive files from turning up in a search (especially if you share a user account with

Fine-tune Results Use the Spotlight system preferences to control what types of content appear in the menu results and to exclude parts of your hard drive.

Spotlight Shortcuts

Spotlight is all about productivity. To become a search whiz, learn these shortcuts for the Spotlight menu.

ACTION	SHORTCUT
Display the Spotlight menu	⌘-spacebar
Go to the next item	down arrow
Go to the first item in the next category	⌘-down arrow
Go to the previous item	up arrow
Go to the first item in the previous category	Hover your mouse over the file name
View the location of a file	⌘-Return or click it while holding down ⌘

someone else). Or perhaps you don't want to waste time having Spotlight search backups or archives that live on a second partition or hard disk.

Spotlight indexes every drive you connect to your Mac: external hard disks, removable media (if they're writable), and even iPods (if they're set to appear as an external hard drive). You can, however, choose to exclude certain folders or volumes. In Spotlight's preference pane, click the Privacy tab. If you want to exclude a folder or volume on your Mac (such as one containing sensitive information), drag it to this list, or click the plus sign and select it.

If you want to exclude an external volume, first connect the drive, then add it to the list. When you do this, Spotlight deletes any current index for the folder or volume and adds this item to a list of areas it won't index or search.

If you need to search that external hard disk down the line, connect it, remove it from the Privacy list, and then wait while Spotlight reindexes the device.

CHANGE KEYBOARD SHORTCUTS By default, pressing ⌘-spacebar activates the Spotlight menu. Likewise, pressing ⌘-Option-spacebar will bring up a Finder search window (more on that later in this chapter). But if one of these keyboard shortcuts conflicts with a program or just gets in your way, you're welcome to change it. At the bottom of the Spotlight preference pane, click inside the text field of the shortcut you want to change. Then type your new shortcut. You can also click the pop-up menu to select one of the default shortcuts or a function key. If you want to eliminate the shortcuts completely, click to remove the checkmarks from the boxes in front of them.

Creating Smart Queries

On the surface, running a search in the Spotlight menu is pretty straightforward. But if your search involves multiple terms, or if you need to narrow your results to dig up a particularly elusive file, it pays to know how to put together a good search query.

By mastering a few simple tricks, you can limit your search to specific types of data, exclude terms, and more—giving you a better shot at locating exactly what you need.

Use Phrases

Every Spotlight query is an AND search by default. This means the program looks for files containing all the words you type. For instance, if you enter `time machine`, Spotlight seeks out anything that contains both the words *time* and *machine.* That means the search will turn up any files that mention Time Machine, as well as e-mails from your IT administrator discussing the best time to swing by and fix your machine.

You can narrow down the search results by using quotes—this specifies that the words must appear next to one another. So if you type `"time machine"` Spotlight will only look for files that contain an exact match for the search string in quotes. It will find *Time Machine.doc* and any file containing the text *time machine,* but it will skip over that presentation on the evolution of machines through time (see "Smart Phrasing").

By the way, you don't have to close the quotes around your phrase; typing only the first set of quotation marks tells Spotlight that the words following it are together. However, if you want to add more search terms after the phrase, you'll need to add the closing quotes.

Add Boolean Operators

Boolean searching uses logical operators (AND, OR, NOT) to refine a search.

For instance, if you type `"time machine" OR morlocks`, you'll see references to Snow Leopard's backup tool, as well as any files related to H. G. Wells' fictional species. To find files that include *time machine* but make no mention of H. G. Wells, input `"time machine" NOT Wells`. Whenever you perform a Boolean search, make sure to type operators in all caps.
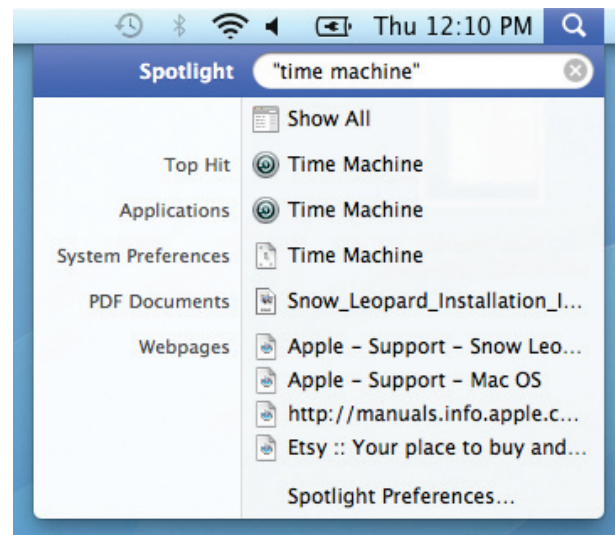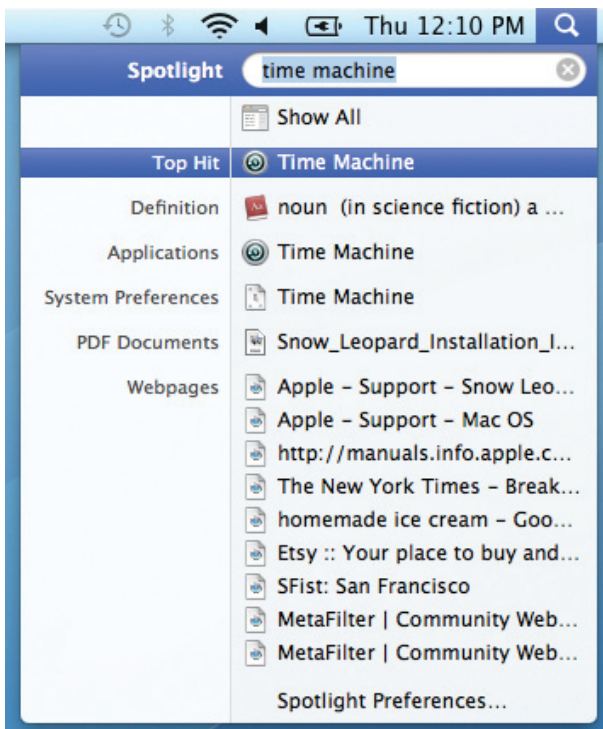
Smart Phrasing   Typing *time machine* into Spotlight finds every file containing both words (left). Adding quotes around the words limits your search to that exact phrase (right).

Limit Your Search with Keywords

Even if you know what you're looking for, the number of search results you get can sometimes be overwhelming. To help limit searches to certain file types or time periods, use one of the many useful keywords that Spotlight understands. Place the appropriate keyword before your search term, separated by a colon. Make sure that you don't accidentally insert a space before or after the colon—a common mistake.

FILE NAMES If you generally know the name of the file you're looking for, you can limit your search to just file names by using the name: keyword. For instance, when you type `name:machine` Spotlight will find only files that contain the word *machine* in the name (though your search results may also turn up bookmarks, iCal events, and other such items). As with regular search queries, you'll need to use quotes to identify phrases—for example, `name:"time machine"`.

AUTHORS If you can't remember the contents of a file, but you know the name of the person who created it, you can try to find it using the author: keyword. To look for a document that was generated by your boss, Herbert, enter `author:herbert` into the search field. There's just one catch: Spotlight will only be able to find files produced by programs that save this attribute, such as Mail, iChat, Word, Excel, Pages, Numbers, and a few others.

DATES Are you looking for a file that was created during a specific time period? Spotlight has a handle on dates. Typing `date:today` will bring up any files you created, read, received, or opened today. You can also use the date: command with *yesterday* and *tomorrow,* though for the latter, Spotlight restricts its results to iCal events and to-do items.

Spotlight also gives you the ability to specify more parameters (whether a file was created or modified on a certain date), as well as enter an exact date or a range of dates. You can type `created:12/25/07` to find files authored on that date; enter `modified:< 11/30/06` to look for files changed before that particular day; or type `created:1/1/06-12/31/06` to locate files created between these two dates.

KIND One of the most useful ways to narrow down a search is by using the kind: keyword. This allows you to distill a big, overwhelming query by restricting your list of results to a certain file format. For instance, if you type `time machine kind:pdf`, Spotlight will pull up only PDF files containing the words *time* and *machine.* You can also limit your

More Kinds of Keywords

Refine your searches by using keywords. Spotlight recognizes anything that displays in the Finder's Kind column. Here's a list of kind: keywords that you can use to narrow down your searches faster.

TO SEARCH FOR...	USE THIS KEYWORD...
Aliases	kind:alias
Applications	kind:application, kind:applications, kind:app
Audio	kind:audio
Bookmarks	kind:bookmark, kind:bookmarks
Browser history	kind:history
Contacts	kind:contact, kind:contacts
E-mail messages	kind:email, kind:emails, kind:mail message
Folders	kind:folder, kind:folders, kind:fol
Fonts	kind:font, kind:fonts
iCal events	kind:event, kind:events
iCal to-do items	kind:todo, kind:todos, kind:to do
Images	kind:image, kind:images
JPEG files	kind:jpeg
Keynote files	kind:keynote
Movies	kind:movie, kind:movies
MP3 files	kind:mp3
Music	kind:music
Numbers documents	kind:numbers
Pages documents	kind:pages
PDF files	kind:pdf, kind:pdfs
PowerPoint files	kind:powerpoint
Preference panes	kind:preference, kind:preferences
Presentations	kind:presentation, kind:presentations
QuickTime files	kind:quicktime
TIFF files	kind:tiff
Word documents	kind:word

search to e-mail messages, music files, system preferences, applications, and more.

Spotlight also provides the option of looking for files created by specific applications, in addition to

Spotlight's Other Tricks

Great search functionality is the main attraction of Spotlight. But it has other clever tricks:

Instant Dictionary Need the definition for taradiddle? Look it up in Spotlight. Whenever you type a word into the Spotlight menu, a short definition appears in the list of results. Hover your cursor over this definition to view the full definition in a tooltip.

Program Launcher Applications now appear as top hits, so you can launch them much more quickly. To fire up Safari, type **saf** in the menu and press Return.

Math Genius Type an equation into the Spotlight menu, and let your Mac do your math. For example, type **2*2**, and you'll get 4.
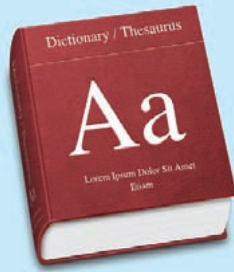
certain file formats. You can search for **kind:mp3** or **kind:tiff** to find files in those formats, as well as **kind:pages** or **kind:powerpoint**, which will return only documents created in those programs. For a list of useful keywords you can use, see "More Kinds of Keywords." But remember, in order for the keywords to work, you must have the appropriate categories enabled in Spotlight's preferences.

MORE TO DISCOVER These keywords are enough to get you started, but they're only a small fraction of what Spotlight can do. To see the other attributes you can search by in Snow Leopard, start a Finder search (we'll show you how in the following section). The drop-down menu on the left includes Kind, Name, Contents, and Other. Other will bring up a complete list of searchable attributes.
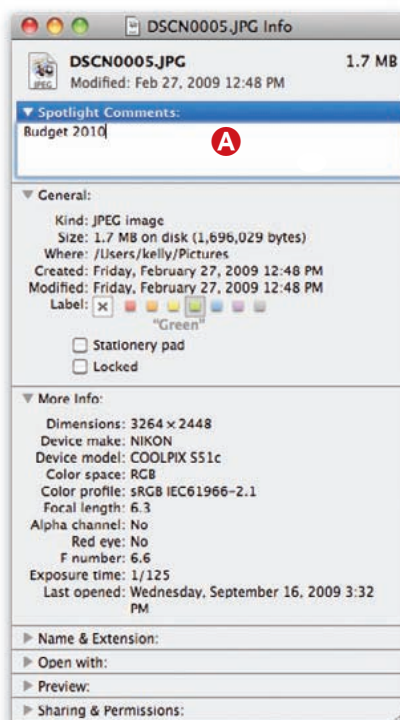
Search Metadata

In addition to scouring your files' names and contents, Spotlight also peruses metadata—information about your files generated by the program or the device that created the file. For example, digital photos contain metadata for the camera's settings at the time the image was taken, including such information as the type of camera, focal length, color space, exposure time, and so forth. If you want to find all photos taken using a certain camera, just enter its name or model number into the search field.

FIND METADATA To view what kinds of metadata a file is storing, select it in the Finder, press ⌘-I to open a Get Info window, and click the triangle next to More Info (see "Metadata Check"). This will bring up the basic metadata for your file, which varies depending on the file type.

You're not limited to the metadata you see here, however; you can also add your own keywords to any file. In the Get Info window, click the triangle next to Spotlight Comments. In the text field that appears, enter any keywords that might help you in future searches, such as the project to which the file is related or the last name of a person you associate with it.

For example, by adding the comment **HOUSE09** to any files having to do with the purchase and remodeling of your new home, you'll be able to find all of those files in one shot.

AUTOMATE SPOTLIGHT COMMENTS Want to avoid the tedium of assigning the same comments to multiple files? There's an easier way. Launch Automator, and select Service from the template pane that appears. Set the menus at the top of the workflow pane to read "Service receives selected Files or Folders in Finder." Click on Files & Folders from the Library column, and drag Set Spotlight Comments For Finder Items from the action list to the workflow pane. Click on Options and enable the Show This

Metadata Check The Get Info window displays what camera was used and the focal length. For information the file doesn't automatically track, you can add your own search terms in the Spotlight Comments field **A**. Here we've indicated that this file is part of a presentation we're planning.
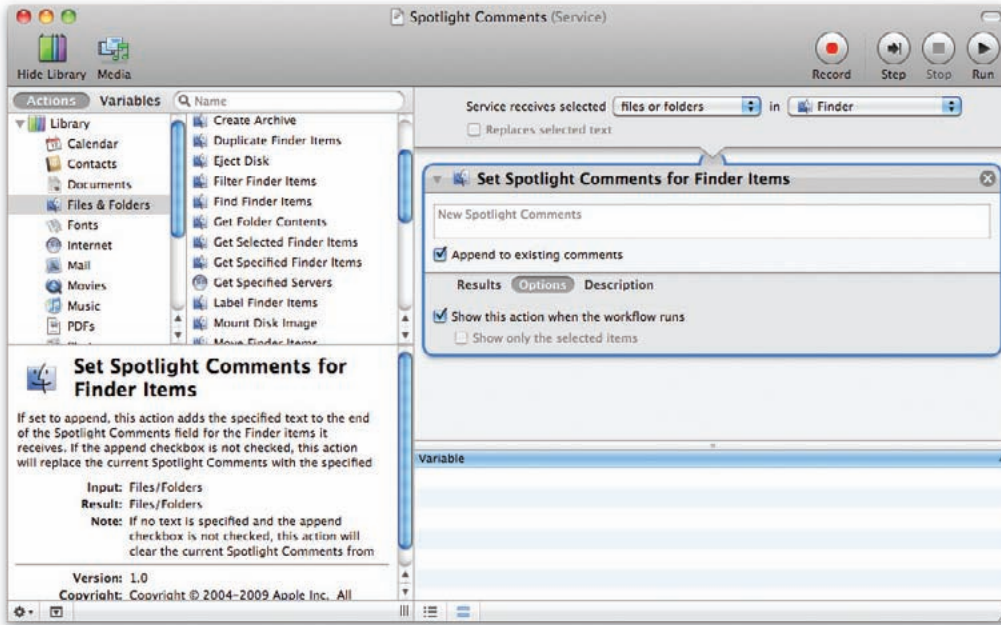
Comments Made Easy This Automator workflow creates an OS X service for adding Spotlight comments. You can easily access it by Control-clicking a group of selected files in the Finder.

Action When Workflow Runs checkbox (see "Comments Made Easy"). Go to File ▸ Save As and give the service a name, such as Spotlight Comments.

To put your new service to use, simply Control-click (or right-click) the files and choose your service from the bottom of the contextual menu. A dialog box appears, allowing you to append your comments to dozens of files at once.

Troubleshoot a Forgetful Spotlight

Sometimes Spotlight refuses to find what you're looking for, even though you know the file exists. This problem occurs when Spotlight's indexes get out of sync. To set things right, try rebuilding the indexes, which forces Spotlight to scour your drive again and serve up the right search results.

Open the Spotlight pane in System Preferences. Click on the Privacy tab, then drag your hard drive to the list of locations that you don't want Spotlight to search. Wait a few seconds, then select the drive and click the minus-sign button. By dragging the drive into this list, you force Spotlight to erase the index; when you remove it from the list, Spotlight notes that the drive is again available for indexing and starts chugging away at that task.

Keep in mind that if you have a ton of files, rebuilding the index may take quite a bit of time. While your hard drive is being indexed, you'll see a pulsing dot inside the Spotlight icon. If you try to use the Spotlight menu, you'll get a message saying that it's busy indexing your drive. Once it's finished, your searches should be more efficient.

Performing Advanced Searches with the Finder

Finding the files you need isn't always a simple case of typing a few words or doing a keyword search. Sometimes you need to use multiple criteria to narrow down the results; other times you may want to run a broad search—for example, every music file on your hard drive that's been encoded at 320 Kbps. For larger or more complex searches, open up a Finder window and run your query from there.

There are many advantages to running a search from within a Finder window. You have access to a wider range of attributes and search criteria, and you can add multiple criteria to define your searches more precisely. Plus, you have more options for sorting and viewing your results.

Opening a Finder Search Window

There are several ways to access Spotlight via the Finder. You can open up a generic Finder window and use the search box at the top; press ⌘-F to convert any open Finder window to a search window; or press ⌘-Option-spacebar to open up a brand-new search window. You can also access the Finder window after you've started a query in the Spotlight menu (this is useful if you've begun a search but you're having trouble narrowing down your results). Choose Show All at the top of the menu and Spotlight will display the results in a Finder window.

If, by default, the Finder displays your search results in icon view, you'll probably want to switch to list view to get a better look at your results. To do this, click the List View button in the Finder toolbar; you can then select the column headers to sort the results. Snow Leopard adds the ability to sort Spotlight search results for more efficient searching. You can sort search data by name, date modified, date created, and type of file.

If you prefer a more graphical approach, switch to cover flow view to look at previews of your files.

Define the Search's Scope

The Finder's search bar contains several options for tailoring your results (see "Finder Search"). You can click the File Name button, which forces Spotlight to search only for file names rather than names and contents. Or you can click This Mac to change the target of your search from the folder you were in when you started searching to your entire Mac.
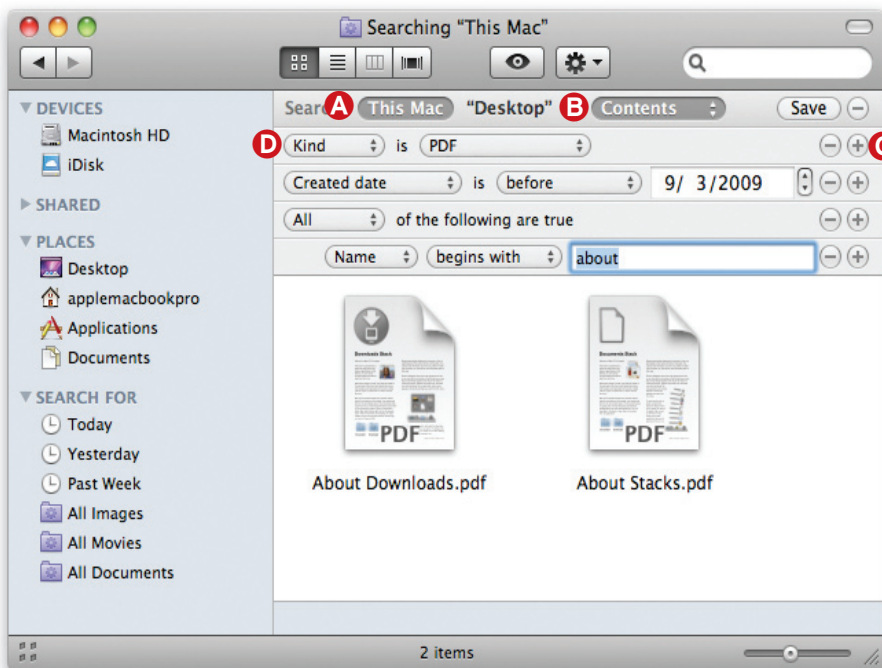
Finder Search When you press ⌘-F from the Finder, you'll get a new search window with advanced search tools. From here you can tell Spotlight where on your Mac or network to look **A** and limit its search to file names or file contents **B**. Click the plus sign **C** to add new search criteria, which you then configure using the pull-down menus **D**.

If your computer is connected to other Macs, click the Shared button to search any networked machines as well. When connected to other Leopard and Snow Leopard machines, Spotlight will search both file names and file contents. But when connected to a Mac running Tiger, Spotlight will search only file names.

Add Criteria

On the right side of the search bar, you'll see a plus sign button. Clicking on it brings up two pull-down menus; the first is set to Kind by default and the second to Any. However, there are many more options to choose from. To help narrow down your results, start by selecting one of the criteria in the first menu, such as Created Date, Last Opened Date, or Name. Or choose Other to call up tons more options, including Authors, Email Addresses, Recipients (those who received the file), Layers (names of Photoshop layers), and much more. Click on the checkbox next to an item if you want it to appear in the main pull-down menu in the future so you can easily access it again. As you select different options, the second menu changes dynamically to allow you to set the appropriate parameters (such as dates, numbers, and so on).

If you're looking for a particular type of file, keep the first menu set to Kind, then use the Any menu to select from Images, Documents, Movies, and more. (It's the same as using the kind: keyword, only you don't need to remember the keywords or manually type them in.) You can access more file types by choosing Other from the Any menu, then entering a kind of file in the text field, such as Excel or MP3.

Combine Multiple Queries

Sometimes a search requires more than one set of criteria in order to summon up the results you want. Finder-window searches allow you to specify as many parameters as you'd like.

Say you want to search for all Word documents you've created or modified in the last month. To do this, leave the first menu set to Kind, then choose Other from the Any menu. Type `Word` in the text field; this will limit the search to Microsoft Word documents. Click on the plus sign in the search bar to add another search parameter. Set the first two pull-down menus to Last Modified Date Is Within Last, enter `1` in the box, and select Months from the last menu. Spotlight will display all files you created or updated within the past month.

Quickly Navigate Results

If your search turns up several likely candidates, there are a couple of ways to quickly peruse the files to see which is the one you're looking for:

Quick Look You can use OS X's Quick Look feature to take a peek inside each found file without going through the hassle of opening any additional programs. With the first search result highlighted in the Finder search window, simply press the space-bar. Once you've activated Quick Look, you can click each file you're unsure of to immediately see its contents.

Cover Flow If you want to quickly peek inside all of your search results, switch to the Finder's cover flow view (press ⌘-4). You'll get a new scrolling pane at the top of the window with a large preview of each file. As you scroll to the left or right the preview will shift to the previous or next search result. What's more, these icons are even interactive. You can flip through a PDF in this mode or play a video file.

Look Within Not sure which is the file you're looking for? Switch to cover flow view.

Add Hidden Booleans

You can use Booleans by typing them in, of course, but if you're more visual by nature, you can also use a hidden feature in the Finder's search window to create Boolean searches—without ever typing AND, OR, or NOT.

In the Finder search window, click the plus sign and use the pull-down menus to set up your first condition. At this point you would typically click the plus sign again to add your second condition. But to
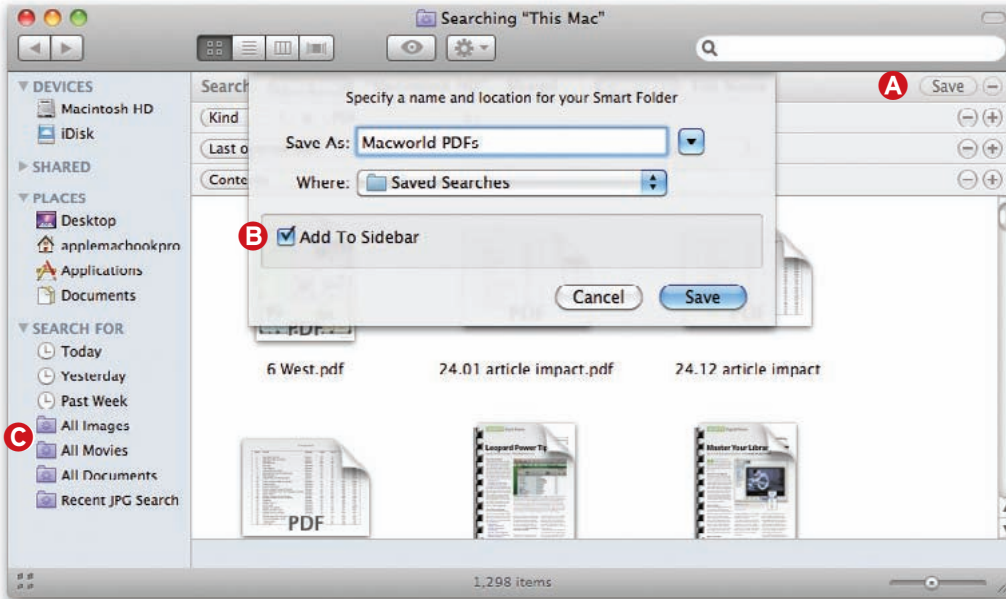
add a Boolean search term to your next condition, Option-click instead. The plus sign will turn into an ellipsis (...) and you'll get a new conditional pull-down menu with options for Any (OR), All (AND), or None (NOT). Now just add conditions to this new indented section to create a Boolean search.

This trick adds a lot of power to your Finder searches; just remember you can only Option-click after you have at least one criterion already created for your search.

Save Searches for Later

What if you plan to search for the latest Word files once a month so you can back them up? There's no reason to manually type in the same commands again. To save yourself some work, preserve the searches you run regularly as smart folders.

To save your current search as a smart folder, click the Save button in the search bar, enter a name for the folder, and select a location to save it to. Enable the Add To Sidebar checkbox if you want to make your smart folder a permanent fixture in the finder

window (see "Repeat Searches"). From now on, whenever you open this smart folder, Spotlight will run the search again and update the results with any new files that fit the criteria.

If you want to change your search, or add or remove criteria, simply open up the smart folder, click the action button (the gear icon), and select Show Search Criteria. Note that several default smart folders appear in the Search For section of the Finder's Sidebar, including Today, All Documents, and All Images. You can use the existing folders as they are, or modify them to suit your needs.

String It All Together

Thanks to its broader keyword capabilities and new mix of search options, Spotlight is more powerful and flexible than ever before. So say goodbye to the days of misplaced e-mails and lost documents. Now that you know the ins and outs of Snow Leopard's all-powerful search technology, you'll be able to locate anything you need, as soon as you need it.

Mac Security Essentials

Protect Your Data with Passwords, Encryption, and Common Sense

Your Mac may be the safest personal computer on the market, but it's by no means invulnerable. Even if you primarily use your Mac just to surf the Web and send e-mail messages to friends, you're storing valuable and potentially vulnerable information on it.

In this chapter, we explain exactly what the biggest dangers are and break down what you can do to protect yourself and your computer.

Be Safe with Passwords

The best way to control access to your Mac and data is to use good passwords. But if you make them hard to guess, you may forget them yourself. Make your passwords easy to remember, and someone may swipe your secrets.

Mac OS X has the answer: the keychain. The keychain can manage your sensitive information, remember your passwords and keep out nosey intruders.

Use Keychain Access

If you've ever entered a password in your Web browser or e-mail client, your Mac has probably asked if you'd like to save that password to your keychain. In addition to accessing your keychain through these dialog boxes, you can work directly with your keychain via Keychain Access (in Applications ▸ Utilities). Keychain Access is a nifty utility that can hide all sorts of information, from password hints for Websites to notes on a confidential business deal. It can also help ensure you're choosing good passwords that outsiders can't easily guess.

NAVIGATE YOUR KEYCHAIN You can double-click any password item to bring up information about it, including its name and kind; the account name (if applicable); and the URL, application name, or disk image name for which you use the password.

Login Safety Keychain Access holds a lot of top-secret information you wouldn't want falling into the wrong hands. Lock it up by changing its password.

Pick Smarter Passwords

When you create a new password, the trick is to come up with something long and complex that's not in a dictionary. Here's how:

Make Passwords Long Your mandatory minimum for a password should be eight characters. Even then, you need to make those eight characters count: ideally, choose a randomly generated eight-character password that uses letters, numbers, and symbols.

Start with a Sentence One common way to create a random password is to turn a sentence that you can easily remember into a password by using the first letter of each word, perhaps substituting some numbers as appropriate.

Mix and Match Try combining several terms in unexpected ways. For example, if you combine your first pet's name, the last four digits of your phone number when you were growing up, and your high school mascot, you might get something like "Fluffy3057Bears."

To view the password, click the Show Password box, enter your keychain password (by default, this is the same as your account password), and select Allow. You can also add comments about the item—say, to remind you what it's for, or to include a Web site's password hint and answer.

The Access Control tab lists the programs allowed to access each item. Although you can manually change these settings, there's less chance of error if you use the dialog box that appears when a program requests access to your keychain.

GUARD YOUR KEYCHAIN By default, Keychain Access unlocks as soon as you log in to your Mac. Unfortunately, this means that anyone who can access your Mac will be able to open your password-protected items. If you use Safari's AutoFill feature, that could include your bank account, your Amazon account, your MobileMe account, and more.

For an added level of security, give Keychain Access a password that's different from your user-account password. Open Keychain Access (/Applications/Utilities), and select your keychain in the list of keychains. If there's not one with your user name,

Keychain Additions Click the plus sign to add a new password to the keychain. The color bar along the bottom Ⓐ indicates how secure your password is. For help picking a better password, click the key icon Ⓑ.

then the login keychain will be the default. Select Edit ▸ Change Password For Keychain *nameofkeychain*, and then enter a new password and type it again in the Verify field (see "Login Safety").

Once your keychain is unlocked, it usually stays that way until you log out or shut down your Mac. To give your passwords a little more protection, set the keychain to lock when it's inactive. Open Keychain Access and select Edit ▸ Change Settings For Keychain *nameofkeychain*. In the Keychain Settings window that appears, select the Lock After *number* Minutes Of Inactivity option, and specify how much time should pass before it locks. Also choose the Lock When Sleeping option here.

ADD ITEMS TO THE KEYCHAIN You can store almost any type of information in Keychain Access, including ATM card PINs, software serial numbers, notes, and other sensitive data. To add a new password, click the plus sign at the bottom of the window

(see "Keychain Additions"). Give the new item a name (for example, ATM PIN), then enter the account or user name associated with the password (if applicable) and the password or passphrase you want stored in the keychain; click Add to save the new item.

Choose Strong Passwords

Anyone wanting to break into one of your accounts would start by trying to guess your password. He or she would begin with words and numbers that have significance for you. Therefore, you should never use the following as passwords: your name or nickname; the names of your spouse, kids, or pets; your birth date, anniversary, or spouse's or kids' birthdays; any part of your address or telephone number; favorite sports teams; or anything else that someone who knows you well might be able to guess, or that could be found in public records. Also avoid obvious choices such as "password."
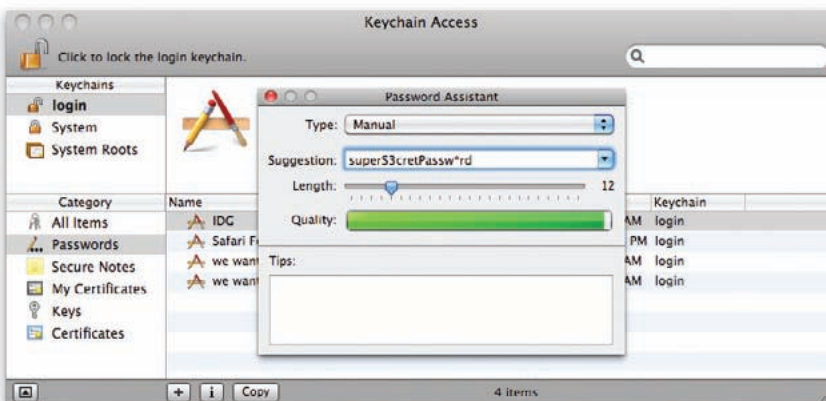

A Little Help The Password Assistant will suggest passwords for you. Adjust the Length slider to get longer passwords. Click the Suggestion pulldown menu to see more options.

Protection for Sleeping Macs

When you step away from your computer, anyone can come by, press a key to wake your computer, and access your files. Prevent this easy access by requiring a password when anyone deactivates the screensaver or wakes your computer from sleep.

Until recently, requiring a password after waking from sleep has been an all-or-nothing setting—you had to type in your password even if your screensaver kicked in just seconds before. Snow Leopard finally provides some flexibility.

Open System Preferences, click on Security and choose the General tab. Select the Require Password *amountoftime* After Sleep Or Screen Saver Begins option. From the drop-down menu, you can specify how long after putting your Mac to sleep, or activating the screensaver, the password requirement kicks in: immediately or after 5 seconds, 1 minute, 5 minutes, 15 minutes, 1 hour, or 4 hours.
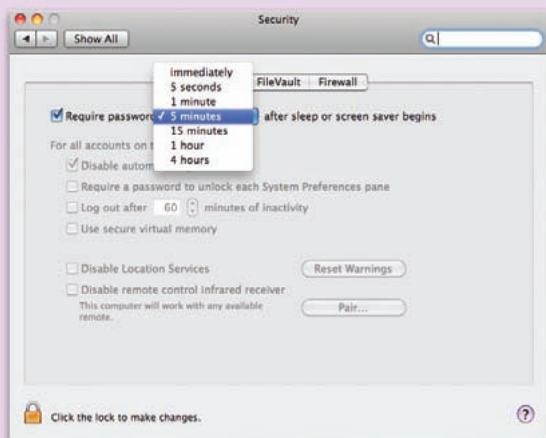
If you're having trouble coming up with a good password, your Mac can help. Mac OS X includes a password-generator tool called Password Assistant (see "A Little Help"). You can access it when you're setting up a new account in System Preferences or creating a new keychain in Keychain Access. (You'll see a key icon next to the field where you enter a password. Click this icon to access the tool.)

Password Assistant lets you set the password's length via a slider and adjust its complexity via the Type pop-up menu. For example, choose Letters & Numbers; Memorable, which mixes common words with numbers and punctuation; or Random, which includes letters, numbers, and special characters. If you don't like the first suggestion, pick another from the Suggestion pull-down menu. Or generate another set by changing a setting or selecting More Suggestions from the Suggestion menu.

You can also use Password Assistant to test your own passwords. Type one in the Password field. The tool rates the password's quality and gives you tips for improving it. However you choose your passwords, be sure to use different ones for each account. If you use one password for everything, all your data can be compromised if someone gets ahold of it.

Lock Up Your Data

Good passwords will help protect your files from casual break-in attempts. However, someone could use an OS X Install disc to reset your password, or remove your hard drive and view the files on another computer. To fully protect your information, consider encrypting any truly sensitive data on your hard disk. This ensures the privacy of data by making it essentially impossible for anyone else to read it.

FileVault

OS X's FileVault feature encrypts the entire contents of your user folder. To activate FileVault, go to the Security preference pane and click the FileVault tab. If you haven't already done so, click Set Master Password and specify a password that you can use to unlock FileVault if you forget your regular login password (see "Safety Net"). Make sure the password is secure but memorable, as there's no way to recover it if you forget it. Then click Turn On FileVault.

The process of encrypting your user folder takes time, so you'll have to be patient. Remember that before you start, you'll need at least as much free space on your disk as your user folder currently occupies. Once FileVault is on, logging out will encrypt all your files, and logging in will decrypt them again.

Safety Net If you've encrypted your user folder with FileVault, then for some reason forget your regular login password, you can still get your data by providing the master password.

If Your Laptop Is Missing

Losing a laptop is a traumatic experience. If you haven't taken steps to make your data secure, you open yourself to a lot of additional problems. Here are some steps that can make losing your laptop (or having it stolen) a little less painful.

Keep Paperwork Note your laptop's serial number, and make sure you have a copy of the receipt in a safe place. You'll need both for insurance purposes, and the serial number will help identify the computer if it turns up. You can find the serial number on the laptop, usually under the battery or in the Hardware Overview section of System Profiler.

Encrypt Your Files If you keep sensitive files on your laptop, make sure to encrypt them, turn off auto-login, and protect your keychain. All of these measures can help prevent anyone from getting to your files or your personal information.

Leave Your Calling Card Create a special account named "guest" with no password. In this account, set up a TextEdit document with your name, telephone number, e-mail address, and what you'd pay as a reward if your laptop is stolen and recovered.

Go to the Accounts preference pane, click Login Items, and add this document. If someone finds your laptop and turns it on, the login window will show this account. A good Samaritan may see all this information and give you a call.

Get Tracking Software Consider using laptop-tracking software, such as Orbicule's Undercover ($49; orbicule.com). If your computer is stolen, Undercover sends back network information to help you find your Mac's physical location. It also takes frequent screenshots and photos (using iSight) to help you ID the thief.

Act Fast Once your laptop goes missing, you have a limited amount of time to protect your information from being abused. You must act immediately to change every password you can at every Web site that has your credit card. If someone gets hold of your user name and password, these accounts might be in jeopardy—especially if you use a keychain and you use Safari's AutoFill feature to automatically fill in your user names and passwords online.

Unfortunately, Time Machine doesn't work well with FileVault and will back up only FileVault-encrypted home directories when the user logs out.

Disk Utility

Despite the ease with which you can set up FileVault, few Mac owners use it. For one thing, it's kind of silly to encrypt all your music, photo, and video files along with your truly confidential documents. What's worse, encrypting all your data with FileVault can be dangerous; even a minor disk error could leave you unable to access any of your files.

Luckily, your Mac also includes a less blunt instrument: Disk Utility. With it, you can create encrypted disk images that act (in most respects) like regular folders, except for one big difference—they won't mount unless you supply the correct password; when unmounted, they're digitally scrambled. You can then put only the files you really need to protect into that encrypted folder, while leaving your iTunes and iPhoto libraries, browser cache files, and less sensitive documents unencrypted.

To create a disk image, open Disk Utility (/Applications/Utilities). Choose File ▶ New ▶ Blank Disk Image. Enter a name for the disk image file and choose a location (see "Bundled Up"). Next, enter the volume name—the name you want the mounted image to have. From the Size pop-up menu, choose the maximum size you want your disk image to be (for example, you might want to use 4.7GB, so that even if you fill up the disk image, you can still burn it to a DVD-R). Select Mac OS Extended (Journaled) from the Format pop-up menu. Finally, choose 128-
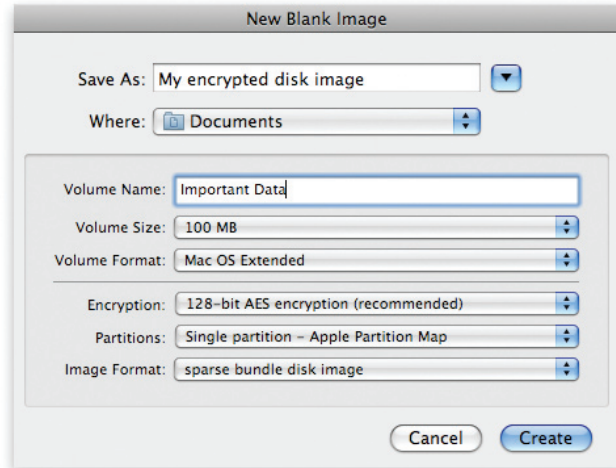
Bundled Up When creating an encrypted disk image in Disk Utility, use these settings for the best results (alter the name, location, and size to meet your needs).

bit AES Encryption (Recommended) from the Encryption pop-up menu, leave Partitions set to Single Partition—Apple Partition Map, and choose Sparse Bundle Disk Image from the Image Format pop-up menu. Click Create and enter a password.

Since the disk image is a working folder, not an inactive archive, you'll be adding files to it all the time (just double-click the file and enter your password when prompted). Perhaps you just want to protect certain project folders; in that case, those are the only ones you need to copy into your disk image. Subfolders are fine; just make sure you have everything you want to protect, and nothing else, in one place. Once you've figured out which files to include, simply open your new disk image and drag them into it.

Make Safe Connections

When you connect with the outside world, you potentially open yourself up to intruders and snoops. Defend your information with these tools and tricks.

Just about everything these days, from iPhones to printers, is designed to run on a wireless network. But if the wireless network you're using doesn't offer encryption, it's easy for ne'er-do-wells to intercept data passing through the air. Whether you're setting up your own network or using the service at your local coffee shop, here are simple steps you can take to make sure your activity is protected.

Use OS X's Firewall

As you install and use programs on your system, you often open ports without realizing it. And there's always the possibility that a chink in OS X's armor will lead to a wave of new exploits. That's why it's imperative to turn on OS X's built-in firewall when using unsecured Internet connections.

Snow Leopard's firewall settings have been considerably revamped. To turn on your firewall, open the Security preference pane (see "New Firewall Settings"). Select the Firewall tab and you'll see a simple On/Off setting. To configure the firewall, click the Start button and then the Advanced button.

Your options now include Block All Incoming Connections, Automatically Allow Signed Software To Receive Incoming Connections, and Enable Stealth Mode. You can also configure individual firewall rules. (Leopard's option to enable and view firewall logs is gone.)

BLOCK ALL INCOMING CONNECTIONS This option is the equivalent of the old Allow Only Essential Services option. It allows access to all essential services and applications. It prevents file sharing, remote access, and other optional services. Use this option if you really want to block everything—for instance, when you're on potentially hostile networks, such as those in hotels or public hotspots.

AUTOMATICALLY ALLOW SIGNED SOFTWARE TO RECEIVE INCOMING CONNECTIONS This option automatically gives signed software (apps with a valid certificate) access to the network. You can disable this option if you want better control over which applications accept network connections. If you want
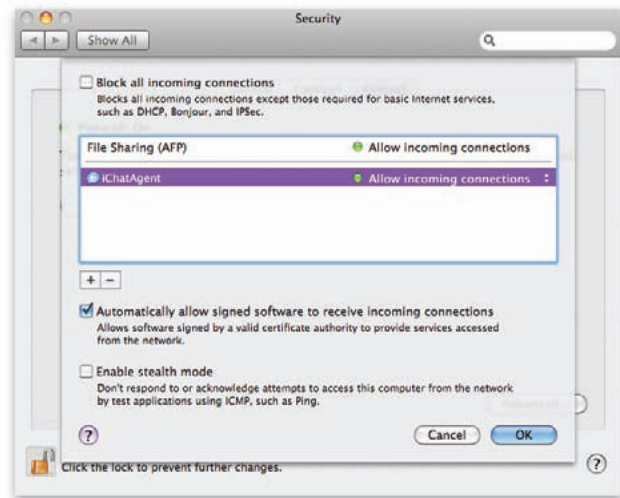
New Firewall Settings Snow Leopard's new firewall settings give you greater control over incoming connections.

to make your computer invisible to unapproved traffic, select Enable Stealth Mode.

A LA CARTE You can also manually choose whether to allow file sharing for individual programs. Click the plus sign (+) to add a program and choose Allow Incoming Connections or Block Incoming Connections from the drop-down menu on the right.

WHEN TO USE IT While it's smart to run OS X's firewall when you're at home and have your Mac sitting safely behind a router, enabling it is mandatory when you are accessing unfamiliar Wi-Fi connections. You should switch your OS X firewall to Block All Incoming Connections and Enable Stealth Mode when you are traveling. When you return home, you can switch back to more lenient settings or turn the firewall off.

Set Up a Secure Wi-Fi Network

To protect your passwords, e-mails, and so on when working on a Wi-Fi network, you need to make sure your network hardware has encryption turned on and is using the WPA (Wi-Fi Protected Access) or WPA2 protocol.

WHAT YOU NEED To use WPA Personal (the home version), you need a Mac with an AirPort or AirPort Extreme card installed. Any newer Mac with Wi-Fi built in can use WPA; Macs released since 2003 can also use WPA2. Pretty much all third-party Wi-Fi

adapters sold in the last four years also have WPA and WPA2 support. Some mobile devices from 2005 or earlier may lack WPA support.

You also need an AirPort Extreme or AirPort Express base station, a Time Capsule, or a third-party router that was released in 2003 or later. (The original AirPort Base Station can't be upgraded for WPA support.)

SET UP WPA First, confirm that your base station is up-to-date by launching AirPort Utility (in /Applications/Utilities) and selecting your base station. AirPort Utility automatically checks whether you have the latest firmware installed on each base station you connect to on your network and offers to download and install newer firmware if it's available.

Next, in AirPort Utility, select the AirPort pane and click the Wireless tab. If you're using only Macs and other equipment released since 2003, you can reliably choose WPA2 Personal or WPA/WPA2 Personal from the Wireless Security pop-up menu (see "Protect the Airwaves").

If your network includes Macs that have an original AirPort Card installed, you must choose WPA/WPA2 Personal or those computers won't be able to connect. This mode is sometimes problematic—older adapters still can't join the network. With 802.11g AirPort Extreme Base Stations, you can revert to just WPA Personal by holding down the Option key when selecting a security mode from the Wireless Security pop-up menu. With Apple's 2007 and later base stations set to use 802.11n, that's not an option, and you may have to upgrade older equipment.

Enter a password in the Wireless Password field—the longer the better—and confirm your selection.
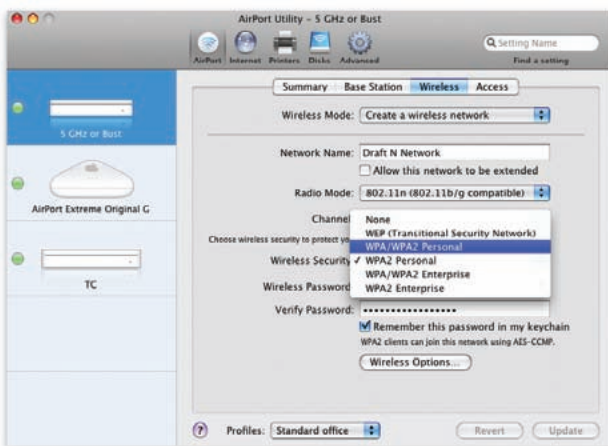
Protect the Airwaves To safeguard your wireless network, you must turn on encryption for your base station.

Protect Your Communications

Even on a protected network, your communications can be intercepted at another point during their journey to the recipient.

Encrypt E-mails Any e-mail message can pass through numerous servers, and it's not difficult for outsiders to intercept your data anywhere along the line. To protect the contents of your e-mail, use one or more of the following techniques.

The easiest place to start sending safer messages using Mail is to make sure you use SSL (Secure Sockets Layer). Virtually all modern e-mail services (including Apple's MobileMe) offer SSL as an option for receiving mail (using IMAP, POP, or Exchange) and for sending mail (using SMTP). SSL encrypts e-mail as it travels between your computer and your e-mail provider (in either direction); messages will still be stored unencrypted on your mail server and the recipient's mail server.

To activate SSL in Mail, choose Mail ▸ Preferences, click Accounts, and select your e-mail account in the list on the left. To use SSL for incoming mail, click the Advanced tab and make sure the Use SSL checkbox is selected. To use SSL for outgoing mail, click the Account Information tab and choose Edit Server List from the Outgoing Mail Server (SMTP) pop-up menu. Select the SMTP server associated with this account, click the Advanced tab, and make sure the Use Secure Sockets Layer (SSL) checkbox is selected. Then click OK.

Instant Messages If you exchange business plans, financial details, or other confidential information using IM, you should consider encrypting your chats.

Some IM programs (such as Skype) encrypt chats automatically. iChat can encrypt chats (and screen sharing sessions) if you're a MobileMe member. To set this up, open iChat and choose iChat ▸ Preferences. Select your MobileMe account in the list on the left, click Security, and make sure the message at the bottom of the window says "iChat encryption is enabled." If it says "iChat encryption is disabled," click the Enable button.

You can also transfer files through your instant messaging client. While it's not mentioned in the help documentation, iChat can encrypt files you send through IM, in addition to your text, audio, and video. Another alternative is to create an encrypted disk image and send that over iChat. You can also opt for a third-party encryption solution.

Protection via VPN With WiTopia's VPN software installed, you'll know your data is hidden from others on a wireless network.

Next, enable the Remember This Password In My Keychain option to store the information.

Click Update to apply the settings. The base station will reboot. The next time you connect to the network and enter the password, you'll be using the best security available for home users.

Connect to Public Hotspots

You should take additional precautions when joining public networks, such as those at coffee shops and libraries. Public hotspots rarely use WPA encryption, and even the few that do aren't necessarily secure. That's because WPA protects the data only between your computer and the base station; you have no way of knowing what's happening between the wireless base station and the Internet.

Also, anyone with the same WPA password on a hotspot network has as much access to your data as if there were no encryption. A cracker can install readily available, free packet-sniffing software (which intercepts packets of data and sorts out the text from the addressing data), connect to a Wi-Fi network, see all of the data passing over it, and snatch passwords, e-mail messages, and files right out of the air.

When using a public Wi-Fi network, you can secure your individual activities. For example, you can

protect your e-mail by using a Web service or an e-mail application that supports SSL/TLS (Secure Sockets Layer/Transport Layer Security), or turn on iChat encryption to protect quick conversations (see the "Protect Your Communications" sidebar for instructions). But an even better option is a virtual private network (VPN), which protects your entire network connection.

Use a VPN

A VPN is a way to securely connect to a remote network over the Internet without having to worry about someone eavesdropping on your traffic. A VPN client connects to a VPN server or gateway, creating an encrypted tunnel between the two. It allows you to check your e-mail, access servers, or perform any other activity as if you were on the local network.

Most VPNs use a protocol called IPSec, although an older, less secure standard called PPTP is still in wide use. A more recent addition is SSL/TLS, the same technology used to secure Web sessions, applied to VPNs.

VPNs used to be an option only for employees of large corporations. However, you can now "rent" access to a VPN that will protect your surfing, e-mail, and other connections over the local network. WiTopia.net ($40 per year; www.witopia.net) and publicVPN.com ($70 per year or $7 per month; www.publicvpn.com) offer full OS X support (see "Protection via VPN").

WiTopia uses an SSL/TLS VPN, which requires downloading and installing a simple connector package; publicVPN uses OS X's built-in L2TP-over-IPsec service.

With WiTopia, you receive a custom configuration that, once installed, lets you connect, while publicVPN requires very minimal configuration to get up and going. Both services also offer PPTP: WiTopia, because the iPhone doesn't work with SSL/TLS VPNs yet, and publicVPN in case a hotspot blocks the L2TP-over-IPsec connection.

Protect Your Mac Online

Viruses. Spyware. Internet hackers and wireless prowlers. It's a dangerous world out there, and although your Mac is the safest personal computer on the market, it's by no means invulnerable. But with a little awareness and prep work, you can keep your personal information out of the wrong hands and your Mac out of trouble.

Malware Basics

While malicious software has long been a near-daily annoyance for Windows PCs, Mac users have become accustomed to not having to worry about malware.

With Snow Leopard, Apple has decided to take some preventative measures against malware, much as it has done in the past with antiphishing features in Safari. For the first time, the Mac OS contains a built-in system that detects malicious software and attempts to protect users from inadvertently damaging their computers (see "Are You Sure?").

OS X's File Quarantine tool checks files that are downloaded from the Internet via Mail, Safari, or iChat. A warning reveals which application downloaded the file, from what site, and at what time. It offers the option to continue opening the file, to cancel, or to view the source Web page.

In Snow Leopard, Apple has enhanced File Quarantine to also check files against known malware, pulling from a list of malware definitions on your computer that Software Update keeps current.

If you try to open an infected file, Snow Leopard will present a warning, saying that the file will damage your computer and suggesting that you move it to the Trash. If you've enabled Safari's Open "Safe" Files

Clear Your Mac

Before selling or handing off your Mac to someone else, there are a few things you need to do to permanently remove all traces of your personal information.

First, deauthorize your Mac. If you use the iTunes Music Store or Audible.com, you're limited in the number of computers that can be authorized to play back music or audiobooks. So you'll want to remove your Mac from the list of authorized devices before giving it to someone else. To do this in iTunes, select Advanced ▶ Deauthorize Computer, select the account to deauthorize, and follow the instructions.

You should also securely erase all the files on your hard disk. Using Disk Utility, you can write zeroes to the entire disk, making it impossible for all but the National Security Agency to find remnants of your files. To do this, insert the OS X installation CD or DVD, start the installer, and then select Tools ▶ Disk Utility after the installer launches. Select your Mac's hard disk and click the Erase tab. Select Security Options, and choose the Zero Out Data option (or 7-Pass or 35-Pass Erase if you're really paranoid). Finally, click Erase. This process will take a while, so don't start it when you're in a hurry.

After Downloading preference, you will automatically be prompted with this malware warning dialog box when the download completes and the file opens (but before any malicious code can execute).

OS X defines an expanded list of applications for which it quarantines downloaded files (that is, marks

Are You Sure? Snow Leopard checks downloaded files and warns you if there is a potential threat to your Mac.

them as having come from the Internet). So if you download a file via your Web browser, an e-mail client, or iChat, Snow Leopard will check it for malware when you open it. However, if you grab an infected file from another source, such as an FTP site, a file-sharing service like BitTorrent, or a program that Apple's system doesn't cover, Snow Leopard won't detect it.

Apple's system contains no built-in way to clean malicious software off your Mac after it has been infected. For that, you'll still need to turn to third-party antivirus products.

Protect Yourself

There are many other ways your system can be compromised. Here are some simple ways to protect yourself from the biggest threats to your Mac:

USE AN ANTIVIRUS PROGRAM If you run Windows on your Mac, you should install a Windows antivirus program on your virtual PC. Symantec (symantec.com) and Intego (intego.com) offer dual-protection products for users who run both Windows and OS X on their Macs. Just as important as having antivirus software is making sure its virus definitions—which the software uses to recognize viruses—are current by checking for updates regularly.

DON'T FALL FOR PHISHERS Remember that legitimate banks and online vendors would never send you an e-mail asking you to confirm account information or reveal a password or other personal data. When in doubt about where a link in an e-mail message leads, check its real destination before clicking it. If you're in Mail, just hover your cursor over the link for a moment, and a dialog box showing the true URL will pop up.

STAY UP-TO-DATE Protect yourself from malicious software by making sure your Mac is always up-to-date. Mac OS X security updates include fixes not only for OS X but also for the various tools Apple provides with each Mac. Make sure your Mac's Software Update preference pane is set so that your Mac checks regularly for new software. Checking weekly should be sufficient for most people. But if you're in a higher-risk category—if you regularly visit unknown Web sites or use personal file sharing or Web sharing, for instance—you should check daily.

CUSTOMIZE SHARING PREFERENCES Hackers attempt to attack your computer over the Internet by finding open, unsecured ports and exploiting them. To stay safe, make sure you open only the ports that

Security Terms Glossary

Most Mac users haven't had a reason to become familiar with the security world's colorful terminology. Here's a primer.

TERM	WHAT IT REALLY MEANS
Back door	A means of accessing your computer or protected data without your knowledge or permission. For example, a back door could be a password that's hidden in a database application and that allows a user to bypass all other security measures.
Bot	A small program designed to mimic a person's behavior—for instance, by sending messages via chat software. Not all bots are bad. Some provide useful information, just as an airline's or a bank's automated phone system does.
Keylogger	A program, usually hidden, that records everything you type. Its purpose is to capture your computer account passwords, credit card numbers, Web passwords, and other private information and send it back to someone.
Malware	A general-purpose term for all software written for nefarious reasons.
Phishing	Using counterfeit e-mail messages or Web pages to trick people into providing user names, passwords, or other private account information. Many recent phishing attacks mimic correspondence from banks, eBay, Amazon, and other popular online businesses.
Phone home	What keyloggers and other spyware programs running on your computer do when it's time to transmit your private info over any sort of Internet connection to the malware's author.
Spyware	Hidden software that collects your private information—either by keylogging or by accessing your documents—and then sends that information to someone who'll abuse it.
Trojan horse	Malware that pretends to be something else—an image or a software program—that you want to use or see. It can't do anything to your computer until you activate it.
Virus	Malware that self-replicates and spreads by infecting applications, operating system files, or documents on your computer.
Worm	Malware that can spread itself without touching existing applications. Usually it's a stand-alone piece of code.
Zombie	A computer that has been hijacked, without the owner's knowledge, to perform tasks for someone else. Some malware uses zombie computers to send spam.

need to be open. Open your Sharing preference pane (see "Cautious Sharing"). Here you'll see a checklist of sharing options such as File Sharing (which lets other users access files on your Mac), Screen Sharing (which lets them see your screen), and Remote Login (which lets other people access your Mac using SSH). Turn off any services that you don't need by removing the checkmarks from the boxes next to their names.

Also, to make sure that your Mac thwarts hackers' attempts to sniff out open ports, turn on your firewall.

LIMIT FILE SHARING If you have File Sharing activated (the most common of the sharing services), you can choose exactly which folders and volumes you want to share, which users will get what kind of access, and which file-sharing protocol they'll use. To remove someone, select the user or group and click the minus-sign button. To add users, click the plus sign. When you do so, you'll be presented with a list of the users and groups set up in the Accounts preference pane. There's an entry for your Address Book, too; you can choose any contact, click Select, and set a password. This creates a Sharing Only account.

For each folder or volume you add to Shared Folders, you can specify one of four kinds of access rights—read only, read-write, write only, or no access—by using the drop-down menu to the right of the user or group name. Read-write access gives users complete creative and destructive rights to all files in the shared folder. Users with read-only access can view files and folders but can't change them. With write-only access, they can copy documents into a folder but can't view its contents.

Troubleshooting Your Mac

Protect Your Data and Recover from Common OS X Problems

Most of the time, your Mac is the picture of health—it crunches numbers, plays music, and tackles the most difficult tasks without so much as a hiccup. But hundreds, maybe thousands, of things can go wrong with such a complicated system.

When something does go wrong, a good backup of your system can help give you peace of mind and get you back on your feet quickly—which is why OS X includes a user-friendly backup program called Time Machine. We'll show you how to get started with Time Machine and walk you step by step through solving persistent crashes, stalls, and other OS X maladies.

Back Up with Time Machine

The first step in any maintenance plan should be setting up a reliable backup routine. Backing up your data regularly won't prevent Mac disasters, but it will help you get back on your feet quickly when something does go wrong, whether it's a dying hard drive, corrupted data, or accidental deletions.

But while everyone knows they *should* back up their data, too few actually do. Time Machine hopes to remedy that. Using a unique 3-D interface, Time Machine attempts to turn the complex and sometimes confusing processes of backing up and restoring into simple, visual operations. Once activated, Time Machine works behind the scenes to automatically create time-based snapshots of your Mac, letting you instantly retrieve archived versions of files, folders, and programs.

How Time Machine Works

Time Machine copies the files on your computer to a destination you designate—such as an external hard drive or a second drive inside your Mac. Then, once per hour, the program runs again, updating your backup to include whatever files have changed since last time.

With each hourly backup, Time Machine makes a snapshot of your entire system at that moment. If you look through the folders on your backup disk, you'll see what appears to be a complete copy of all your files for each of numerous backup sessions. But to some extent that's an illusion; Time Machine copies to your backup disk only those files and folders that are different from the ones in your previous backup. That way, your disk doesn't fill up with multiple copies of files that haven't changed.

Time Machine keeps all of the day's backups for 24 hours, but then it begins to delete older versions to save space. You can count on it to keep the first backup of any given day for an entire month. Even after a month, it preserves the first backup of each week until your disk is nearly full. Only at that point does the program begin purging files from your oldest weekly backups. The net result is that you can see your files as they looked at many points in the past.

Keep in mind that Time Machine doesn't work instantaneously—if you create a file and then delete it a few seconds later, Time Machine won't have time to create a backup copy of it. But that's not really what Time Machine is for. Think of it as a safeguard for all those priceless files you store on your machine.
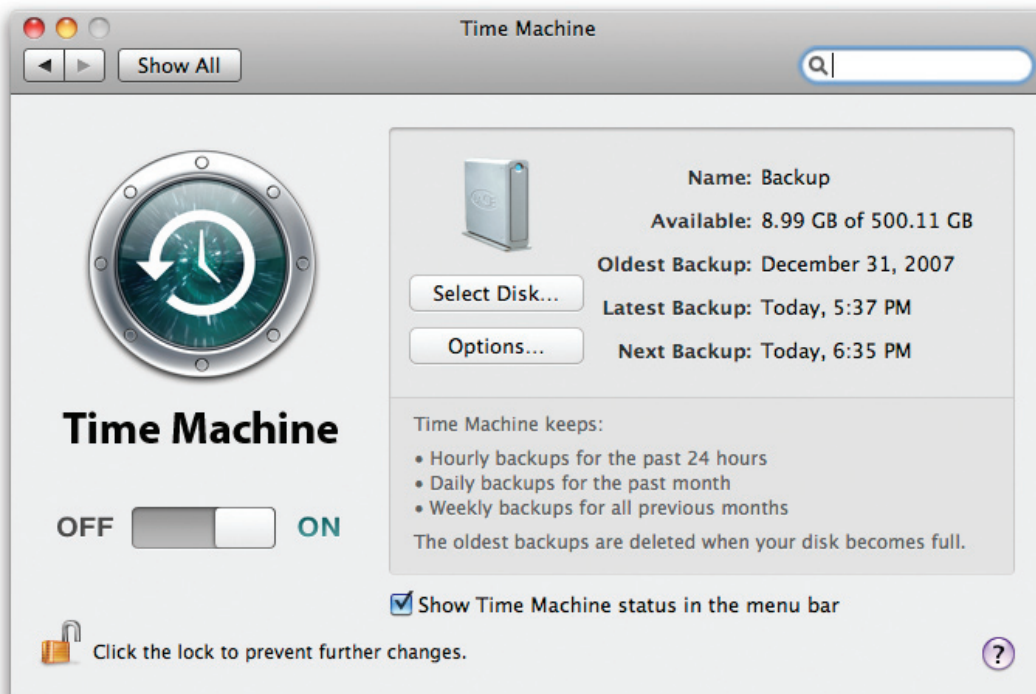
Stop, Please
The Time Machine preference pane lets you temporarily stop your backup or change its location.

Setting Up Time Machine

Time Machine can (for some users at least) be set up and turned on with a single click. But you may need to do some manual configuration to get it to work the way you want.

STEP 1: CHOOSE A HARD DRIVE   Time Machine can store your backups on an external hard drive, or a second internal drive on a Mac with more than one. However, you'll need to make sure the hard drive you choose has enough available space to hold your backup.

Begin by checking on how much space is currently occupied on your startup disk. Select the disk in the sidebar of a Finder window and choose File ▶ Get Info. In the General section next to the word "Used" you'll see how much space your data is using. Now, multiply that number by 1.2; the result is the minimum amount of disk space Time Machine can work with. However, more space is always better because it enables Time Machine to retain backups that go further into the past. A backup disk with at least 1.5 times as much free space as is occupied on your startup disk is recommended (see "Space Savers").

Time Machine works best when it has an entire disk, or at least a partition on a disk, all to itself. So if you have a suitably large drive that's completely blank or can be erased, that's ideal. You can use Disk Utility (in /Applications/Utilities) to erase a disk if needed.

STEP 2: MAKE A CONNECTION   When you first plug in a hard drive that's suitably formatted, Time Machine will display an alert asking if you want to use that disk for backups. Click on Use As Backup Disk to set it to use that destination.

If no alert appears, or if you want to choose a different volume as your destination, open the Time Machine system preferences pane and click the Choose Backup Disk button (which switches to Change Disk after your initial selection). Select the volume you want to use and click Use For Backup.

RUN AUTOMATICALLY OR MANUALLY   Time Machine ordinarily runs in the background, updating your backup disk once per hour. This isn't always convenient for mobile Mac users, who aren't near their backup hard drive.

To temporarily disable this automatic operation, click the Off switch in the Time Machine preference pane (see "Stop, Please"). Later, you can force Time Machine to do an immediate backup by right-clicking (or Control-clicking) the Time Machine icon in the

Space Savers

If your backup disk is too small to hold all the files on your startup disk, you can tell Time Machine not to back up some of them. Click on the Options button in the Time Machine preferences pane. Drag the items you want to exclude into the Do Not Back Up list from the Finder, or click the plus-sign (+) button, navigate to a file or folder, and click Exclude. Here are some suggestions for items you might exclude:

System Files   The files that make up OS X itself—including Safari, Preview, and iCal—take up nearly 10GB. To exclude all of them, add your System folder to the Do Not Back Up list. Click on Exclude All System Files when prompted. Excluding these files means Time Machine will be unable to restore your entire disk—so be sure to keep a separate bootable duplicate.

Large Media Files   Video files and, to a lesser extent, audio files, can take up an enormous amount of space. Consider excluding video and audio files if they can be recovered another way—such as ripping them from CDs.

Virtual Machine Disk Images   If you use the $80 Parallels Desktop (parallels.com) or $80 VMware Fusion (vmware.com) to run Windows on your Mac, you may have one or more large disk image files that contain an entire Windows installation. Because these files change every time you do anything in Windows, you should exclude them and back them up separately. Parallels disk images (.hdd) are in *youruserfolder*/Documents/Parallels/*virtual-machine-name*. Fusion disk images (.vmwarevm) are in *youruserfolder*/Documents/Virtual Machines.

Installers   Downloaded software can chew up disk space quickly. Exclude your Downloads folder to give Time Machine more breathing room.
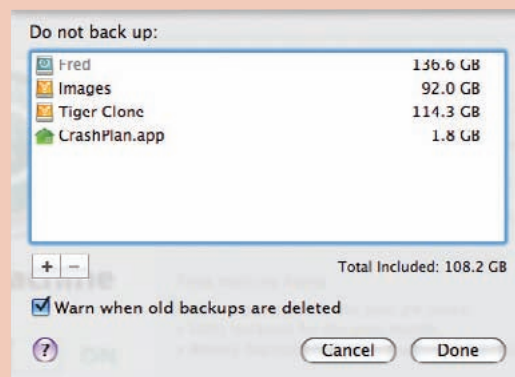
Exclude Extras To save space on your backup disk, use Time Machine's Do Not Back Up list.

Get an External Hard Drive

An external storage device is one of the most important investments you can make for your Mac. It represents extra space and a safety net should anything bad happen to your Mac. And if you want to use Mac OS X's Time Machine, an external storage device is a must-have. You can go with Apple's Time Capsule, but there are myriad other storage choices—external hard drives, desktop RAIDs, optical disc burners, solid-state drives, flash drives, and network-attached storage. Depending on your situation and your file types, some storage devices will serve you better than others. Check out this online buyers guide to help determine which solution is best for you: macworld.com/5240.

Dock and choosing Back Up Now from the contextual menu.

Note that you do not need to turn off Time Machine before disconnecting or unmounting its destination disk. Time Machine stops automatically and will resume backing up to the destination disk once it is available again.

Recovering from Problems

After the initial setup, you probably won't give Time Machine much thought. It works invisibly in the background. But when something goes wrong, it's ready to spring into action to recover lost files.

QUICKLY RESTORE FILES When you need to retrieve something from your backup, click the Time Machine icon in the Dock. You'll be transported to the Time Machine interface, which shows the frontmost window in the foreground and a line of archived versions of that window stretching back in time (see "Time Warp").

To grab a previous version, simply use the timeline along the right side of your screen or the back arrow to "flip back" through time and find the files you want to restore. To immediately jump backward to the last time a selected file was changed, highlight the file and click the back arrow once. Time Machine will search through your backups and automatically stop at the point where the file was last modified. Select the file or folder, click the Restore button, and your file comes back to the present.

RESTORE FILES FROM SPECIAL APPLE PROGRAMS A few programs, such as Apple's Mail, Address Book, and iPhoto, include enhanced support for Time Machine. That means you can go back in time to find a particular e-mail message, contact, or photograph without having to worry about where the underlying file is actually stored.

Time Warp When searching Time Machine's archive, use the scale along the side Ⓐ to jump to a specific date or click the back arrow Ⓑ to jump to the last time a selected file was modified. When you find the file you want, click Restore Ⓒ.

To search for an item in one of these programs, first navigate to a view where the item would normally appear—for example, select a particular mailbox or album. Then click the Time Machine icon in the Dock and navigate to the point in time where the item reappears. Click Restore to bring it back to the present, or, in Address Book and iPhoto, click Restore All to copy all your contacts or photos from the time of that backup to the present.

Note that iPhoto places restored photos in a new, untitled album, while Mail places restored messages, notes, and to-do items in a new mailbox called Recovered Items, inside a Time Machine mailbox in the On My Mac portion of the mailbox list.

RESTORE AN ENTIRE DISK Although it's more time-consuming, Time Machine can also return your entire disk (including OS X itself) to its state at some point in the past.

To restore from your backup, start up from your Snow Leopard Install DVD (you can choose the DVD as your startup volume by holding down the C key as you restart). After the language selection screen, choose Utilities ▶ Restore System From Backup. Click on Continue, select your Time Machine backup disk, and click Continue again.

If the disk contains backups for more than one computer, select the one you want from the Restore From pop-up menu. Then select the particular backup you want to restore (most likely the one at the top of the list) and click Continue. Select your internal disk, click Restore, and confirm your choice.

Note that Time Machine assumes the drive you're restoring to is blank. If it isn't, you can—and should—erase it prior to restoring your backup by choosing Utilities ▶ Disk Utility and clicking the Erase Disk button on the Erase tab.

Is Time Machine Enough?

Having any backup system is better than none. But don't let Time Machine provide you with a false sense of security. After all, someone who breaks into your office and steals your Mac will probably pick up the hard drive sitting next to it, too. Likewise, disasters like fires and floods won't spare your backup drive.

If you're really serious about protecting important data, it's best to include some sort of off-site backup—for example, using an online backup service (see macworld.com/5451 for recommendations) or storing a bootable duplicate at your sister's house—in your plan.

Also keep in mind that even though Time Machine backs up every file on your disk to another hard drive, you can't start up your computer from your Time Machine backup. That means if your internal hard drive is damaged or corrupted, you'll have to spend hours restoring your data before you can get back to work.

To get back up and running more quickly, consider also creating a bootable copy (or *clone*) of your hard drive. You can use any of numerous programs, such as Shirt Pocket's $28 SuperDuper (www.shirt-pocket.com). You must store the duplicate on its own drive or partition in order for it to be bootable.

If your primary hard drive fails, plug in your clone, press and hold the Option key when you start up your Mac, choose the clone from the drive-selection screen, and start working immediately. Once you've replaced the dead hard drive, use your cloning software to copy your backup (which you've been using as the primary drive) onto the new drive. Reboot from the new drive, and you're almost back to where you began; however, you'll need to use Time Machine to restore the latest versions of any files you updated after your last clone was made.

TIP

Erase Backups

Want to make sure no one can recover sensitive files from your Time Machine backup? Or perhaps you'd just like to make sure you never ever see that photo of your ex again? Open Time Machine and navigate to the file you want to remove. Control-click the file selected, click the gear icon in the Finder window, and select the option to delete all instances of the file from all backups.
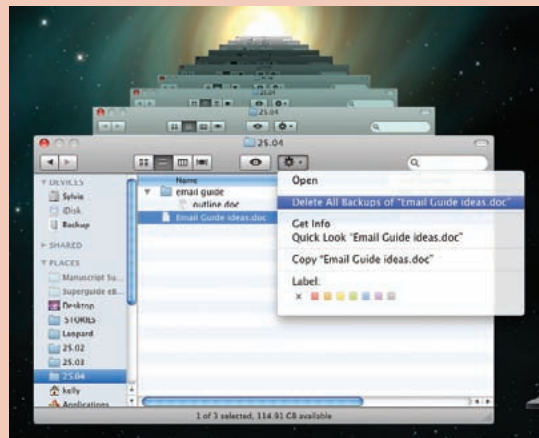
Recover from Crashes

When trouble strikes, figuring out what exactly the problem is and where it's coming from is half the challenge. There are often several possible explanations for a single problem. With that in mind, we'll take a look at some of the most common Mac problems—including freezes, crashes, and startup woes—and walk you through the steps you should take to solve them.

Application Freezes and Crashes

It happens to all Mac users sooner or later. You're about to select a menu command when suddenly your cursor turns into a beach ball that just spins and spins. You try everything from pounding on the keyboard to offering a sacrifice to the computer gods, all to no avail. Your application has frozen.

First some good news: usually, only one application freezes at a time. This means if you move your cursor away from the program's window, the beach ball should disappear and your Mac's behavior should return to normal. But you're still stuck with an application on ice.

When you can't access an application's Quit command, how do you get it to quit? Don't fret: OS X

offers several alternative ways to force-quit a program. You only need to use one, as they all do the same thing; however, you may find one method more convenient than another. Sometimes, one may work when another doesn't. Cycle through to find the best method for you:
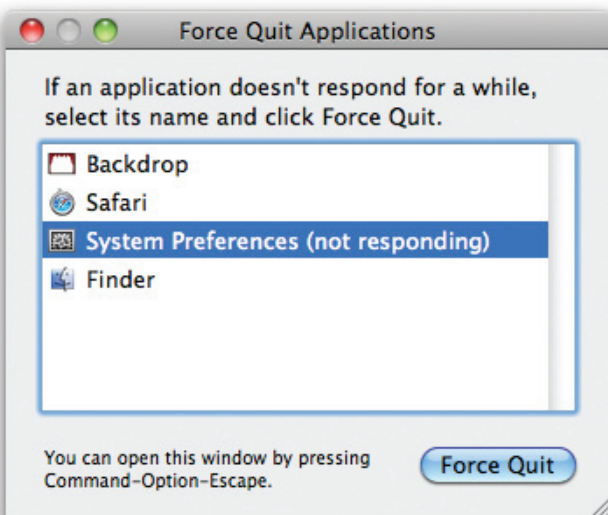
Force Quit

Go to the Apple menu and select Force Quit (or press its keyboard equivalent: ⌘-Option-Escape). This brings up the Force Quit Applications window (see "Use the Force"). You'll see a list of all your currently open applications. Typically, the name of the frozen one will be followed by the phrase "not responding." Select the program's name and click Force Quit.

USE THE DOCK MENU You can also force an application to quit from the Dock. Click and hold over the frozen application's Dock icon. When the contextual menu pops up, the item that normally reads Quit should say Force Quit. If it still just says Quit, hold down the Option key. This makes the Force Quit command appear.

USE ACTIVITY MONITOR On rare occasions you may need to quit a program—such as the Dock—that doesn't have a Dock icon or appear in the Force Quit window. In that case, launch Activity Monitor (it's in /Applications/Utilities). From the list in the main window, select the frozen application. Click the Quit Process button in the toolbar. In the dialog box that appears, click Force Quit.

Relaunch

Just as unwelcome as the application freeze is the application crash. In this case, you're not trying to force a program to quit; you're trying to prevent it from quitting on its own. When an application crashes, you typically see a dialog box informing you that the application has "unexpectedly quit." As with application freezes, the good news is that these crashes rarely bring down an entire Mac—they usually affect just the one application. The "unexpectedly quit" dialog box includes a Reopen button. Click it to launch the application again. With luck, the crash will not reoccur.

Use the Force Frozen solid? Press ⌘-Option-Escape to open the Force Quit window.

Is Your Memory Bad?

If you can't find a software explanation for persistent crashes or corrupted files, you may need to look to your hardware—especially if you've recently added new memory to your Mac. For starters, you'll need to confirm that the memory you installed is both alive and kicking and the right type of RAM for your Mac.

Is It Alive? Select About This Mac from the Apple menu, and see how much memory it reports. If it's not the amount you expect, your new RAM module is either dead or improperly installed. To find out which is the case, go through the installation again, making certain that the module clicks into its slot properly. If the memory still doesn't register, you probably have a defective module.

If the amount of RAM seems correct, open System Profiler (select About This Mac from the Apple menu and then click the More Info button). In the Contents pane, select Hardware ▶ Memory. In the right-hand pane, you should see a list of all your installed memory. Check the Size, Type, and Speed columns. Make sure these specs match those of the RAM you intended to buy. To confirm that this type of RAM will work with your system, check your Mac's documentation or use Mac-Tracker (mactracker.ca), a free application that details specifications for every Mac. What if your Mac won't start? In that case, pay attention to the startup sounds when you turn on the Mac. Unusual beeps instead of the normal startup tone likely mean defective memory.

On Again, Off Again If all the specs check out, you may have the dreaded intermittent-memory problem—it works fine most of the time but has occasional hiccups.
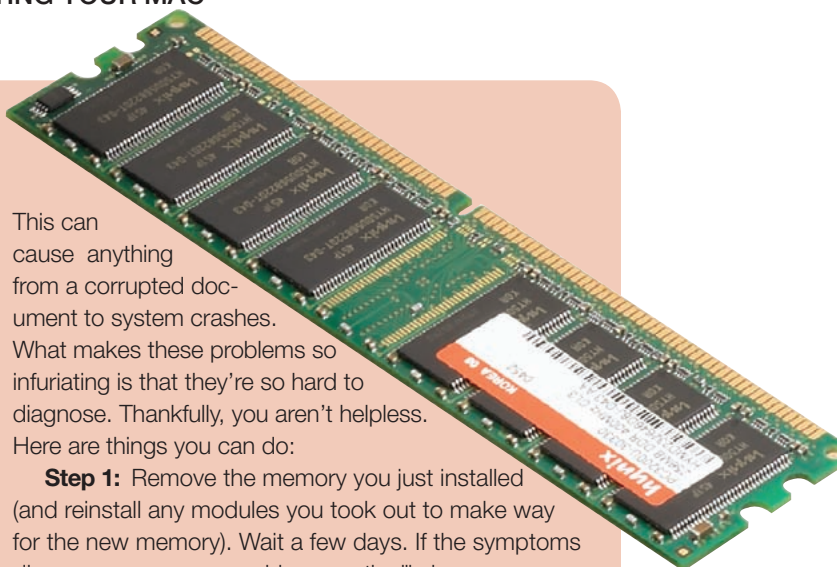
This can cause anything from a corrupted document to system crashes. What makes these problems so infuriating is that they're so hard to diagnose. Thankfully, you aren't helpless. Here are things you can do:

Step 1: Remove the memory you just installed (and reinstall any modules you took out to make way for the new memory). Wait a few days. If the symptoms disappear, a memory problem was the likely cause.

Step 2: Get out the discs that came with your Mac and look for Apple Hardware Test. With recent Macs, it's on the Install And Restore DVD. With older Macs, it's on a separate Hardware Test CD. Insert the DVD and restart your Mac while holding down the Option key. Select the one named Apple Hardware Test and click the right-arrow button to launch the utility. You will have a choice of a Quick Test or an Extended Test. Choose Extended Test. One advantage of Hardware Test is that you can use it even if you can't launch OS X. But if your problem is too intermittent, Hardware Test may not test long enough to detect it.

Step 3: Get Kelley Computing's free Rember (macworld.com/1082). This utility can test your memory for any length of time. Enable its Infinite option, and it will test forever (or until you click Stop). This allows you to run a test that lasts for days. After stopping, check the log output to see if it found any errors.

Recurring Problems

If a program crashes repeatedly or your Mac begins misbehaving in other ways, it's time to move on to a time-tested set of potential fixes.

Restart Your Mac

Select the Restart command from the Apple menu. It's amazing how often this simple act resolves a problem. If the crash is so bad that you can't get Restart to work, press and hold your Mac's power button until the machine shuts off.

Update the Problem Program

Does a program consistently crash when you try to perform a particular action, such as saving a file? If the symptom doesn't occur with any other applications, check to make sure the program doesn't have a conflict with Snow Leopard. It's possible you'll need to update the program. Check the company's Web site for details. Oftentimes, it will have a new version that fixes some bug that is causing the symptom. Snow Leopard will also automatically check for known conflicting programs at installation and move them to an Incompatibility folder.

Many programs automatically check for updates upon launch. Take advantage of this option—if you see a dialog box asking whether you want to check for updates, accept the offer. Other software comes with a separate update utility that can launch on a schedule. For example, look for the Microsoft AutoUpdate program in your Applications folder if you want to check any of your Office programs right away or set up a schedule. To check for updates from Apple, select Software Update from the Apple menu.

A Date to Update Have OS X automatically check for updates that may fix persistent problems.

You can set the Software Update system preferences to alert you to new updates (see "A Date to Update"). For a program that doesn't offer this sort of help, check for an update by going to the company's Website or to VersionTracker (versiontracker.com).

Reinstall Programs

If the misbehaving software is still acting up and is the latest version, there's a chance your copy of it may be corrupted. In that case, it might help to reinstall the software, by either downloading it from the Web or pulling out your original CD.

Unfortunately, reinstalling won't fix problems involving a program's support files. For example, numerous programs place files in *youruserfolder*/Library/Application Support. Simply replacing the main program won't replace these support files. Sometimes even using an application's installer won't do it. If the program came with an uninstall utility, uninstall and then reinstall the program. Otherwise, you may need to search for support files (in Spotlight, search for items that contain the application's name) and remove them before you reinstall the software.

Log In as a Different User

You've installed new programs and tweaked preferences—is one of the millions of changes you've made to your system giving your Mac a stomach-ache? You can find out by logging in as a different user. If you've never created a second account, now is the time to do so (see the *User Accounts* chapter for instructions).

Log in to your troubleshooting account by selecting Log Out *username* from the Apple menu, and then selecting the account from your login screen. Launch the troublesome application. Does it launch

successfully now? If so, you've discovered a critical piece of information. You now know that the cause of the crash is almost certainly some file within your Home directory—the folder that holds all the files for your user account. This is typically a corrupt or conflicting file somewhere in the Library folder—either a preferences (.plist) file, a font, a cache file, a plug-in, or some other support file (often found in the Application Support folder). For help fixing these types of problems, see the "Solve Home Directory Problems" sidebar. Ultimately, it might take some good old trial-and-error to ferret out the culprit.

If you use a different account and the crash still occurs, the source of the problem is probably outside your Home directory. As you've presumably already tried reinstalling the application to no avail, the problem is most likely in the /System/Library or /Library folder—or perhaps one of the invisible Unix folders. Fixing problems like these can be tricky. If you're feeling intrepid, one of OS X's troubleshooting utilities may be able to help (see "Three Handy Troubleshooting Tools"). For most people, though, a problem of this type merits a visit to a Mac repair specialist such as workers at an Apple Store's Genius Bar.

Check Console Logs

Launch OS X's Console utility (/Applications/Utilities). If you don't see a list of logs in the left column, click the Show Log List button in the toolbar. From the list on the left side, locate the CrashReporter folders (in *youruserfolder*/Library/Logs and /Library/Logs). In here you'll find a .crash.log file for every application on your Mac that has ever crashed.

In the log file with the name of your problem, you might find a clue to the cause of the crash—for example, a reference to a plug-in that may be the ultimate cause of the conflict. Look carefully at any section with a header including the word "Crashed" (such as "Thread 0 Crashed"). The output in the All Messages item under Log Database Queries may also provide a clue as to the cause of a crash. (For more advice on using Console, see macworld .com/3302.)

CPR for Startup Woes

What strikes the most fear into the hearts of Mac users? When the computer fails to start up at all. If your Mac seems to start up normally but stalls at some point before the desktop appears—an

Solve Home Directory Issues

If you've confirmed that the problem is within your Home directory, you may be able to fix things on your own. Here are several common sources of trouble and ways to deal with them.

Root Out Corrupted Preference Files To find the preferences file for an application, look in *youruserfolder*/Library/Preferences. Once you've opened this folder, press ⌘-F and limit your search to this folder by clicking Preferences in the Search bar. Type the name of your program in the Search field. Look for a file with a name in the format com.*vendorname.programname*.plist. In iTunes, you'll see one named com.apple .iTunes.plist.

Drag this file outside its folder and relaunch the application. If the crash disappears, congratulations—you've found the culprit. Delete the .plist file you removed. You may next need to redo any custom preferences you set up for the application. If the crash still occurs, return the apparently OK file to the Preferences folder. If additional .plist files include the name of the application (as is the case with iTunes), you can next try removing them.

Dump Corrupted Cache Files Go to the Cache folder in your Library folder. Again, check for folders or files with the name of the crashing application. Delete them. If you can launch the application, a faster way to accomplish this task is to use the Empty Cache command that's built into some applications. For example, in Apple's Safari, select Safari ▶ Empty Cache.

Purge Problematic Plug-Ins It's possible that there's a conflict between your crashing application and a third-party plug-in designed to work with it. For example, if you use Safari plug-ins, you'll find them in *youruserfolder*/Library/Internet Plug-ins. For Mail plug-ins, check *youruserfolder*/Library/Mail/ Bundles. Remove plug-ins from their folder to see if this fixes the problem. If it does, check for updated versions of those plug-ins. Otherwise, determine which particular plug-in

is the culprit and stop using it.

In Snow Leopard, some plug-ins and input managers will not work with apps that run in 64-bit mode. To use these plug-ins, relaunch the related app in 32-bit mode, via the option in the application's Get Info window.

Rebuild the Program's Database If your program uses a database or library, the problem may be a corrupted database. Many programs of this type offer a way to rebuild the database. For instance, with iPhoto, hold down the ⌘ and Option keys when launching and select Rebuild The iPhoto Library Database From Automatic Backup (see "Rebuild Rotten Libraries").

If any other rebuild options seem relevant to your symptoms, check them, too. Similarly, hold down the Option key when you launch Microsoft Entourage to access the Database Utility. For other programs, search the help info or read the documentation to find out whether a simple database-rebuilding procedure exists.

Fix Your Keychain If programs inexplicably reject your passwords, or if you're having a problem that seems related to a password, launch Keychain Access (Applications/Utilities). From the Keychain Access menu, select Keychain First Aid and try to repair the Keychain.

Rebuild Rotten Libraries If your iPhoto database becomes corrupted, rebuilding it can get the program up and running again.

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indication that the problem isn't with your monitor or your power—try each of the following steps in turn until one succeeds.

Restart Again

First try a little patience. Sometimes the Mac takes a little extra time to restart after a crash. If you've gotten a cup of coffee, but your Mac still hasn't started, try restarting one more time. Things often work better the second time around.

Do a Safe Boot

If your Mac crashes when you turn it on, hold down the Shift key at startup until you see the words "Safe Boot" appear on screen. In Safe Boot mode, the Mac performs checks and makes repairs much as it does when you run Disk Utility's Repair Disk feature. It also deletes the dynamic loader shared cache, a known cause of some "blue screen" startup crashes. Even if you don't do anything else, Safe Boot may restore your Mac to its old self with the next normal restart.
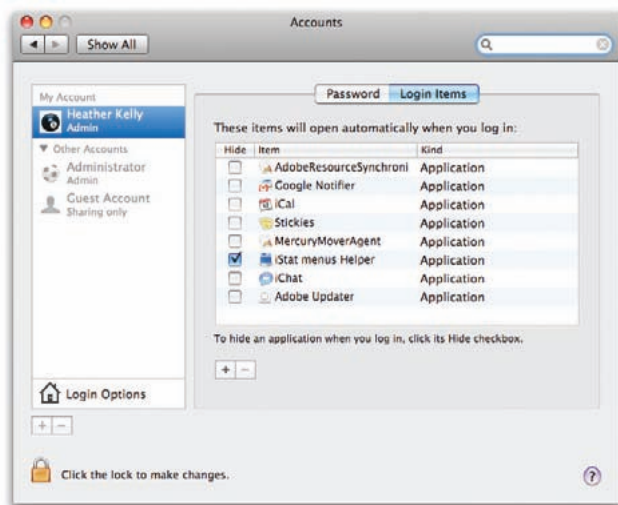
Trial and Error If you're having trouble starting up, the culprit may be one of the items in your Login Items list. Eliminating them one by one—by clicking the minus button—may help you track down the troublemaker.

Otherwise, assuming the Safe Boot succeeded, you've at least temporarily bypassed the startup crash and you can now do further troubleshooting, modifying or moving files. After you're done troubleshooting, restart normally.

Investigate Your Login Items

If you're still in trouble after a post-safe-boot restart, it's going to take some detective work to figure out what's going on. For example, if the crash occurs after you've logged in to your account (and the desktop background has appeared), the most likely cause is a Login Items conflict.

To check for this, go to the Preferences folder inside the Library folder of your Home directory. Locate the file named loginwindow.plist (not com.apple .loginwindow.plist). Now, make a copy of the file and store it in another location (such as your desktop).

Next, go to the Accounts system preference pane, select your account name, and click the Login Items tab. Select the top item in the list and click the minus sign (-) at the bottom of the Login Items window (see "Trial and Error"). Next, log out (Apple menu ▶ Log Out *username*) and then back in. Continue removing items one by one until the crash stops occurring. When it does, it's a good bet that the login Item you last deleted is the culprit.

At this point, replace the active loginwindow.plist file with the copy you made. Return to the Login Items window in Accounts. Your complete list of login

Three Handy Troubleshooting Tools

Snow Leopard includes several useful diagnostic tools for tracking down persistent problems. Here are a few of the most helpful.

Network Preference Pane and Network Utility If you're having trouble with an Internet connection, your first stop should be the Network preference pane. Click on the Assist Me button. From the dialog box that appears, select Diagnostics. If you need more help, and as long as you have sufficient technical skills, try Network Utility. See the article "Inside Network Utility" (macworld.com/4607) for a guide to its most useful features.

Activity Monitor When you're wrestling with systemwide problems, such as your Mac slowing down, Activity Monitor is the first place to turn. This program lists all your open processes, including applications and those behind-the-scenes activities that you don't see in the Finder.

Start by checking Activity Monitor's CPU column. If one application is consistently showing an especially high percentage (anything over 30 percent would certainly qualify), it may be the source of your problem. If it's an application you know you can safely quit, highlight it and click Quit Process. Otherwise, if you don't want to risk quitting something unfamiliar to you, restart your Mac.

Sync Diagnostics If you're suffering from sync-related problems, try using the Sync Diagnostics assistant included with Snow Leopard. Hold down the Option key when selecting the Sync icon in the menu bar. One option will be Open Sync Diagnostics. Another will be Reset Sync Services. Both can help resolve problems.

items should be back. Delete just the likely culprit item, log out, and log back in.

Repair the Disk

Mac still not starting up properly? When you do a safe boot, OS X attempts to repair your disk, but it offers no feedback as to what happened. You don't know if it found and fixed problems or if it ran into problems it couldn't fix. If the safe boot fails to fix the problem and login items have been ruled out as

a cause, try using Disk Utility's First Aid to repair the disk. Open the utility, click the First Aid tab, and then click Repair Disk. Unfortunately, if the problem drive is your startup disk (which is almost always the case), you'll run into an immediate dilemma: the Repair Disk button will be dimmed and you won't be able to select it.To get it to repair your current startup drive, you'll have to jump through some hoops. There are several ways to deal with this issue:

CLICK ON VERIFY DISK The Verify Disk button usually works even if Repair Disk doesn't. Click on it if you can (see "Verification Station"). If the results say that everything is OK, you can bypass Repair Disk.

START UP FROM ANOTHER DRIVE You can start up from your Snow Leopard install DVD. Insert the DVD; then click the Utilities button and then Restart. Once your system restarts, you will have additional Utilities options and can choose Repair Disk for your normal startup drive. Alternatively, you can start up from a secondary bootable drive if you have one with Disk Utility installed. If First Aid reports that it successfully made repairs, run the utility again. Occasionally, a successful repair uncovers yet another problem requiring a fix. When the results indicate that no further repairs were necessary, you're done.

**USE SINGLE-USER MODE** If you can't locate an install DVD and don't have a second bootable drive, you can attempt to start up from your default drive in single-user mode. To do so, hold down ⌘-S at startup. The Mac should enter a command-line mode that looks as if you're running an odd version of Terminal. You don't need to know any Unix to get your job done. All you have to do is type `/sbin/fsck –fy`. The resulting output will be similar to what you see when running Repair Disk from Disk Utility. If the utility reports that your drive is OK, or that it successfully made repairs, type `reboot`.

Apotek's AppleJack (macworld.com/4249) makes single-user mode a bit more user-friendly. If you've had the foresight to install it, type `applejack` at the prompt. From the menu of options that appears, select `repair disks`. Its other menu choices offer additional repair options.

IF NOTHING WORKS If one of the utilities reports a problem but can't repair it, move up to a more robust repair program, such as Alsoft's $100 DiskWarrior 4 (macworld.com/2503), Prosoft's $99 Drive Genius (www.prosofteng.com), or Micromat's $98 TechTool Pro 5 (macworld.com/4606).

Disconnect Peripherals

If you're still having problems, try disconnecting all USB and FireWire devices (except your Apple-supplied keyboard and mouse). Restart the Mac. If you can start up, you may have had a conflict between OS X and one of the disconnected devices.
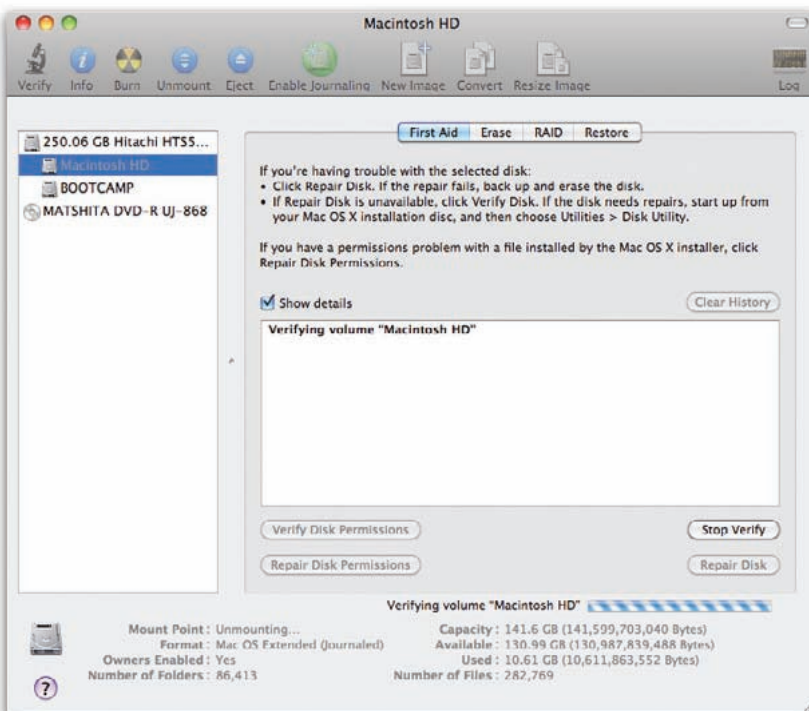
Verification Station If you can't pin your problems on a particular application, take a trip to Disk Utility and click Verify Disk.

You may be able to reconnect all the devices and use them, but if you leave them connected, your Mac may fail to start up the next time you try. The only way to cure this problem is by updating the device's driver software or firmware. (Firmware is the set of programming instructions stored on the hardware itself; it remains unchanged unless specifically modified by a firmware updater utility.) Check the company Website for details.

Reset PRAM

Restart the Mac yet again. This time immediately hold down the ⌘-Option-P-R keys until the Mac chimes a *second* time. This resets the information in the Mac's Parameter RAM (PRAM) to its default values, which can solve certain startup problems. PRAM is a special area of RAM where data is retained even after shutting down the Mac. PRAM stores an assortment of systemwide parameters, such as time zone setting and speaker volume.

Reinstall OS X

If your sleuth work has not paid off, it may be time to bring out your OS X Installation DVD and start from scratch.

Although it's not obvious, the Snow Leopard installer still includes a process equivalent to the old Erase And Install option. It wipes out the data on your startup drive (including applications) and installs everything fresh, restoring only Snow Leopard and its bundled software. You will have to reinstall your other applications, so make sure all your files are fully backed up first.

To erase your hard drive, insert the Snow Leopard installation disk and double-click the OS X icon. Click Utilities and then Restart. You'll be prompted to choose your language. Then click Disk Utility, choose your disk, click the Erase tab, select Mac OS Extended (Journaled), and erase your disk. Once Disk Utility is done, you can quit it and start the installation process again from the beginning. After you install Snow Leopard this way, the Setup Assistant will run and ask if you'd like to restore or transfer files from a Time Machine backup, another drive connected to your Mac (including a Mac in Target Disk Mode), or another Mac (over a local network).

Treat Panic Attacks

It's an ominous sign indeed: your screen just turned a shade darker and a message appeared—in several languages—informing you that you must restart your Mac. Your Mac is suffering from kernel panic. Despite the name, there's no need to panic if you experience it. Just follow these five steps:

Step 1: Restart
First, restart your Mac as requested. Near the end of the startup, a "this application has unexpectedly quit" message will appear. Don't worry: your Mac is merely informing you that OS X itself quit unexpectedly prior to your restart.

Step 2: Check for Updates
Like application crashes, kernel panic problems often vanish after a restart. If not—and if the onset of the panic is linked to a specific application—there's almost certainly a fatal bug in that software. Contact the maker for an updated version or for technical support.

Step 3: Ax New Hardware
Have you recently added RAM or a PCI card to your Mac? Regard such additions with suspicion, especially ones that add a kernel extension with the word Driver in its name to your Mac's /System/Library/Extensions folder. These can be potential sources of kernel panics. If you recently added a card or peripheral to your Mac, try removing it to see if that eliminates the panic.

Step 4: Try a Safe Boot
If the kernel panic occurs at apparently random moments or during startup, try a safe boot. Restart and immediately hold down the Shift key until the sundial icon shows up at the gray screen.

Step 5: Reinstall OS X
If the safe boot succeeds but kernel panic strikes again when you boot normally, a file in the /System/Library/Extensions folder is generally the cause. The file was probably installed by a third-party application. The simplest approach here is to reinstall OS X. Once you've reinstalled Leopard, reinstall your third-party software only as needed until you find one that triggers the panic.

Seek Outside Help

You've tried all the usual fixes with no luck. It's time to enlist the outside world for help. Whether it's the Internet masses or a paid professional, someone out there can help solve your Mac woes.

Research Online

One way to sidestep the complicated parts of the troubleshooting process and zero in on an easy solution is to search the Web. It's likely that you are not the first or only person to have experienced your problem, so chances are good that you'll discover solutions online.

START WITH A GOOGLE SEARCH If you can type in the exact text of your error message or otherwise summarize your problem using a few keywords, you're especially likely to get helpful results using Google. Use quotes to enclose exact phrases; this reduces the number of unwanted results. For example, if you type in the error message **"the Preferences File Could not be opened. The end of file was reached. -39"**, you'll get a useful Microsoft Entourage Help Page, which tells you what to do if you have a damaged Identity database file. If you instead

just type **Entourage -39**, you'll have to wade through a lot of information about HBO's *Entourage* series.

TRY SUPPORT SITES If Google comes up empty, search the support sites for the products that are giving you trouble. For OS X in general, or for any Apple products, there's no substitute for searching Apple Support (www.apple.com/support). After you type in your search terms, the results will typically take you to articles in Apple's Knowledge Base and threads in Apple's Discussions section. The Discussions threads are often more fruitful, as they include tips from readers for fixing problems that Apple may not yet have officially acknowledged.

The Apple Support site gives you a number of ways to home in on the answers you seek. For example, as with most search engines, you can use Boolean operators. Include the word AND when you want to search for documents that include both of your search terms—**macbook AND battery**. Likewise, use OR to find either of two terms and NOT to exclude a certain term. Enclose specific terms within quotation marks. Also take advantage of the site's ability to limit your search to certain products. After you type in your search string, you may see a blue
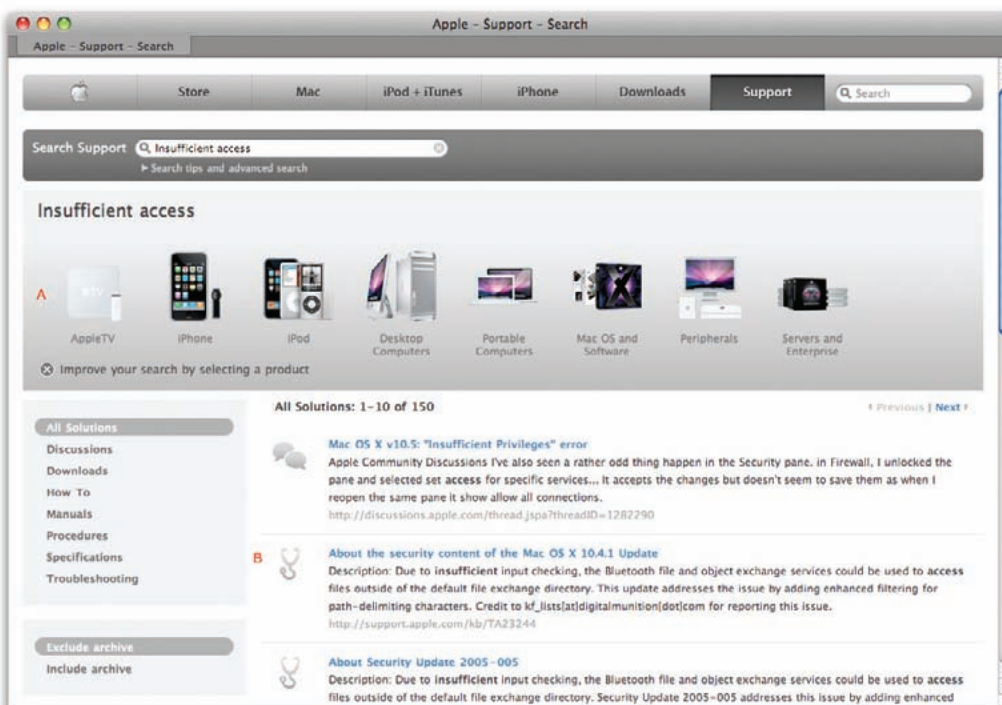
Apple Answers
The Apple support site lets you use Boolean operators in searches. To drill down further you can limit your search to a certain product family.

circle with a plus sign in it next to the words "Improve your search by selecting a product." Click on this to reveal images of Apple's product line. Choose one to limit your search to just that product.

BE CAUTIOUS Not every fix you find online will actually work, at least not for your particular variation of the problem. And don't assume that just because a user posting says you must do something extreme, such as erase your hard drive, it's absolutely necessary. Less radical solutions may exist. Read through several postings on a subject before deciding on a course of action. Start with the simplest, least time-consuming solution, especially if there appears to be a consensus that it works.
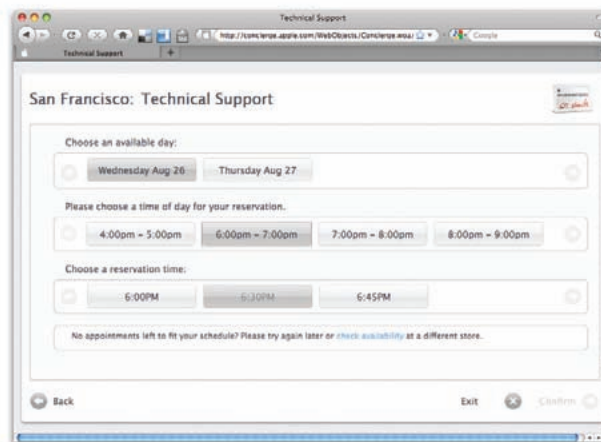
Go to a Genius Bar

At some point, if you work your way through the Internet's suggested fixes without success, you'll exhaust your patience. This can easily happen if the problem lies with the Mac's hardware—in most cases, you can't do those repairs yourself. More rarely, you might have a software problem that you can't figure out, despite your best efforts. In either case, the time has arrived for a trip to the Genius Bar.

THE GENIUS BAR is best suited for problems with Apple products. Geniuses are less likely to help—and may even refuse to help—with problems involving third-party hardware and software. If you know your problem is with Adobe Photoshop or a Canon printer, for example, you're usually better off contacting the makers of those products than dealing with the Genius Bar.

The Genius Bar is incredibly popular, so make an appointment before you go. You can schedule your visit via Apple's Website (apple.com/retail/geniusbar) (see "Reserve a Genius"). Arrive a few minutes early and check in with the concierge. In most cases, the Genius Bar will call you up within minutes of your appointed time.

Apple products generally come with a one-year warranty. If you purchase AppleCare (apple.com/support/products/), that extends it for another two years. For a product that's still under warranty, there's a good chance that Apple won't charge you for repair or replacement. Occasionally, it may offer a free repair or replacement even if the warranty has expired. It can't hurt to bring in your hardware and check things out. If you expect to be paying for any repairs, you may face some difficult decisions. Many repairs cost almost as much as a replacement. Would you rather spend $800 to fix your

Reserve a Genius Don't just drop in at your local Apple store; first make a reservation for the Genius bar online.

three-year-old Mac- Book or get a new one for $1,000? Give this possibility some thought before your visit.

If it turns out that your Mac needs a repair and you give the go-ahead, you'll probably have to leave your Mac with Apple. Don't make an appointment for the Genius Bar until you know you can do without your computer for a few days. And since there's always a chance that you'll lose data on your hard drive, back up the drive *before* you take off for the store.

Beyond the Genius Bar

The Genius Bar is not the only place you can turn for help. Whether you don't have an Apple Store in your town or you're just not ready to jump in the car and go, you have options.

You can still find old-fashioned telephone support at 800/275-2273. It's free for 90 days for most products, and for two years if you purchased AppleCare. If you prefer, you can avoid waiting on hold by placing your phone request at the Apple Expert page (apple.com/support/expert). Apple will call you at an agreed-upon time. Apple also offers online chat help for a few products, notably MobileMe (macworld.com/4609).

To find out more about your warranty status and what repair options are available for any Apple product, check out Apple's Online Service Assistant (macworld.com/4611).

Lastly, you may consider bypassing Apple altogether and going to an Apple Authorized Service Provider (macworld.com/4614). One of these providers may be more conveniently located than an Apple Store. They are also typically less expensive and not as busy (so you are likelier to get help as a drop-in visitor).

Switching from Windows

How to Make the Leap without Losing Your Files…or Your Sanity

Remember the last time you moved? For all the promise of major long-term gain, there was at least some short-term pain: boxes to pack and unpack, new neighbors to meet, and a house to turn into a home.

Moving from a Windows PC to a Mac presents the same kinds of opportunities and challenges. It requires some up-front effort: transferring your old data to your new machine, getting your essential hardware and software up and running, and learning your way around.

Here's a quick guide to the most important steps.

Transferring Your Data

Just because you're leaving your Windows PC doesn't mean you have to leave your files behind, too. These days, most common file types—including photos, word-processing files, spreadsheets, and e-mail—will work just fine on the Mac. And for those that don't, inexpensive utilities can often translate them to a compatible format. However, if you've had that old PC for a while, you could have many gigabytes of stuff to move.

So how do you safely move that mass of data from one machine to the other? You actually have a couple of options.

Use an External Hard Drive

Apple's support site (macworld.com/5452) suggests several different methods for transferring files from a PC to a Mac. One of the easiest is to use an external USB hard drive.

If you don't already have an external drive, there's no better time to buy one: they're cheap, and you'll probably want one for use with OS X's Time Machine backup utility (see the *Troubleshooting Your Mac* chapter).

For data-transfer purposes, make sure the drive is formatted using Windows' FAT32 file system, so both your Windows PC and your Mac can read it and write to it. After you're done copying files over, use OS X's

Moving Day An external hard drive such as this LaCie d2 Quadra offers an easy way to move files and later serve as your backup drive.

Disk Utility (Applications ▸ Utilities) to reformat the drive as Apple's HFS+ so you can use it with Time Machine.

To transfer files via your USB drive, connect the hard drive to the PC, drag your data onto it, and then disconnect it. Now attach it to your Mac, and drag the data onto the Mac's hard drive using the Finder, OS X's equivalent of Windows' Explorer (for more information, see *The Finder* chapter). Your Home folder, which appears in the left-hand pane of the Finder and is equivalent to My Documents, is a good place to copy your personal files; it's got folders for Documents, Movies, Music, and Pictures.

Over the Network

You can also shuttle files from your old PC to your new Mac using a wireless or wired network; however, the process can be a hassle depending on your setup. Here's one way to do it:

On your Windows PC, select Run from the Start menu, type **cmd**, and then click OK. In the subsequent command line, type **ipconfig**.

Make a note of the IP address that appears. Next, use Windows' Explorer to navigate to a folder containing files you'd like to transfer to the Mac. Right-click on it, choose Properties, and click the Sharing tab. Select Share The Folder On The Network (Windows may demand confirmation that you know what you're doing), and then choose a Share name. Click OK.

Where Is Everything?

Most major Windows features have counterparts in Snow Leopard.

IF YOU USED THIS IN WINDOWS	LOOK HERE IN OS X	FOR MORE INFORMATION SEE
Start menu	Apple menu and Applications folder	*Working with Files* chapter
Taskbar	Dock	*The Dock* chapter
System tray	Right side of menu bar	*Mac OS X at a Glance* chapter
Explorer	Finder	*The Finder* chapter
Preview pane	Quick Look	*The Finder* chapter
Flip 3D (Vista and Windows 7)	Exposé	*Working with Files* chapter
Control Panel	System Preferences	*System Preferences* chapter
My Documents	Home folder	*The Finder* chapter
Search	Spotlight	*Searching Your Mac* chapter
Gadgets and Sidebar (Vista and Windows 7)	Dashboard	*Get Started with OS X Apps* chapter
Backup (XP) and Backup and Restore Center (Vista and Windows 7)	Time Machine	*Troubleshooting Your Mac* chapter
Recycle Bin	Trash	*The Dock* chapter

On your Mac, go to the Finder and select Connect To Server in the Go menu. In the text field that appears, type a server address in this format: `SMB://ipaddress/sharename`. (For example, if the IP address is 10.0.1.8 and the share name you chose is windowsstuff, you'd type `SMB://10.0.1.8/windowsstuff`.) When you click OK, your shared folder in Windows should show up in the Finder, letting you drag its contents onto the Mac.

Moving E-mail

Getting your old e-mail from your PC onto your Mac is easy if you've been using a POP3 or IMAP account that leaves messages on the server. Just launch Mail on your Mac (it's the postage-stamp icon in the Dock), choose Mailbox ▶ New Mailbox, and follow the instructions to add your account and download mail (see "Mail" in the *Get Started with OS X Apps* chapter for more on OS X's e-mail program).

If your e-mail account doesn't store your messages on a server, but stores them on your computer instead, transferring them to a new machine can be tough. Where and how those e-mails are stored depends largely on which e-mail client you use. Our best advice is to perform a Google search using the name of your old e-mail client and the phrase `"transfer e-mail"`. OS X's Mail app can import mail in mbox format (choose File ▶ Import Mail-

boxes), so, if your old e-mail client can export in that format, you should be able to make the transfer.

Let Someone Else Do It

If you're willing to invest $40 in simplifying the moving-to-the-Mac process, consider Detto Technologies' Move2Mac (detto.com). This Windows-to-Mac migration utility not only transfers your files via network or external drive (shuttling items from Windows' My Documents to OS X's equivalent folders) but also moves your Outlook e-mail and address book, browser favorites, and even your wallpaper preferences.

Move It for Me Move2Mac transfers files, folders, and more from your Windows PC to your Mac.

Replacing Windows Software

Most files can make the move from Windows to Mac. But programs typically aren't so adaptable. Software by its very definition works with only one operating system. Unless you plan to spend all your time in a copy of Windows on your Mac (see the "Bringing Windows with You" section later in this chapter)—something we don't recommend—you'll need to replace your Windows apps with Mac equivalents. While many Windows programs have Mac versions, in some cases you'll end up using a product that's entirely different from what you used on your PC. For those that don't come in both flavors, you should almost always be able to find something comparable. In fact, third-party OS X apps can be pretty darn impressive.

Here's a look at some of the most important software categories:

Web Browsers

Most leading Windows browsers—including Firefox, Opera, and Apple's own Safari—are available in essentially identical Mac versions. The one Windows
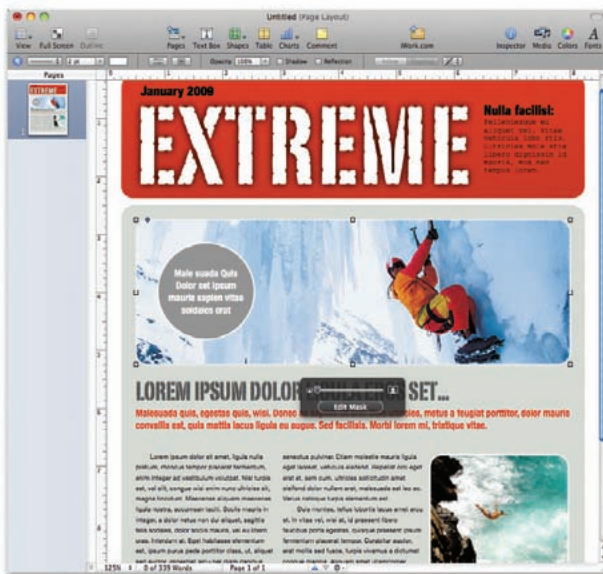
The Word on Pages Pages '09, the word processor in Apple's iWork '09, isn't as dense with features as Microsoft Word, but it's easy to use—and creates slick designs.

Bilingual Hardware

Most peripherals you used with your Windows PC—including printers, digital cameras, networking equipment, external hard disks and USB drives, and scanners—should work fine with your Mac.

Try plugging yours, one at a time, into your new Mac. If OS X doesn't automatically identify it and set it up, visit the manufacturer's Website and look for a downloadable driver.

Sadly, Mac compatibility remains spotty in a few hardware categories, most notably MP3 players that aren't made by Apple (it's assumed that Mac users buy iPods) and cell phones. In some cases, third-party tools such as Mark/Space's Missing Sync utilities (markspace.com) can help.

browser you won't find on the Mac happens to be the one with the highest market share: Microsoft's Internet Explorer. If you've been using IE, give Safari or Firefox a try on the Mac—both are impressive and markedly faster than IE (for a primer on Safari, see the *Get Started with OS X Apps* chapter).

Another useful tool is the free Xmarks plug-in (xmarks.com), which can sync your bookmarks from Internet Explorer or Firefox on a PC over to Safari or Firefox on your new Mac.

Microsoft Office

Office 2008, Microsoft's Mac suite, is quite different from Office 2007 for Windows. It has fewer applications and fewer features overall—and its user interface only roughly approximates the Windows version's. (To be fair, Office 2008 also has some features that Office 2007 lacks.) The Home and Student edition is $150.

If you want to spend less and typically don't use some of Office's more advanced features, consider Apple's own iWork '09 (macworld.com/5454). This suite, which bundles the Pages word processor,

Pretty Pictures iPhoto '09 is part of Apple's iLife suite and ships with every new Mac. It includes powerful image-management features such as face recognition.

Numbers spreadsheet, and Keynote presentation together for a reasonable $79, is slick but less full-featured than Office.

E-Mail and Calendaring

All Macs come with Apple's more-than-respectable Mail and iCal programs—and the new versions in Snow Leopard can even connect to the Microsoft Exchange servers used by many businesses. That's good news given that there's currently no version of Outlook for OS X (Microsoft plans to release one in 2010, but Office 2008 comes with a different, skimpier e-mail/calendar package called Entourage).

Personal Finance

On the Mac, finance mainstay Quicken is stuck on the antiquated 2007 version, which isn't a native Intel application. A new edition was originally due in 2008 but Intuit now says it will appear in February 2010. If you can't wait, check out Moneydance (moneydance.com) or Mint.com (mint.com).

Creative Apps

One of the best thing about Macs is that they come with Apple's innovative iLife suite (apple.com/ilife) of photo, video, music, and Web tools. Even if you've never used it, it'll probably feel familiar—many of its features have been adopted by Windows apps.

Try iLife before you buy anything else; if you're not satisfied, you may want to spring for meatier third-party alternatives such as Adobe's $100 Photoshop Elements 8 photo editor (adobe.com) and Roxio's Toast Titanium CD/DVD/Blu-Ray burning software (roxio.com).

Utilities

OS X comes with Disk Utility, an essential tool for formatting, partitioning, and otherwise wrangling hard drives. What's more, its Repair Disk Permissions feature can fix a remarkable percentage of otherwise mysterious Mac problems. Two solid third-party packages cater to hard-core utility fans: Micromat's $98 TechTool Pro (micromat.com) and Alsoft's $100 Disk Warrior (alsoft.com).

Bringing Windows with You

These days, moving to a Mac doesn't mean leaving Windows behind. Modern Macs, like PCs, use Intel processors, a technical transition that lets you run Microsoft's operating system on Apple's hardware.

This is a powerful option if you've got a Windows program or two that you just can't live without and that isn't available in a Mac version, such as Intuit's TurboTax Business. It can also be handy for maintaining compatibility with the Windows-using majority—for example, PowerPoint 2007 for Windows lets you embed fonts in a slideshow, a feature PowerPoint 2008 for the Mac lacks.

Snow Leopard comes with Apple's Boot Camp, a utility that lets you install a copy of Windows (which you supply) alongside OS X. From then on, booting into Windows turns your Mac into a true Windows PC; speed is at least as good as with any PC with comparable specs, and all Windows-compatible applications and peripherals work.

Of course, by turning a Mac into a Windows computer, you're giving up the goodness of OS X that convinced you to switch in the first place. Which is why most folks who are serious about running Windows applications on a Mac invest in one of two packages that can put an entire virtual PC within OS

X: Parallels Desktop ($80, macworld.com/4299) and VMware Fusion ($80; macworld.com/4300). Both let you run Windows in an OS X window, which you can view in full-screen mode, or in a near-seamless mode that puts each Windows app in its own window within OS X.

Unlike Boot Camp, both virtualization packages offer ways for switchers to transfer their old copy of Windows to their new Mac—applications, settings, and all.

VMware Fusion 3 lets you do it via a wireless or wired network; Parallels is available in a $100 Switch to Mac Edition that includes a similar feature, except it does the transfer over a bundled USB cable.

Virtualization isn't without its downsides: you'll experience a performance hit (which isn't noticeable with garden-variety programs but can hobble demanding apps such as games) and shorter battery life on a laptop. Still, a Mac running Snow Leopard and a virtualized copy of Windows delivers the best of both computing platforms in a uniquely useful way.

Keep in mind that if you run Windows on your Mac via Boot Camp, VMware Fusion, or Parallels Desktop, you'll need to protect it just as you would any copy of Windows—it's just as vulnerable. (Both VMware and Parallels bundle security software.)
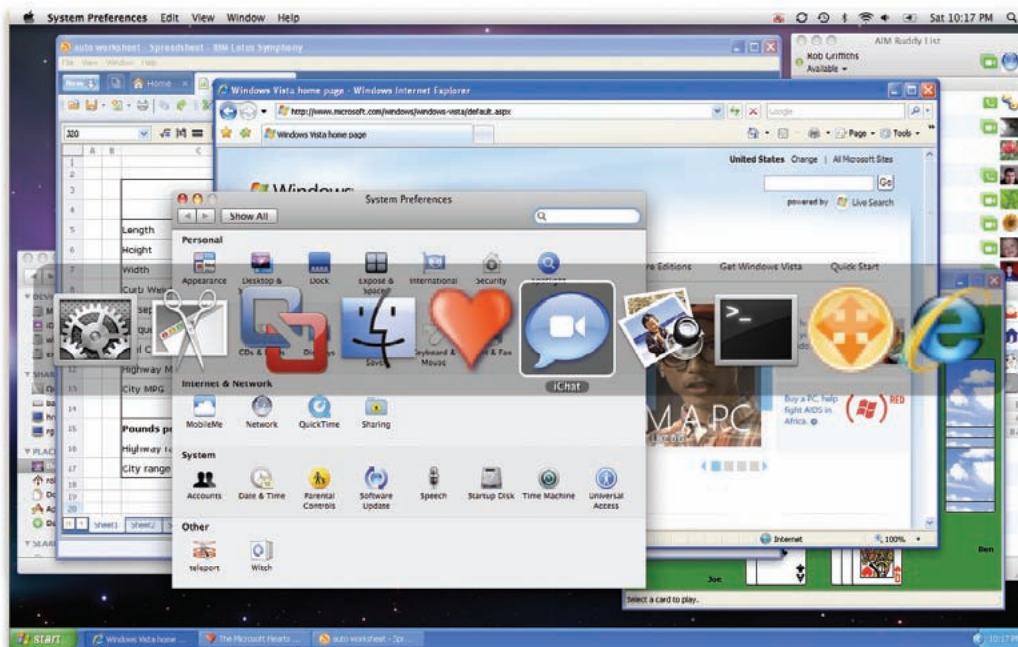
**Work Together** VMware Fusion lets you run Windows apps side by side with OS X apps.

Worthwhile Add-ons

20 Useful Programs to Make Your Mac Easier to Use

Snow Leopard is full of useful features, but chances are it still can't do everything you want, exactly the way you want. Thankfully, there's a lot of inexpensive third-party software out there just itching to add powerful new features to your Mac. These programs do everything from help you organize your files to increase your productivity and customize OS X.

Here are some of our favorite affordable, indispensable applications. For even more suggestions, check out our Mac Gems Weblog (macworld.com/macgems) or the *Mac Gems* Superguide (macworld.com/superguide).
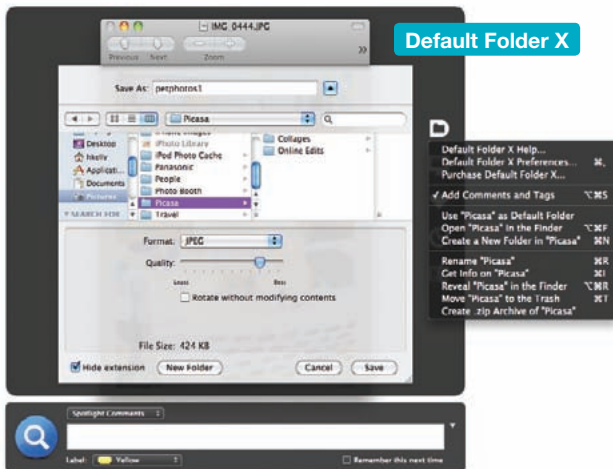
Default Folder X

Enhance Dialog Boxes

Default Folder X (macworld.com/1678) adds much-needed improvement to OS X's Open and Save navigation dialog boxes. As the name implies, it lets you assign a default folder for each application. In addition, it makes recently used and favorite files and folders, as well as open Finder windows, easily accessible. While you're in any navigation dialog box, you can click a Finder window (or choose it from Default Folder's X's Windows menu) to immediately switch the dialog box to that directory. Add to that Default Folder X's ability to make Open and Save dialog boxes remember the last folder and file you worked with in each application as well as the size and position of each dialog box.
$35; St. Clair Software, stclairsoft.com/DefaultFolderX

Create Documents in the Finder

One feature missing from OS X that Windows users have long enjoyed is the ability to create a new document in the Finder; instead, you have to launch the application, create a new document, and then save it in the desired folder. **Document Palette** (macworld.com/1208) and **NuFile** (macworld.com/1474) skip all that, letting you create a new document in the current Finder folder via a keyboard shortcut or contextual menu, respectively.
Document Palette: free; Vertical Eye,
coldpizzasoftware.com
NuFile: payment requested; Piti Ongmongkolkul,
growlichat.com

Control Windows by Mouse

Give your mouse cursor capabilities it never had before with **MondoMouse** (macworld.com/4043). This application allows you to move, resize, or identify windows without having to first switch to them and then reach for particular window pieces. With MondoMouse installed, if you can see any part of a window, you can manipulate it. Via a new Mondo-Mouse pane in System Preferences, you choose modifier keys for each action. You can perform any of these actions by simply moving your mouse cursor over any visible part of the desired window, and then holding down the appropriate modifiers. For example, you can move or resize a window, even if its menu bar or resize handle is hidden, by holding down the right modifier key as you drag the cursor. When moving or resizing a window, MondoMouse displays a highlighted border to indicate the edges of the window, even if some of those edges are hidden behind other windows; and if a window can't, for whatever reason, be resized, its border will be highlighted red. Finally, if a particular program doesn't get along with MondoMouse, you can specifically exclude it.
$15; Atomic Bird, atomicbird.com/mondomouse

Get Better Notifications

There are many ways programs can try to get your attention in Mac OS X. They can place a small badge on their Dock icon; bounce that Dock icon; make noise in the background; or even do all of those things at once. A better alternative is **Growl** (macworld.com/4732), a third-party notification manager for OS X. Growl provides notification services to other programs, letting them alert you in more effective ways than with bouncing Dock icons. When using programs that support Growl—examples include Chax, Firefox, Mail, NetNewsWire, SuperDuper, and Transmit—you can choose which events result
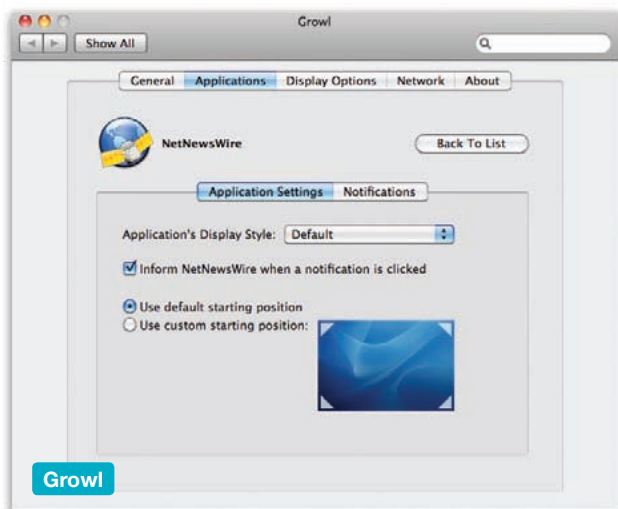
Growl

in notifications, as well as the style and formatting of each kind of notification.

Unlike OS X's built-in methods, Growl puts you in charge of the notification process. You can choose not only whether to receive notifications, but also which notifications you receive based on the type of activity a program is reporting. Growl also includes a number of add-ons that provide Growl notifications for other programs as well as for certain system events. One of the most useful extras is Hardware-Growler, which is most handy when added to your Login Items in the Accounts preference pane. When running, HardwareGrowler watches your Mac's FireWire, USB, Bluetooth, and network interfaces, as well as the file system, and notifies you whenever devices and volumes are connected or disconnected. It also monitors your network connections and helps you watch out for trouble with your connected peripherals.

Free; Growl Team, growl.info

Never Forget a Shortcut

Some keyboard shortcuts—such as ⌘-C for Copy—are pretty easy to remember. But others can be more elusive. Typically, to learn these shortcuts, you have to search the current application's menus to find the desired command and then try to memorize the keyboard shortcut associated with it. With **KeyCue** (macworld.com/3546) installed, holding down ⌘ pops up a window summarizing all the shortcuts available from within the current application. It also displays custom menu shortcuts you've defined through OS X's Keyboard & Mouse preference pane and third-party utilities such as MenuMaster. When you press modifier keys, KeyCue highlights the shortcuts that are accessible via that combination of modifiers. It's a great cheat sheet for using and learning keyboard shortcuts.

€20; Ergonis, macility.com

Automatically Fill In Passwords

Most Web browsers can store user names, passwords, and other data, and then automatically put them into Web forms when necessary. But **1Passwd** (macworld.com/3801) extends this capability, letting you store more than one set of information per site, save passwords in one browser and use them in another, and create new passwords whenever you need to. You can even generate, store, and enter the password for a new site, all with a single click.
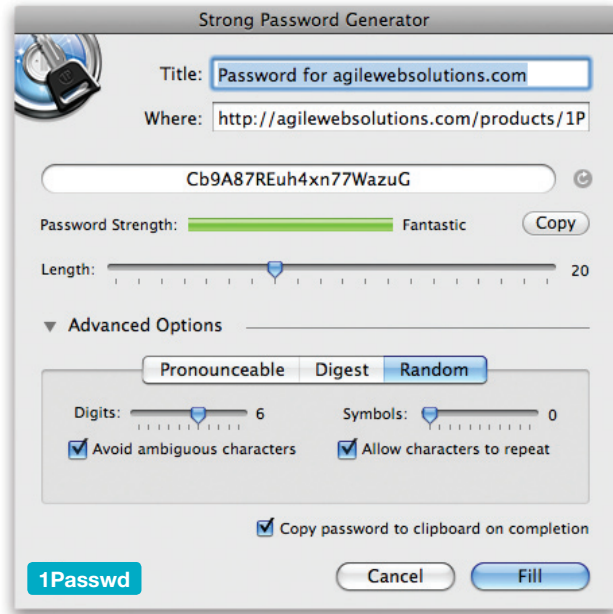
1Passwd relies on OS X's Keychain technology but uses its own keychain for extra security. In addition, 1Passwd protects you against phishing attempts and keyloggers, and optionally syncs its keychain using MobileMe.

$40; Agile Web Solutions, 1passwd.com

Switch Between Apps

OS X lets you switch between windows in the current application by pressing ⌘-`. Unfortunately, not all applications support this shortcut, and even among those that do, there's often no apparent logic to the order of window switching. **Witch** (macworld .com/2956) gives you proper window-switching behavior. By pressing its customizable keyboard shortcut, you get an on-screen list of all open windows in all applications, organized by application. Press the shortcut until you get to the desired window and then release. Unlike OS X, Witch shows you exactly which window you'll be switching to.

€10; Peter Maurer, manytricks.com/witch

Use Multiple Clipboards

If you move text around a lot, you probably know the pain of cutting a bit of text from a document and then forgetting to paste it in the right spot before copying another snippet of text. OS X's Clipboard can remember only one snippet at a time. But you can change that with **Jumpcut** (macworld.com/4662). This free utility automatically keeps track of all of the items you copy to the Clipboard. To access previous Clipboard contents, you simply press your chosen keyboard

shortcut; a translucent pane appears on the screen displaying past contents. Use the left or right arrow keys to highlight the desired Clipboard content and then press the Return key to paste the selection or press the Escape key to cancel.

You can customize the translucency of Jumpcut's pane and specify the number of recent Clipboard contents it remembers. Jumpcut is smart enough to know not to add the same snippet to the Clipboard twice, and it numbers each saved Clipboard item—making it clear which is the most recent addition. The program will even remember your cuts after you restart your Mac.

Free; Steve Cook, jumpcut.sourceforge.net
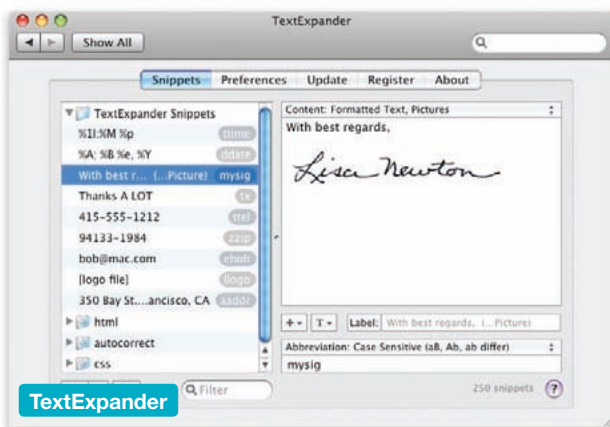
Speed Up Typing

If you find yourself typing the same snippet of text over and over again, **TextExpander** (macworld .com/1672) can save you hours of work—and your fingers hours of typing—each month. It lets you assign abbreviations to snippets of text; the abbreviations are automatically expanded to the full text snippets when you type them. For example, you can set the word "homeadd" to turn into your full home address.

TextExpander can also insert images or a mix of text and images, and you can create new snippets from selected text. TextExpander works systemwide, so your snippets are available in any OS X application that lets you type text.

$30; SmileOnMyMac, smileonmymac.com

Edit Photos Fast

Sometimes you need more photo-editing function-ality than iPhoto provides, but not so much that you're willing to shell out big bucks for Adobe Pho-toshop. **GraphicConverter X** (macworld.com/1684) is a nice compromise. As its name implies, it's

adept at image conversion: it can read 190 graph-ics formats (including some raw files) and export to nearly 80. But GraphicConverter also includes an extensive set of image-editing and drawing tools, including color correction, sharpening, and creative filters. The program can serve as a robust image browser (it also works with iPhoto), batch-convert and batch-edit multiple images, build slideshows, and be scripted via AppleScript. Its interface is a bit confusing at times, but you can't beat the fea-tures for the price.

$35; Lemke Software, lemkesoft.com

Convert DVDs for an iPod or AppleTV

There are times you want to take DVDs you've purchased and convert them to a file format you can play on your Mac, iPod, iPhone, or AppleTV. Unfortu-nately, thanks to copy-protection technology, doing so isn't as easy as ripping a music CD in iTunes. But **HandBrake** (macworld.com/3104) makes it almost as simple. Just insert a commercial DVD, choose from HandBrake's list of presets for movie-watching de-vices, and click Start. After a period of time—which varies wildly depending on the speed of your Mac—you'll have a space-saving video file you can watch on your Mac or sync to your iPod, iPhone, or Apple TV. You can even use a Queue feature to rip episodes from a TV-show DVD in sequence.

Free; Eric Petit, handbrake.fr

Admire Your Album Art

If you're looking for a simple, attractive, and fun iTunes controller, try **CoverSutra** (macworld .com/4703). It lets you assign keyboard shortcuts to the most common iTunes actions; pressing one results in visual on-screen feedback in the form of a symbol or, in the case of skipping to a different track, a symbol over the new track's album art.

A display that looks just like a CD jewel case and shows the album art appears whenever the track changes; the title of the track itself is displayed just below the case. You can enable a similar, always-visible CD-case display that you can place anywhere on your screen; this virtual CD case floats over your desktop (but behind application windows) and lets you quickly see information about the current track. One of the best CoverSutra features is its control win-dow. By pressing a keyboard shortcut, or choosing Show Player Controls from the CoverSutra menu, you get a translucent control window. This window shows
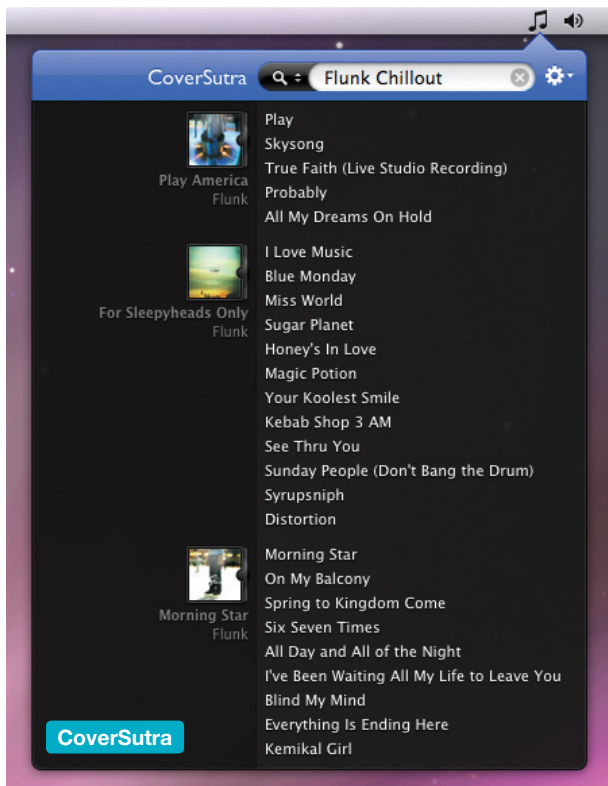
the current track's album art, album and song titles, artist name, and rating. But you also get controls for play/pause, forward, back, shuffle, repeat, and volume, as well as a progress slider, just like iTunes, that you can use to quickly skip to any point in the track. You can click any rating star to give the current track that rating. CoverSutra even includes support for the Apple Remote.

$20; Sophiestication, sophiestication.com/coversutra

Get All the Headlines

If you're a news junkie, you're probably already following RSS feeds—live-updated summaries of articles—from your favorite sites. If so, you need a news reader that can organize all of those RSS-feed subscriptions and make browsing and reading articles easier. News-Gator's **NetNewsWire** (macworld.com/2799) is one of the best. It stands out for its extensive feature set, easy-to-use interface, and ability to sync your feeds across multiple devices. The program's customizable interface makes it easy to navigate numerous feeds and subscribe to new feeds. You can choose which data is displayed for each list of articles—for example, the title, date, and feed name—as well as how articles are sorted within each feed. You can group related feeds into folders, sort feeds, save articles for viewing later, and create smart lists that group feeds based

on conditions you set. The program will also indicate whether an article has been updated. NNW can sync your feeds between multiple computers and mobile devices.

Free with ads; NewsGator, macworld.com/3257

Move Files between Machines

DropCopy (macworld.com/4671) simplifies the process of copying files between Macs by letting you quickly send files directly to other computers—or to particular users on those computers. When running, DropCopy looks for other copies of DropCopy running on your local network; it calls these destinations. (If you want to copy files to a computer running DropCopy that's not on your local network, you can manually add that computer as a destination by providing its IP address.) If any destination is found, a "drop zone" icon for it appears on your desktop. When you want to copy a file to another computer, simply drag the file into the drop zone, and then onto the name of the preferred destination. The file will be copied to the other computer and will immediately appear wherever that computer's owner has decided that incoming files should reside. That's all there is to it—no network browsing, no Connect To Server, no user names and passwords.

If you're on a public network, DropCopy's preferences dialog allows you to disable the option to automatically receive files for security reasons. You can also choose whether to display user names or computer names as targets in the drop zone. Drop-Copy also has the capability to send text messages to other DropCopy users and to copy the contents of the Clipboard on another computer running Drop-Copy. You can use DropCopy only with other computers that are also running DropCopy.

Free; 10base-t Interactive, 10base-t.com/macintosh-software

Share Your Screen

Snow Leopard's Screen Sharing feature, which lets you view and control the screen of another Mac, can be quite handy, especially for performing remote tech support for family and friends. Many people use it mainly with computers on the same local network —in the same house or office. Stefan Klieme's **ScreenSharingMenulet** (macworld.com/5274) aims to make such connections easier by providing a menu-bar menu that lists any computers on your local network with Screen Sharing (or Remote

Management—aka Apple Remote Desktop) enabled. Choose a computer from the menu and the Screen Sharing application launches and initiates a screen-sharing connection to the chosen computer.

Thanks to Bonjour, ScreenSharingMenulet's menu updates in real time, showing new Screen Sharing–compatible computers as soon as they appear on the network. The menu also provides a submenu that includes any computers to which you've recently connected. And if you've tweaked the Screen Sharing application to display its hidden browser, the menu displays any nonlocal hosts you've previously con-nected to as well.

Donations accepted; Stefan Klieme, klieme.com/ScreenSharingMenulet

Easily Make Bootable Backups

SuperDuper (macworld.com/3574) is a clone-backup utility that can create a fully bootable backup of your system. Although it doesn't let you archive older files, its advantages include a dead-simple Smart Copy feature for updating an existing clone, easy sched-uling, a Sandbox feature for easier restores when testing beta software, a great interface that explains exactly what's going to happen each time you use the program, and a developer that stands out for tech and customer support. And if you find yourself per-forming several different types of backup operations with SuperDuper, you can save different settings for each, and then load the appropriate settings when needed. SuperDuper also supports AppleScript, so savvy users can automate their copy operations us-ing these settings files.

$28; Shirt Pocket, shirt-pocket.com/SuperDuper

List Hard Drive Space Hogs

If you notice that your hard drive is getting full, you may want to find out what files are taking up all that space. One easy approach is to use a utility such as **WhatSize** (macworld.com/2433) that shows how your hard drive space is being used. When you launch WhatSize, you see a list of all mounted drives; click one, and WhatSize scans all the files on it. (How long the process takes depends on the drive.) When it's finished, WhatSize automatically sorts all the files and folders at the root level of the drive by space used; even normally invisible files are displayed. Each file and folder is also color-coded by size range: sizes over 1GB are red, sizes from 1MB to 1GB are purple, and sizes below 1MB are green. You can then browse
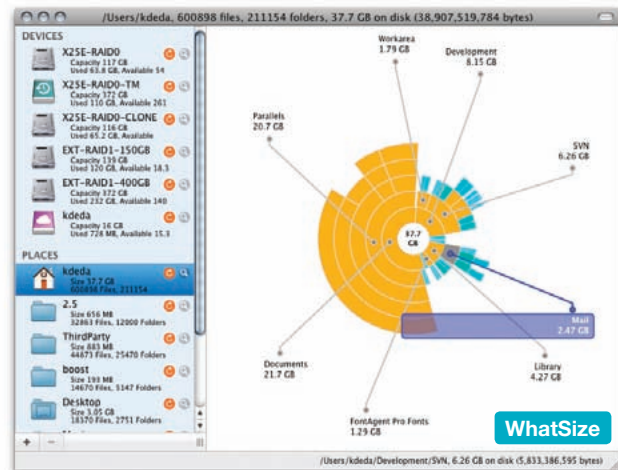
those files and folders just as you'd navigate them in the Finder's column view. Through this process, you can quickly see which files and folders are occupying the most space on your drive. If you find a huge file that you want to delete, simply select it and click the Delete button in the WhatSize toolbar.

You can view your files as a pie chart. You can also filter your results, displaying, for example, files and folders anywhere on the drive larger than 1GB. This feature makes it easier to find space-wasters, be-cause you don't have to manually search each folder on your drive. There are also tools for removing files you'll never need, like items for other languages.

$13; ID-Design, id-design.com/software

Access Hidden Settings

Tweaking utilities offer ways to access settings and features of Mac OS X that aren't easily available via the standard interfaces—system preferences, ap-plications, and various preferences dialogs. But if you don't know what you're doing, you can cause serious trouble. With **TinkerTool** (macworld.com/3572) and **TinkerTool System** (macworld.com/3572) the de-veloper has taken much of the risk out of using such utilities by separating safe actions from potentially risky ones: user-level preference settings are avail-able via TinkerTool, whereas system-level and admin-istrative settings and actions are limited to TinkerTool System (which can be run only by an administrator). In addition, TinkerTool System finely divides its func-tions into topical tabs, with each tab including clear warnings, if applicable, about the function(s) therein. TinkerTool is the best choice for an amateur tinkerer who wants a safe way to dig into system preferences.

TinkerTool: free; TinkerTool System: €7, Marcel Bresink, bresink.com

Mac Basics
SUPERGUIDE

Snow Leopard Edition **Macworld**

The Finder
How to Locate Files, Create Folders, and Navigate OS X

User Accounts
Protect Personal Files and Settings on a Shared Mac

Printing
The Ins and Outs of Setting Up and Troubleshooting a Printer

Searching Your Mac
Use Spotlight to Track Down Files, Messages, Events, and More

Mac Security Essentials
Protect Your Data with Passwords, Encryption, and Common Sense

Switching from Windows
How to Make the Leap without Losing Your Files...or Your Sanity

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Nobody spends more time with Apple's computers and software than the writers and editors at *Macworld*, the world's foremost Mac authority.

Now *Macworld*'s team of experts has used its knowledge to create this straightforward guide to getting started with your Mac running OS X 10.6 (Snow Leopard). Whether you're new to the Mac, just need a refresher course, or suspect that you've only scratched the surface of your Mac's potential, the Macworld *Mac Basics Superguide*, Snow Leopard Edition will give you the step-by-step advice you need to become a Mac whiz.

Inside these pages, you'll find detailed tips and information about navigating your system using the Finder and the Dock and managing and switching between programs using Exposé and Spaces. You'll learn how to find anything using the Spotlight search tool and the best ways to open, save, organize, and print files. We include tips on customizing your Mac to suit your needs through system preferences, including how to add and control user accounts. Our experts also give you vital troubleshooting and security advice—and even recommend 20 inexpensive add-on programs that can improve your Mac experience in ways you've never thought possible. To help you take advantage of Apple's built-in applications, we've also included helpful pointers on getting started with Safari, Mail, iChat, and other included Apple software.

Let *Macworld*'s team of experts show you how to get the most out of your Mac.