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Mac OS X Lion

the missing manual®

The book that should have been in the box®

Covers Mac OS X 10.7 and iCloud

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David Pogue

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by David Pogue

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CHAPTER
10

The Free Programs

Right out of the box, Mac OS X comes with a healthy assortment of about 50 freebies: programs for sending email, writing documents, doing math, even playing games. Some have been around for years. Others, though, have been given extreme makeovers in Lion. They're designed not only to show off some of Mac OS X's most dramatic technologies, but also to let you get real work done without having to invest in additional software.

Your Free Mac OS X Programs

A broad assortment of programs sit in the Applications folder in the main hard drive window, and another couple dozen less frequently used apps await in the Applications→Utilities folder.

This chapter guides you through every item in your new software library, one program at a time. (Of course, your Applications list may vary. Apple might have blessed your particular Mac model with some bonus programs, or you may have downloaded or installed some on your own.)

Tip: A reminder: You can jump straight to the Applications folder in the Finder by pressing Shift-⌘-A (the shortcut for Go→Applications), or by clicking the Applications folder icon in the Sidebar. You might consider adding the Application folder's icon to the Dock, too, so you can access it no matter what program you're in. Shift-⌘-U (or Go→Utilities) takes you, of course, to the Utilities folder.

Address Book

The Address Book is a database that stores names, addresses, email addresses, phone numbers, and other contact information. See page 748.

App Store

See the beginning of Chapter 5 for full details on the Mac App Store.

Automator

This software-robot program is introduced in Chapter 7.

Calculator

The Calculator is much more than a simple four-function memory calculator. It can also act as a scientific calculator for students and scientists, a conversion calculator for metric and U.S. measures, and even a currency calculator for world travelers.

The little Calculator widget in the Dashboard is quicker to open, but the standalone Calculator program is far more powerful. For example:

- Calculator has three modes: Basic, Advanced, and Programmer (Figure 10-1). Switch among them by choosing from the View menu (or pressing ⌘-1 for Basic, ⌘-2 for Advanced, or ⌘-3 for Programmer).
- You can operate Calculator by clicking the onscreen buttons, but it's much easier to press the corresponding number and symbol keys on your keyboard.
- As you go, you can make Calculator speak each key you press. The Mac's voice ensures that you don't mistype as you keep your eyes on the receipts in front of you, typing by touch.

  Just choose Speech→Speak Button Pressed to turn this feature on or off. (You choose *which* voice does the talking in the Speech panel of System Preferences.)

Tip: If you have a pre-2008 laptop, you probably have an embedded numeric keypad, superimposed on the right side of the keyboard and labeled on the keys in a different-color ink. When you press the Fn key in the lower-left corner of the keyboard, typing these keys produces the numbers instead of the letters. (You can also press the NumLock key to *stay* in number mode, so you don't have to keep pressing Fn.)

- Press the C key to clear the calculator display.
- Once you've calculated a result, you can copy it (using Edit→Copy, or ⌘-C) and paste it directly into another program.
- Calculator even offers Reverse Polish Notation (RPN), a system of entering numbers that's popular with some mathematicians, programmers, and engineers, because it lets them omit parentheses. Choose View→RPN to turn it on and off.

Tip: How cool is this? In most programs, you don't need Calculator or even a Dashboard widget. Remember that the Spotlight menu is a calculator, too. Type or paste an equation into the Spotlight search box; instantly, the answer appears in the results menu.

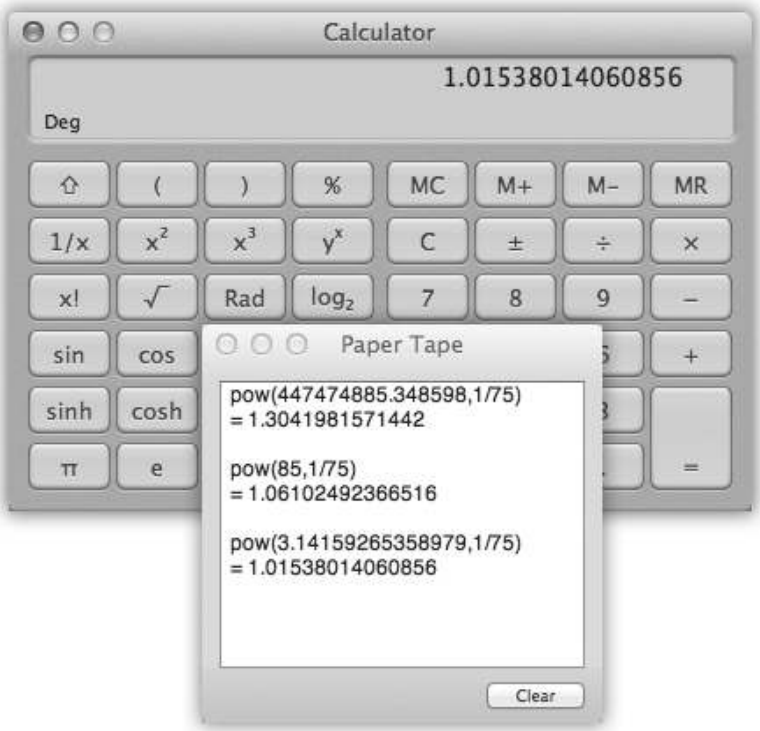

Figure 10-1:
The Calculator program offers a four-function Basic mode, a full-blown scientific calculator mode, and a programmer's calculator (shown here, and capable of hex, octal, decimal, and binary notation). The first two modes offer a "paper tape" feature (Windows→Paper Tape) that lets you correct errors made way back in a calculation. To edit one of the numbers on the paper tape, drag through it, retype, and then click Recalculate Totals. You can also save the tape as a text file by choosing File→Save Tape As, or print it by selecting File→Print Tape.

Conversions

Calculator is more than a calculator; it's also a conversion program. No matter what units you're trying to convert—meters, grams, cubic inches, miles per hour, euros—Calculator is ready.

Now, the truth is, the Units Converter widget in Dashboard is simpler and better than this older Calculator feature. But if you've already got Calculator open, here's the drill:

1. **Clear the calculator (for example, type the letter C on your keyboard). Type in the starting measurement.**

   To convert 48 degrees Celsius to Fahrenheit, for example, type *48*.

2. **From the Convert menu, choose the kind of conversion you want.**

   In this case, choose Temperature. When you're done choosing, a dialog box appears.

3. **Use the pop-up menus to specify which units you want to convert to and from.**

   To convert Celsius to Fahrenheit, choose Celsius from the first pop-up menu, and Fahrenheit from the second.

4. Click OK.

That's it. The Calculator displays the result—in degrees Fahrenheit, in this example.

The next time you want to make this kind of calculation, you can skip steps 2, 3, and 4. Instead, just choose your desired conversion from the Convert→Recent Conversions submenu.

Calculator is especially amazing when it comes to *currency* conversions—from pesos to American dollars, for example—because it actually does its homework. It goes online to download up-to-the-minute currency rates to ensure that the conversion is accurate. (Choose Convert→Update Currency Exchange Rates.)

Tip: If you're working with big numbers, don't forget to turn on View→Show Thousands Separators. Calculator will add commas (like 1,242,939) to help you read your big numbers more easily.

Chess

Mac OS X comes with only one game, but it's a beauty (Figure 10-2). It's a traditional chess game played on a gorgeously rendered board with a set of realistic 3-D pieces.

Note: The program is actually a sophisticated Unix-based chess program, Sjeng, that Apple packaged up in a new wrapper.

Playing a Game of Chess

When you launch Chess, you're presented with a fresh, new game that's set up in Human vs. Computer mode—meaning that you, the Human (light-colored pieces) get to play against the Computer (your Mac, on the dark side). Drag the chess piece of your choice into position on the board, and the game is afoot.

If you choose Game→New Game, however, you're offered a pop-up menu with choices like Human vs. Computer, Human vs. Human, and so on. If you switch the pop-up menu to Computer vs. Human, then you and your Mac trade places; the Mac takes the white side of the board and opens the game with the first move, and you play the black side.

Tip: The same New Game dialog box also offers a pop-up menu called Variant, which offers three other chess-like games: Crazyhouse, Suicide, and Losers. The Chess help screens (choose Help→Chess Help, and then click "Starting a new chess game") explain these variations.

On some night when the video store is closed and you're desperate for entertainment, you might also want to try the Computer vs. Computer option, which pits your Mac against itself. Pour yourself a beer, open a bag of chips, and settle in to watch until someone—either the Mac or the Mac—gains victory.

Chess Prefs

Choose Chess→Preferences to find some useful controls like these:

- **Style.** Apple has gone nuts with the computer-generated materials options in this program. (Is it a coincidence that Steve Jobs was also the CEO of Pixar, the computer-animation company?)

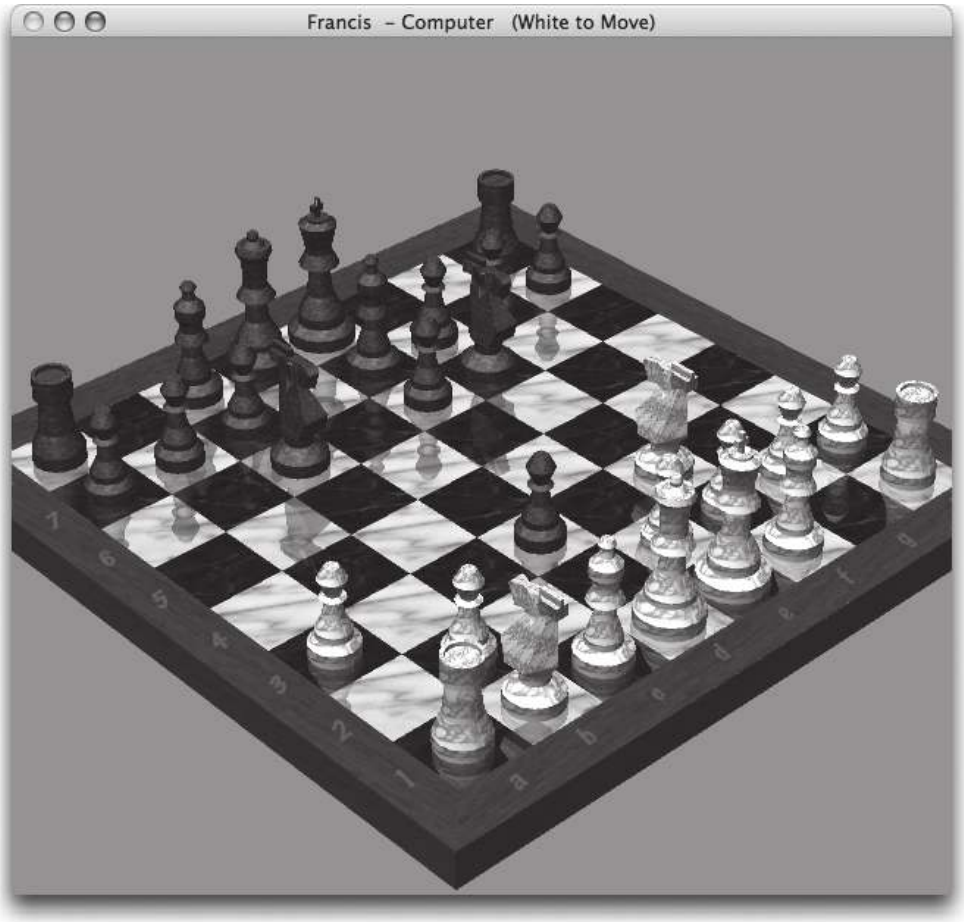

Figure 10-2: *You don't have to be terribly exact about grabbing the chess pieces when it's time to make your move. Just click anywhere within a piece's current square to drag it into a new position on the board (shown here in its Marble incarnation). And how did this chessboard get rotated like this? Because you can grab a corner of the board and rotate it in 3-D space. Cool!*

In any case, you can choose all kinds of wacky materials for the look of your game board (Wood, Metal, Marble, or *Grass*) and for your playing pieces (Wood, Metal, Marble, or *Fur*).

- **Computer Plays.** Use this slider to determine how frustrated you want to get when trying to win at Chess. The farther you drag the slider toward the Stronger side, the more calculations the computer runs before making its next move—and, thus, the harder it gets for you to outthink it. At the Faster setting, Chess won't spend more than 5 seconds ruminating over possible moves. Drag the slider all the way to the right, however, and the program may analyze *each move* for as long as 10 fun-filled hours. This hardest setting, of course, makes it all but impossible to win a game (which may stretch on for a week or more anyway).

Choosing the Faster setting makes it only mildly impossible.

- **Speech.** The two checkboxes here let you play Chess using the Mac's built-in voice-recognition features, *telling* your chess pieces where to go instead of dragging them, and listening to the Mac tell you which moves it's making. Page 618 has the details.

Tip: If your Chess-playing skills are less than optimal, the Moves menu will become your fast friend. The three commands tucked away there undo your last move (great for recovering from a blunder), suggest a move when you don't have a clue what to do next, and display a previous move (in case you failed to notice what the computer just did).

Studying Your Games

You can choose Game→Save to save any game in progress, so you can resume it later.

To analyze the moves making up a game, use the Window→Game Log command, which displays the history of your game, move by move. A typical move would be recorded as "Nb8 – c6," meaning the knight on the b8 square moved to the c6 square. Equipped with a Chess list document, you could recreate an entire game, move by move.

Tip: If you open this window before you begin a new game, you can see the game log fill in the moves *as* they happen.

Dashboard

Dashboard, described in Chapter 5, is a true-blue, double-clickable application. As a result, you can remove its icon from your Dock, if you like.

Dictionary

For word nerds everywhere, the Dictionary (and thesaurus) is a blessing—a handy way to look up word definitions, pronunciations, and synonyms. To be precise, Mac OS X comes with electronic versions of multiple reference works in one:

- The entire New Oxford American Dictionary. The *third* edition, actually. You'll note that its entries give you more examples, background, and tables that help to differentiate fine shades of meaning (look up *weak* for an example).
- The complete Oxford American Writer's Thesaurus.
- A dictionary of Apple terms, from "A/UX" to "Xsan." (Apparently there aren't any Apple terms that begin with Y or Z.)
- Wikipedia. Of course, this famous open-source, citizen-created encyclopedia isn't actually on your Mac. All Dictionary does is give you an easy way to search the *online* version, and display the results right in the comfy Dictionary window.

- A Japanese dictionary, thesaurus, and Japanese-to-English translation dictionary.

Tip: You don't ordinarily see the Japanese reference books. You have to turn them on in Dictionary→Preferences.

Mac OS X also comes with about a million ways to look up a word:

- **If you have a trackpad, point to a word in a basic Mac program, and then double-touch the trackpad (don't actually click) with three fingers.** That's the new Lion gesture for the same dictionary panel described above. (It doesn't work unless you've turned it on in System Preferences→Trackpad.)
- **Double-click the Dictionary icon.** You get the window shown at top in Figure 10-3. As you type into the Spotlight-y search box, you home in on matching words; click a word, or highlight it and press Return, to view a full, typographically elegant definition, complete with sample sentence and pronunciation guide.

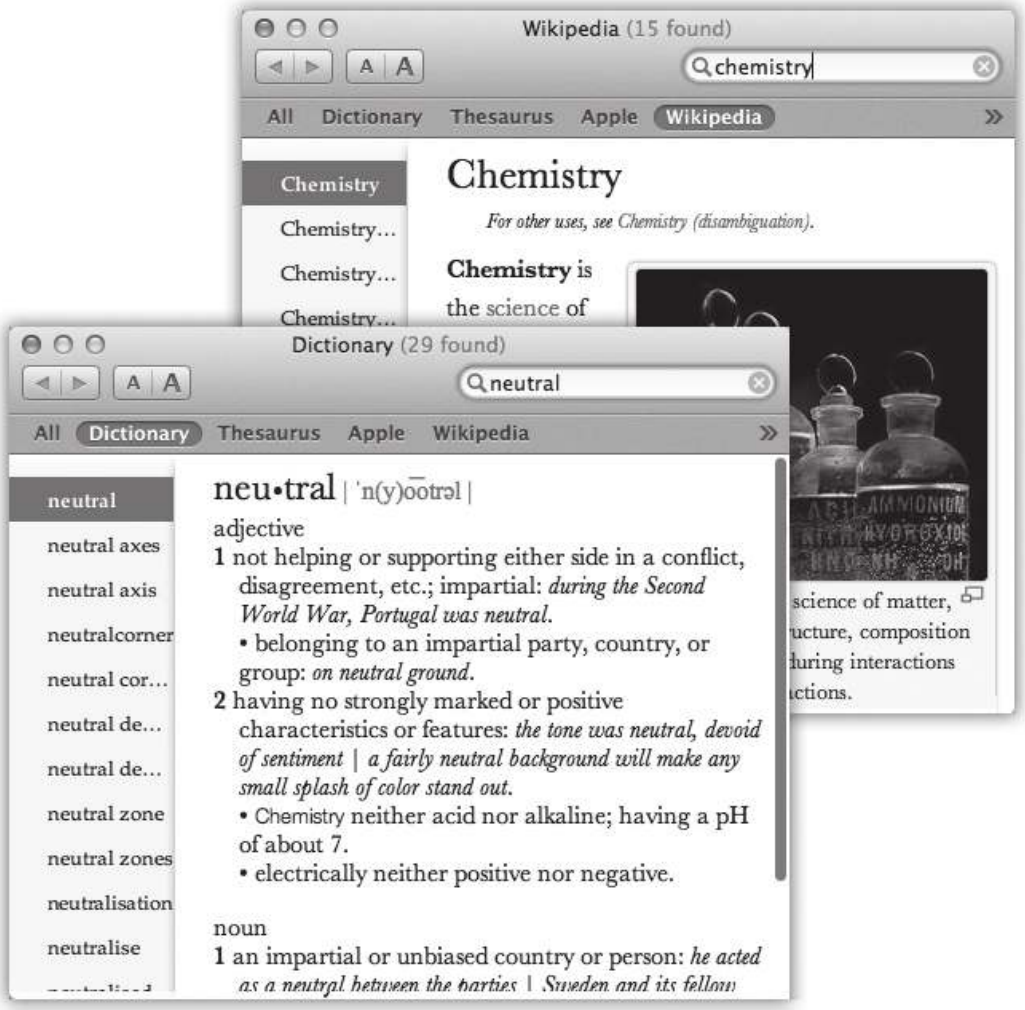

Figure 10-3: *When you open the Dictionary, it generally assumes that you want a word's definition (top left). If you prefer to see the Wikipedia entry (lower right) at startup time instead, for example, choose Dictionary→Preferences—and drag Wikipedia upward so that it precedes New Oxford American Dictionary. That's all there is to it!*

Tip: And if you don't recognize a word in the definition, click *that word* to look up *its* definition. (Each word turns blue and underlined when you point to it, as a reminder.) You can then click again in *that* definition—and on, and on, and on.

(You can then use the ⊖ and ⊕ buttons on the toolbar, or the ⌘-[and ⌘-] keystrokes to go back and forward in your chain of lookups. Hold down the ⊖ for a pop-up menu of recent lookups.)

It's worth exploring the Dictionary→Preferences dialog box, by the way. There you can choose U.S. or British pronunciations and adjust the font size.

- **Press F12.** Yes, the Dictionary is one of the widgets in Dashboard (page 187).
- **Control-click (right-click) a highlighted word in a Cocoa program.** From the shortcut menu, choose Look Up [word]. You get a panel that pops out of the highlighted word or the Dictionary program opens to that word.
- **Use the *dict://* prefix in Safari.** This might sound a little odd, but it's actually ultra-convenient, because it puts the dictionary right where you're most likely to need it: on the Web.

  Turns out that you can look up a word (for example, *preposterous)* by typing *dict://preposterous* into the address bar—the spot where you'd normally type *http://www.whatever.* When you hit Return, Mac OS X opens Dictionary automatically and presents the search results from all of its resources (dictionary, thesaurus, Apple terms, and Wikipedia).
- **Point to a word in a basic Mac program, and then press Control-⌘-D.** That keystroke makes the definition panel sprout right from the word you were pointing to. (The advantage here, of course, is that you don't have to highlight the word first.) "Basic Mac program," in this case, means one of the Apple standards: Mail, Stickies, Safari, TextEdit, iChat, and so on.

The *front matter* of the Oxford American Dictionary (the reference section at the beginning) is here, too. It includes some delicious writers' tools, including guides to spelling, grammar, capitalization, punctuation, chemical elements, and clichés, along with the full text of the Declaration of Independence and the U.S. Constitution. Just choose Go→Front/Back Matter—and marvel that your Mac comes with a built-in college English course.

Tip: Got a big screen or poor eyesight? Then bump up the type size. Dictionary's toolbar has bigger/smaller buttons, and there's a Font Size pop-up menu in the Preferences window.

DVD Player

DVD Player, your Mac's built-in movie projector, is described in Chapter 11.

FaceTime

FaceTime is Apple's video-chat program. It lets you make free video calls to other Macs, or to i-gadgets like iPhones, iPads, and iPod Touches. (This assumes of course, that you and your conversation partner both have high-speed Internet connections. You also both need Macs with Mac OS 10.6.6 or later, and cameras, either built-in or external. And you need an Apple ID; see the box on page 377. If this is your first time enter your Apple ID and password on the right side of the window, and click Sign In.)

To make a video call, open FaceTime. It starts out looking a little weird—the panel that displays the actual video (you, at first) is tall and skinny, as though you're using—what else?—an iPhone.

Place a FaceTime Call

Now you have to choose someone to call. Ironically, this setup step usually begins with a more old-fashioned communication—a phone call or a text message, for example. ("Want to FaceTime now?")

The panel on the right side of the window offers three tab buttons (at the bottom). Click Contacts to see everyone in your Mac OS X address book. If there *is* nobody in your address book, click the **+** button at upper right and enter the FaceTime contact information of your first calling buddy. If you're calling an iPhone, the contact info should be a phone number. For any other machine, it's an email address. Click Done when you've entered the information.

(As in the actual Address Book app, you can put people into groups, like "Work" or "Social Circle." If you plan to use this feature, be sure to click Groups and select the proper one *before* you click **+** to add a new person.)

Tip: If you're smart, you'll pluck out the people you plan to FaceTime with most frequently and put them into your Favorites list (the first tab at the bottom). To do that, click the person's name on the Contacts tab and then click Add to Favorites. (If there's more than one email address or phone number, a subsequent screen lets you click the one you want to use.)

To remove someone from the Favorites list, click the Edit button (on the Favorites tab) and then click the ⊖ button next to the person's name.

UP TO SPEED

The Apple ID

Once you become a member of the Apple cult, the key that unlocks all Apple doors is your Apple ID. The same email address and password gets you into the iTunes Music Store, the Apple Store, the App Store, iChat, MobileMe or iCloud, and, yes, FaceTime.

In the unlikely event that you don't yet have an Apple ID, you can get one by filling out the form at *https://appleid.apple.com*.

You can also create a new account right from within FaceTime. Choose FaceTime→Preferences, click Account, and then click Create New Account.

All right then. To make the actual call, take one of these steps:

- **Click the person's** name in your Favorites list.
- **Click the Recents tab**, where you'll see a list of FaceTime calls you've recently made or received. Click the person's name.

Tip: If you right-click (or Control-click) FaceTime's Dock icon, you get a handy pop-up menu of Recent Calls. In other words, if you keep FaceTime in your Dock, you can place a new call to somebody on the spur of the moment, whatever you're doing, without having to open FaceTime first.

- **Click Contacts.** Click Groups, if you use the Groups feature, and click the group the person is in. Use the search box, or just scroll, to find the person you want to call. Click the name; if you have multiple email addresses or phone numbers for that person, click the one you want.

In any case, your Mac now attempts to connect to your FaceTime-equipped buddy. After a moment, the video image of *you* is replaced by the video image of your calling buddy (Figure 10-4). If you both have fast Internet connections, and if the other

Figure 10-4: *Yes, iChat also offers video calls—but FaceTime doesn't need as fast an Internet connection. You'll often be able to make FaceTime video calls in situations when iChat gives up.*

guy has a recent Mac (with a so-called FaceTime HD camera), the video should look pretty amazing—hi-def, actually.

Once You're Connected

Once the FaceTime session has begun, just talk normally. You're on camera!

Here's some of the fun you can have during your call:

- **Resize the window.** Drag any window edge, click the Zoom button (upper left), or choose Window→Zoom to make the window fill the screen.
- **Go full-screen.** Click the ⤢ button (upper right) to make the window fill your entire screen. (Click it again to restore the window.)

Tip: You can also enter or exit full-screen mode by spreading or pinching two fingers on your trackpad.

- **Move the inset.** The little picture-in-picture rectangle shows *you*. You can drag it to a different corner of the video window, if you like.
- **Rotate the screen.** If you're calling an iPad/iPhone/iPod Touch, the shape of the video-image rectangle changes automatically to match. But you can change the orientation of the window yourself, too. Either use the Video menu (choose Use Portrait or Use Landscape), or click the curved arrow in the inset that shows you, or use the Rotate gesture on your trackpad (two fingers, rotate).
- **Mute the mike.** Either choose Video→Mute, or click the 🎤 button at the bottom of the video window. The video continues. This is handy when you have to make ugly throat-clearing sounds or yell at your kid in the background.
- **Pause the call.** You can also pause the audio *and* video, for use when you have to perform small acts of personal grooming. To do that, choose FaceTime→Hide FaceTime, or Control-click the FaceTime icon in the Dock and choose Hide from the shortcut menu.

Tip: The call is also paused whenever you minimize FaceTime.

Receiving Calls

Life is even simpler when somebody calls *you*. You hear the little chirpy incoming-call sound, and a message appears on your screen. (If iTunes is playing music, it pauses automatically. Sweet.)

Click Accept to start the call, or Decline if now is not the time. (In that case, your caller will be told that you're not available.)

FaceTime doesn't have to be running for you to receive a call. That's generally a cool feature—but if you really don't want to be interrupted, you can hang up a digital "Do Not Disturb" sign in any of these ways:

- In FaceTime, choose FaceTime→Turn FaceTime Off.

- In FaceTime, choose FaceTime→Preferences; click the Off switch.
- Control-click (or right-click) the FaceTime icon in the Dock; from the shortcut menu, choose Turn FaceTime Off.
- Sign out of FaceTime. (Choose FaceTime→Preferences, click Account, and then click Sign Out.)

Font Book

For details on this font-management program, see Chapter 14.

GarageBand

GarageBand, Apple's do-it-yourself music construction kit, isn't actually part of Mac OS X. If you have a copy, that's because it's part of the iLife suite that comes on every new Mac (along with iMovie, iPhoto, and iWeb).

iCal

In many ways, iCal is not so different from those "Hunks of the Midwest Police Stations" paper calendars people leave hanging on the walls for months past their natural life span. In fact, in the Lion extreme makeover of iCal, it looks more than ever like a physical calendar.

Tip: iCal's Dock icon displays today's date—even when iCal isn't running.

But iCal offers several advantages over paper calendars. For example:

- It can automate the process of entering repeating events, such as weekly staff meetings or gym workouts.
- iCal can give you a gentle nudge (with a sound, a dialog box, or even an email) when an important appointment is approaching.
- iCal can share information with your Address Book program, with Mail, with your iPod or iPhone, with other Macs, or with "published" calendars on the Internet. Some of these features require one of those iCloud accounts described in Chapter 17. But iCal also works fine on a single Mac, even without an Internet connection.
- iCal can subscribe to other people's calendars. For example, you can subscribe to your spouse's calendar, thereby finding out when you've been committed to after-dinner drinks on the night of the big game on TV. You can also tell iCal to display your online calendars from Google and Yahoo, or even your company's Exchange calendar (Chapter 8).

Working with Views

When you open iCal, you see something like Figure 10-5. By clicking one of the View buttons above the calendar, or by pressing ⌘-1, ⌘-2, ⌘-3, or ⌘-4, you can switch among these views:

- **Day** looks exactly like a day-at-a-time desk calendar. On the right-side "page," you see today's schedule on an hour-by-hour chart. On the left "page," you get a simple list of appointments for today and the next few days.

  If you choose iCal→Preferences, you can specify what hours constitute a workday. This is ideal both for those annoying power-life people who get up at 5 a.m. for two hours of calisthenics and for the more reasonable people who sleep until 11 a.m.

Tip: iCal provides three quick ways to get to the current day's date. Click Today (upper-right corner, between the ◄ and ►), choose View→Go to Today, or press ⌘-T.

Figure 10-5: *In iCal, the ◄ and ► buttons at top right take you to the previous or next day, week, month, or year (depending on your current view). In the new Day view, shown here, you can click the tiny numbers on the mini-calendar (top left of page) to change days. Double-click any appointment to open its Info balloon, shown in Figure 10-7.*

- **Week** fills the main display area with seven columns, reflecting the current week. (You can establish a five-day workweek instead in iCal→Preferences.)

Tip: If you double-click the date above the calendar, you open the Day view for that day.

• **Month** shows the entire month that contains today's date. Double-click a date number to open the Day view for that date.

Tip: If a Month-view square is too small to show everything you've got scheduled that day, you'll see a notation at the bottom of the square like, "3 more…" Sometimes, making the window bigger (or full screen) helps make more room, or you can just double-click the date's number to switch to Day view and see everything at once.

To save space, iCal generally doesn't show you the *times* of your appointments in Month view. If you'd like to see them anyway, choose iCal→Preferences, click General, and turn on "Show event times." Now each event's starting time appears in light gray, off to the right.

Tip: If your mouse has a scroll wheel, you can use it to great advantage in iCal. For example, when entering a date, turning the wheel lets you jump forward or backward in time. It also lets you change the priority level of a To Do item you're entering, or even tweak the time zone as you're setting it.

Figure 10-6: *Lion's new Year view shows the entire year. The colors of the squares are a "heat map" that indicate how hectic your schedule is. If this book were in color, you'd see a range of shades from light yellow (not very busy) to deep red (you're in big trouble). Double-click a date to open the Day view for that date.*

• **Year** view, new in Lion, displays a "heat map" of the entire year (Figure 10-6).

In any of the views, *double-click* an appointment to see more about it. The very first time you do that, you get the summary balloon shown at top right in Figure 10-7. If you want to make changes, you can then click the Edit button to open a more detailed view.

Tip: In Week or Day view, iCal sprouts a handy horizontal line that shows where you are in time right now. (Look in the hours-of-the-day "ruler" down the left side of the window to see this line's little red bulb.) A nice touch, and a handy visual aid that can tell you at a glance when you're already late for something.

Also in any view, you can switch into full-screen view by clicking the ⤢ icon in the upper-right corner of the window. See page 11 for more on full-screen view.

Making an Appointment

The basic iCal calendar is easy to figure out. After all, with the exception of one unfortunate Gregorian incident, we've been using calendars successfully for centuries.

Even so, there are two ways to record a new appointment: using the mouse, or using the new Quick Event box.

The mousy way

You can quickly record an appointment using any of several techniques, listed here in order of decreasing efficiency:

- In Month view, double-click a blank spot on the date you want. Type the name of the event and a time slot—for example, *Sales meeting 9am-4:30*. (See "The Quick Event way," below, for details on how iCal interprets these time notations.)
- In Day or Week view, double-click the starting time to create a one-hour appointment. Or drag vertically through the time slots that represent the appointment's duration. Either way, type the event's name inside the newly created colored box.
- In any view, Control-click or right-click a date and choose New Event from the shortcut menu. Type the event's name.

  Unless you use the drag-over-hours method, a new event believes itself to be one hour long. But in Day or Week view, you can adjust its duration by dragging the bottom edge vertically. Drag the dark top bar up or down to adjust the start time.

In many cases, that's all there is to it. You've just specified the day, time, and title of the appointment. Now you can get on with your life.

Tip: If the Edit balloon is blocking a part of the calendar you need to see, no biggie: Just drag the balloon out of the way, using any blank spot as a handle.

The Quick Event way

The Lion version of iCal offers the *Quick Event* method, in which the program spares you the trouble of manually selecting dates, start times, and end times. Instead, the program understands notations like "7 pm Friday," and puts your new appointment into the right time slot automatically.

To use this method, press ⌘-N. (Or click the **+** button—top left of the window—or choose File→New Event). The Quick Event box appears. Proceed as shown in Figure 10-7.

Note: iCal proposes adding the new appointment to your *default calendar*–that is, the category you use most often (read on for details on these calendar categories). Supposedly, you've already told it which category is your preferred one by using the iCal→Preferences→General→Default Calendar pop-up menu.

But as you add a new appointment this way, you can override that setting by *holding down* the + button. You get a pop-up menu of your calendar categories; only after you click the one you want do you see the Quick Event box shown in Figure 10-7.

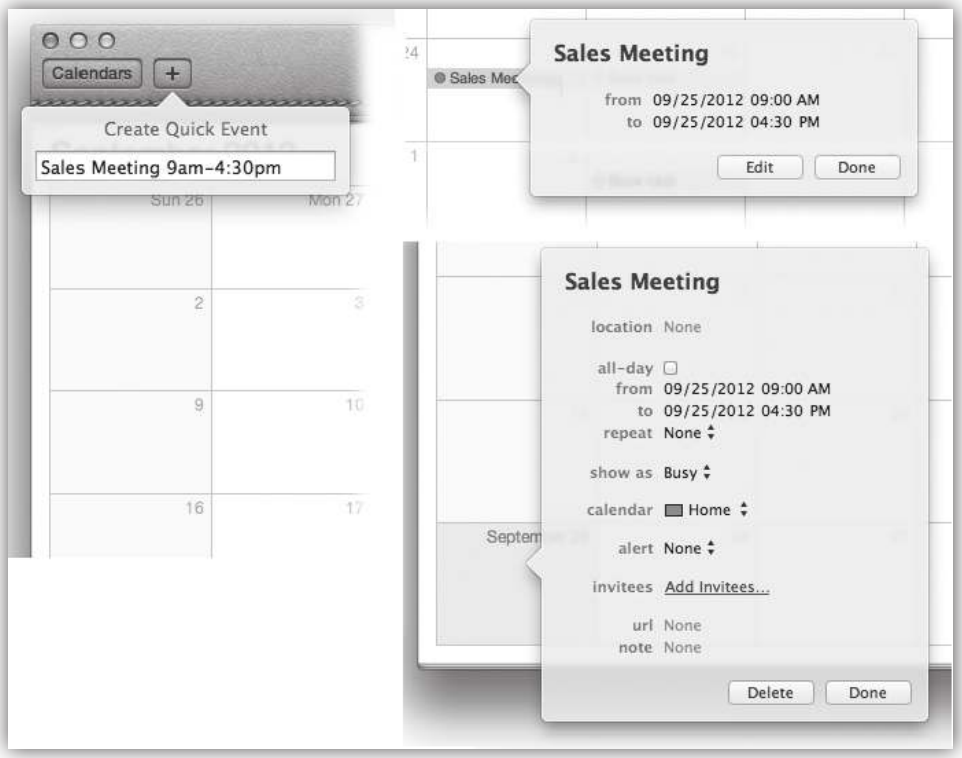

Figure 10-7: *Left: Type the name of the event and a time slot–for example, "Sales meeting 9am-4:30." Press Enter. Marvel as iCal interprets the times you typed and inserts "Sales meeting" into the right time slot. Right: All the details for an appointment sprout right out of the appointment itself in this balloon/box, shown here in both its collapsed (top) and expanded views. Tab your way to an organized life.*

Into the Quick Event box, you're supposed to type the name of your appointment and its date and time. For example, you could type *Report deadline Aug 12,* or "*Titanic 2: The Return*" *Sat 7 pm,* or *Cara date 11-11:15am.*

When you press Return, iCal interprets what you typed, using these rules:

- If you didn't specify an ending time, iCal sets the appointment to 1 hour long.
- If you didn't enter *any* time information, iCal figures you meant an all-day event like a birthday, holiday, or deadline.
- If you typed *breakfast* or *morning*, iCal sets the appointment to start at 9 a.m.; *lunch* or *noon,* it starts at 12 p.m.; *dinner* or *night,* it starts at 8 p.m.
- If you enter a weekday (for example, *Chicago Monday)*, iCal assumes you mean the very next occurrence of that day. (If that's not what you want, enter the date, like *Chicago Jul 3.)*

- If you enter a time but not a date or day (for example, *Fishing 3:30 pm)*, iCal assumes you mean today.

Alarms, repeats, and other details

No matter which method you use to create the basic event (the mouse way or the Quick Event way), you're now presented with the information balloon shown at lower right in Figure 10-7. Here's where you go to town filling in the details. (This same balloon will appear when you double-click any existing appointment later.)

Tip: After you've already edited an appointment once, the full info balloon is a little more effort to open; double-clicking an event produces only the summary balloon shown in Figure 10-5.

The short way to open the full balloon is to click the appointment and then press ⌘-E (which is short for Edit→Edit Event). The long way is to double-click the appointment to get the summary balloon and then click Edit inside it.

But the *best* solution to this problem is to avail yourself of an option in iCal→Preferences→Advanced. It's the checkbox called "Open events in separate windows." Now when you double-click an appointment in iCal, it opens immediately into a full-size Details window, saving you that intermediate step forever. (You can close the window with a quick ⌘-W.)

For each appointment, you can Tab your way to the following information areas:

- **subject.** That's the large, bold type at the top—the name of your appointment. For example, you might type *Fly to Phoenix.*
- **location.** This field makes a lot of sense; if you think about it, almost everyone needs to record *where* a meeting is to take place. You might type a reminder for yourself like *My place,* a specific address like *212 East 23,* or some other helpful information, like a contact phone number or flight number.
- **all-day.** An "all-day" event, of course, refers to something that has no specific time of day associated with it: a holiday, a birthday, a book deadline. When you turn on this box, you see the name of the appointment jump to the top of the iCal screen, in the area reserved for this kind of thing.
- **from, to.** You can adjust the times shown here by typing, clicking buttons, or both. Press Tab to jump from one setting to another, and from there to the hours and minutes of the starting time.

  For example, start by clicking the hour, and then increase or decrease this number either by pressing ↑ and ↓ or by typing a number. Press Tab to highlight the minutes and repeat the arrow-buttons-or-keys business. Finally, press Tab to highlight the AM/PM indicator, and type either *A* or *P*—or press ↑ or ↓—to change it, if necessary.

Tip: If you specify a different ending date, a *banner* appears across the top of the calendar.

- **time zone.** This option appears only after you choose iCal→Preferences→Advanced and then turn on "Turn on time zone support." And you would do *that* only if you plan to be traveling on the day this appointment comes to pass.

  Once you've done that, a time zone pop-up menu appears. It starts out with "America/New York" (or whatever your Mac's usual time zone is); if you choose Other, a tiny world map appears. Click the time zone that represents where you'll be when this appointment comes due. From the shortcut menu, choose the major city that's in the same zone you'll be in.

Tip: The time zone pop-up menu remembers each new city you select. The next time you travel to a city you've visited before, you won't have to do that clicking-the-world-map business.

  Now, when you arrive in the distant city, use the time zone pop-up menu at the top-right corner of the iCal window to tell iCal where you are. You'll see all of iCal's appointments jump, like magic, to their correct new time slots.

- **repeat.** The pop-up menu here contains common options for recurring events: every day, every week, and so on. It starts out saying None.

  Once you've made a selection, you get an *end* pop-up menu that lets you specify when this event should *stop* repeating. If you choose "Never," you're stuck seeing this event repeating on your calendar until the end of time (a good choice for recording, say, your anniversary, especially if your spouse might be consulting the same calendar). You can also turn on "After (a certain number of times)," which is a useful option for car and mortgage payments. And if you choose "On date," you can specify the date when the repetitions come to an end; use this option to indicate the last day of school, for example.

  "Custom" lets you specify repeat schedules like "First Monday of the month" or "Every two weeks."

- **show as (busy/free/tentative/out of office).** This little item shows up only if you've subscribed to a calendar server, like an Internet-based calendar (in geek-speak, a CalDAV server) or your company's Exchange calendar (Chapter 8). It communicates to your colleagues when you might be available for meetings.

Note: If your calendar comes from a CalDAV server, then your only options are "busy" and "free." The factory setting for most appointments is "busy," but for all-day events it's "free." Which is logical; just because it's International Gecko Appreciation Day doesn't mean you're not available for meetings (rats!).

  You might think: "Well, *duh*—if I've got something on the calendar, then I'm obviously busy!" But not necessarily. Some iCal entries might just be placeholders, reminders to self, TV shows you wanted to watch, appointments you'd be willing to change—not things that would necessarily render you unavailable if a better invitation should come along.

- **calendar.** A *calendar,* in iCal's confusing terminology, is a subset—a category—into which you can place various appointments. You can create one for yourself, another for family-only events, another for book-club appointments, and so on. Later, you'll be able to hide and show these categories at will, adding or removing them from iCal with a single click. Details begin on page 390.

Tip: Use this same pop-up menu to *change* an appointment's category. If you filed something in "Company Memos" that should have been in "Sweet Nothings for Honey-Poo," then open the event's information balloon and reassign it. Quick.

- **alert.** This pop-up menu tells iCal how to notify you when a certain appointment is about to begin. iCal can send any of four kinds of flags to get your attention. It can display a message on the screen (with a sound, if you like), send you an email, run a script of the sort described in Chapter 7, or open a file on your hard drive. (You could use this unusual option to ensure that you don't forget a work deadline by having iCal fling the relevant document open in front of your face at the eleventh hour.)

  Once you've specified an alarm mechanism, a new pop-up menu appears to let you specify how much advance notice you want for this particular appointment. If it's a TV show you'd like to watch, you might set up a reminder 5 minutes before airtime. If it's a birthday, you might set up a two-day warning to give yourself enough time to buy a present. In fact, you can set up more than one alarm for the same appointment, each with its own advance-warning interval.

UP TO SPEED

Inviting Guests

The truth is, this business of automatic invitations to iCal events hasn't really caught on yet. Unless you've hooked up iCal to your company's Exchange server (Chapter 8), the invitations system is still fairly complicated, and it requires compatible software on the receiving end.

When you click Send at the bottom of the info balloon, your guests receive your invitation. If they use iCal, the invitation appears in their Notifications panels. (To open the Notifications panel, click the tiny envelope icon in the lower-left corner of the window.) They can click Accept, Decline, or Maybe.

In your Notifications window, you then see the status of each invitee's name: a checkmark for Accepted, an X for Declined, a ? for Maybe, and an arrow for Not Yet Responded. (Your guests, meanwhile, will be delighted to find that the appointment automatically appears on their calendars once they commit.)

Now, suppose you send an invitation to your sister, who doesn't have a Mac. She just gets an email message that says, "Chris Smith has invited you to the event: Company Hoedown, scheduled for February 02, 2012 at 3:00 PM. To accept or decline this invitation, click the link below." Unfortunately, there generally *is* no link. She just has to know to open the .ics attachment.

If she uses a calendar program that understands this attachment, the appointment appears on her calendar, and her RSVP shows up in your iCal Notification panel.

Tip: In iCal→Preferences→Advanced, you can opt to prevent alarms from going off–a good checkbox to inspect before you give a presentation in front of 2,000 people. There's also an option to stifle alarms *except* when iCal is open. In other words, just quitting iCal is enough to ensure that those alarms won't interrupt whatever you're doing.

- **invitees.** If the appointment is a meeting or some other gathering, you can type the participants' names here. If a name is already in your Address Book program, iCal proposes autocompleting the name for you.

  If you separate several names with commas, iCal automatically turns each into a shaded oval button. You can click it for a pop-up menu of commands like Remove Attendee and Send Email. (That last option appears only if the person in Address Book has an email address, or if you typed a name *with* an email address in brackets, like this: *Chris Smith <chris@yahoo.com>*.)

  Once you've specified some attendees, a Send button appears in the Info box. If you click it, iCal fires up Mail and prepares ready-to-send messages, each with an *iCal.ics* attachment: a calendar-program invitation file. See the box on page 387.

- **attachments.** This option lets you fasten a file to the appointment. It can be anything: a photo of the person you're meeting, a document to finish by that deadline, the song that was playing the first time you met this person—whatever.

- **url.** A *URL* is a Uniform Resource Locator, better known as a Web address, like *www.apple.com.* If there's a URL relevant to this appointment, by all means type it here. Type more than one, if it'll help you; just be sure to separate them all with commas.

- **note.** Here's your chance to customize your calendar event. You can type, paste, or drag any text you like in the note area—driving directions, contact phone numbers, a call history, or whatever.

Your newly scheduled event now shows up on the calendar, complete with the color coding that corresponds to the calendar category you've assigned.

What to Do with an Appointment

Once you've entrusted your agenda to iCal, you can start putting it to work. iCal is only too pleased to remind you (via pop-up messages) of your events, reschedule them, print them out, and so on. Here are a few of the possibilities.

Editing events

To edit a calendar event's details, you have to open its Info balloon, as shown in Figure 10-5.

If you just want to change an event's name, Option-double-click it right in place. And if you want to change only an appointment's "calendar" category, Control-click (or right-click) anywhere on the appointment and, from the resulting shortcut menu, choose the category you want. In both cases, you bypass the need to open the Info balloon.

You don't have to bother with this if all you want to do is reschedule an event, however, as described next.

Rescheduling events

If an event in your life gets rescheduled, you can drag an appointment block vertically in a Day- or Week-view column to make it later or earlier the same day, or horizontally to another date in any view. (If you reschedule a recurring event, iCal asks if you want to change only *this* occurrence, or this *and* all future ones.)

If something is postponed for, say, a month or two, you're in trouble, since you can't drag an appointment beyond its month window. You have no choice but to open the Info balloon and edit the starting and ending dates or times—or just cut and paste the event to a different date.

Lengthening or shortening events

If a scheduled meeting becomes shorter or your lunch hour becomes a lunch hour-and-a-half (in your dreams), changing the length of the representative calendar event is as easy as dragging the bottom border of its block in any column view (see Figure 10-8).

Tip: In Week view, if you've grabbed the *bottom* edge of an appointment's block so that the cursor changes, you can drag *horizontally* to make an appointment cross the midnight line and extend into a second day.

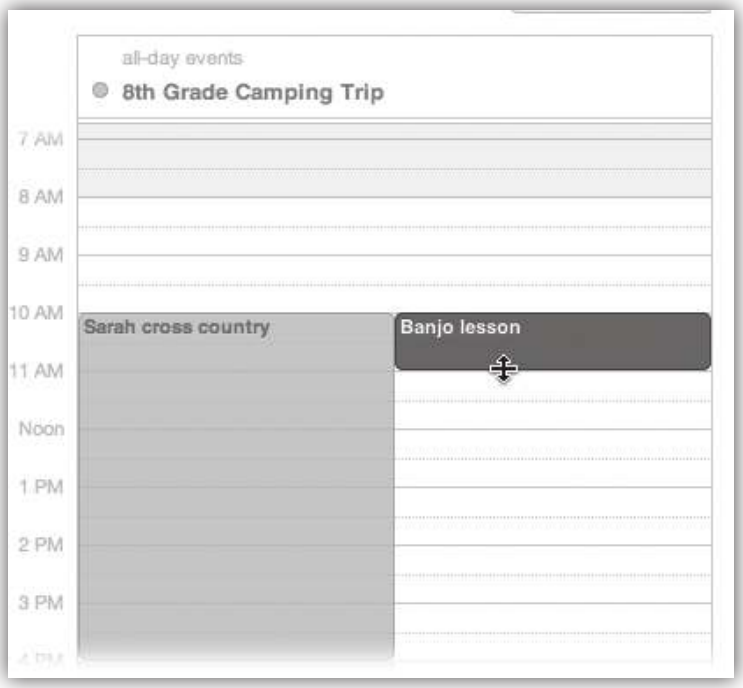

Figure 10-8:
You can resize any iCal calendar event just by dragging its bottom border. As your cursor touches the bottom edge of a calendar event, it turns into a double-headed arrow. You can now drag the event's edge to make it take up more or less time on your calendar

Printing events

To commit your calendar to paper, choose File→Print, or press ⌘-P. The resulting Print dialog box lets you include only a certain range of dates, only events on certain calendars, with or without To Do lists or mini-month calendars, and so on.

Deleting events

To delete an appointment, just select it and then press the Delete key. If you delete a recurring event (like a weekly meeting), iCal asks whether you want to delete only that particular instance of the event, or the whole series from that point forward.

Searching for Events

You should recognize the oval text box at the top of the iCal screen immediately: It's almost identical to the Spotlight box. This search box is designed to let you hide all appointments except those matching what you type into it. Figure 10-9 has the details.

Figure 10-9: *As you type into the search box (top right), iCal builds a little search-results list at the bottom of the window. Double-click any row of the list to jump to and highlight the corresponding event on the calendar and open up its summary balloon.*

The "Calendar" Category Concept

Just as iTunes has *playlists* that let you organize songs into subsets and iPhoto has *albums* that let you organize photos into subsets, iCal has *calendars* that let you organize appointments into subsets. They can be anything you like. One person might have calendars called Home, Work, and TV Reminders. Another might have Me, Spouse 'n' Me, and Whole Family. A small business could have categories called Deductible Travel, R&D, and R&R.

To create a calendar, choose File→New Calendar. From the pop-up menu, specify *where* you want this category to live: either On My Mac (which means "on your Mac")—or, if you've subscribed to an online calendar or two, the name of the online account, like Google or Exchange. Type a name that defines the category in your mind.

Tip: Click a calendar name *before* you create an appointment. That way, the appointment will already belong to the correct calendar.

To see your list of categories, click the Calendars button (upper left of the window). A pop-up list appears. To change the color-coding of your category, Control-click (right-click) its name in this pop-up list; from the shortcut menu, choose Get Info. The Calendar Info box appears. Here, you can change the name, color, or description of this category—or turn off its alarms.

You assign an appointment to one of these categories using the pop-up menu (on its Info balloon), or by Control-clicking (right-clicking) an event and choosing a calendar name from the shortcut menu. After that, you can hide or show an entire category of appointments at once just by turning on or off the appropriate checkbox in the Calendars pop-up list.

Tip: iCal also has calendar *groups:* calendar containers that consolidate the appointments from several *other* calendars. (For example, you could have a calendar group called Kids, containing the individual calendars for each of your offspring. Super-calendars like this make it easier to manage, hide, show, print, and search subsets of your appointments.

To create a calendar group, choose File→New Calendar Group. Name the resulting item in the Calendar list; for the most part, it behaves like any other calendar. Drag other calendar names onto it to include them. Click the flippy triangle to hide or show the component calendars.

"Publishing" Calendars to the Web

One of iCal's best features is its ability to post your calendar on the Web, so that other people (or you, on a different computer) can subscribe to it, which adds *your* appointments to *their* calendars. Anyone with a Web browser—or only people you designate—can also *view* your calendar, right online.

For example, you might use this feature to post the meeting schedule for a club that you manage, or to share the agenda for a series of upcoming financial meetings that all your coworkers will need to consult.

Publishing

If you don't have iCloud: Begin by clicking the Calendars button; in the list of categories, click the calendar you want to publish. (iCal can publish only one calendar category at a time. If you want to publish more than one calendar, then create a calendar *group*.)

Now choose Calendar→Publish; the dialog box shown at top in Figure 10-10 appears. This is where you customize how your saved calendar is going to look and work. You can even turn on "Publish changes automatically," so whenever you edit the calendar,

iCal connects to the Internet and updates the calendar there. (Otherwise, you'll have to choose Calendar→Refresh every time you want to update the Web copy.)

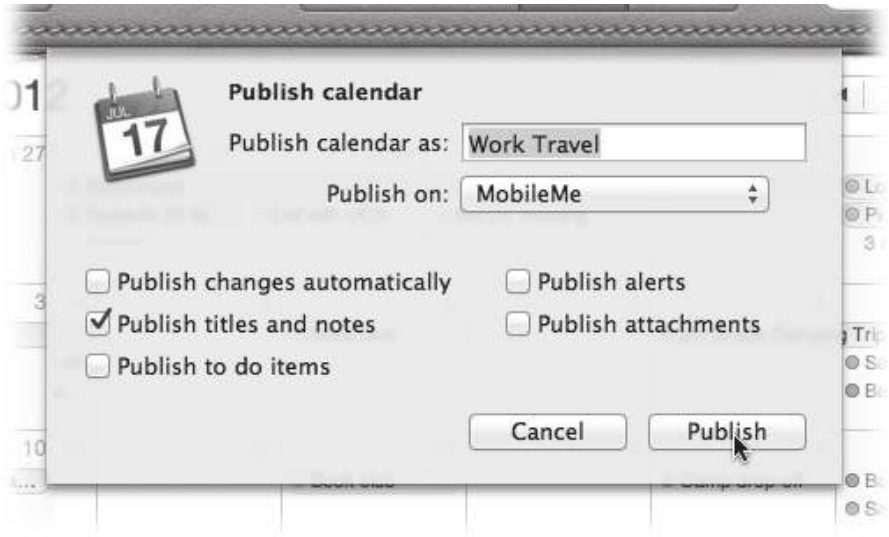

Figure 10-10: *If you click "Publish on: MobileMe," iCal posts the actual, viewable calendar on the Web (while MobileMe exists, anyway). If you choose "a private server," you have the freedom to upload the calendar to your own personal Web site, if it's WebDAV-compatible (ask your Web-hosting company). Your fans will be able to download the calendar but not view it online.*

When you click Publish, your Mac connects to the Web and then shows you the Web address (the URL) of the finished page, complete with a Send Mail button that lets you fire the URL off to your colleagues.

Tip: Whenever you want to send someone the subscription information, click the Calendars button; click the calendar category you've published; and choose Calendar→Send Publish Email. iCal will prepare an outgoing email message containing details on subscribing to your calendar.

To stop publishing that calendar, click its name in the Calendars pop-up list and then choose Calendar→Unpublish.

If you have iCloud: Click the Calendars button; in the list of categories, click the calendar you want to publish. It has to be one of the ones in the iCloud ("@me.com") group.

Now choose Calendar→Share Calendar. In the resulting dialog box, specify Everyone (anyone can see, but not edit, the calendar) or "Only the people you invite" (they'll be able to edit the calendar, too—a delightful, two-way collaboration—a terrific way for a couple or family to coordinate their calendars, for example.). If you choose the latter, fill in the invitees in the little list that appears. Finally, click Share.

Later, you can modify the settings by choosing Calendar→Share Calendar, or stop sharing by choosing Calendar→Stop Sharing.

Tip: You can also share an iCloud calendar at *www.icloud.com.* Proceed as shown in Figure 10-11.

Subscribing

If somebody else has published a calendar, you can subscribe to it by choosing Calendar→Subscribe. In the Subscribe to Calendar dialog box, type in the Internet address you received from the person who published the calendar.

You can also specify how often you want your own copy to be updated (assuming you have a full-time Internet connection) and whether or not you want to be bothered with the publisher's alarms and notes.

When it's all over, you see a new "calendar" category in your left-side list, representing the published appointments.

Tip: Want to try it out right now? Visit *www.icalshare.com*, a worldwide clearinghouse for sets of iCal appointments. You can subscribe to calendars for shuttle launches, Mac trade shows, National Hockey League games, NASCAR races, soccer matches, the *Iron Chef* and *Survivor* TV shows, holidays, and much more. You'll never suffer from empty-calendar syndrome again.

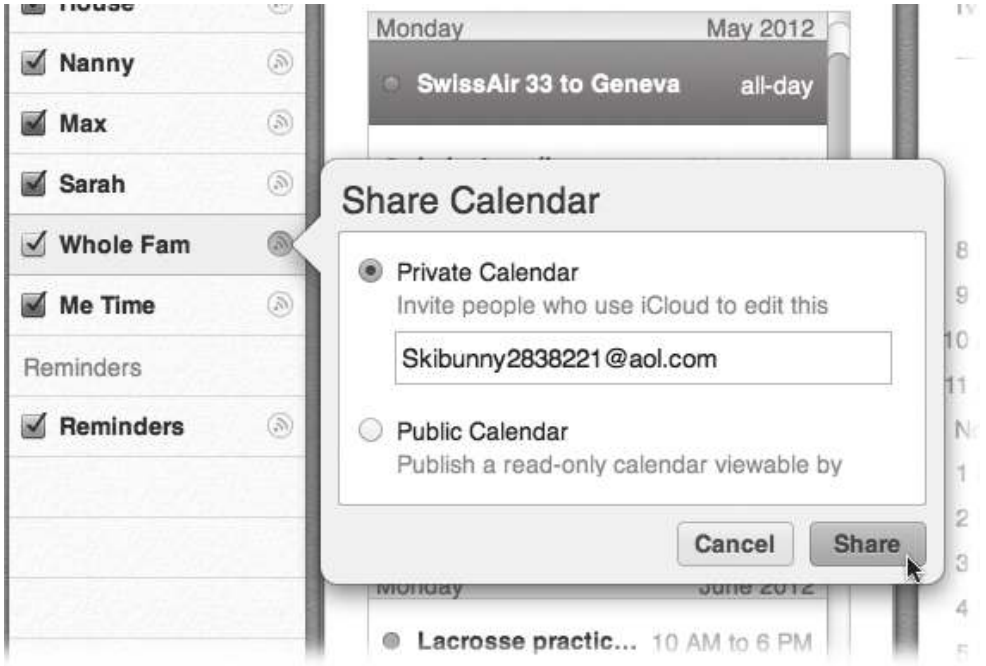

Figure 10-11. *You can share a calendar with another iCloud member by clicking the button. Supply that member's* me.com *address and press Return. Now, as shown here, you can change the other person's access from "View and Edit" to "View Only," if you so desire. Click Share. (In the next box, indicate whether you want an email note every time the other person makes a change.)*

Google and Yahoo Calendars

If you maintain a calendar online—at *www.google.com/calendar* or *http://calendar.yahoo.com*, for example, you may take particular pleasure in discovering how easy it is to bring those appointments into iCal. It's one handy way to keep, for example, a husband's and wife's appointments visible on each other's calendars.

Setting this up is ridiculously easy (see Figure 10-12).

In a minute or so, you'll see all your Google or Yahoo appointments show up in iCal. (Each Web calendar has its own heading in the left-side list.) Better yet: It's a two-way sync; changes you make to these events in iCal show up on the Web, too.

Figure 10-12: *To bring your Yahoo or Google calendar into iCal for free two-way syncing, choose iCal→Preferences→Accounts. Click the + button below the list. Enter your Google or Yahoo address (for example, psmithers@gmail.com) and password, as shown here. Click Create.*

To Do Lists

iCal's Reminders feature lets you make a To Do list and shepherds you along by giving you gentle reminders, if you so desire (Figure 10-13). What's nice is that Mac OS X maintains a single To Do list, which shows up in both iCal and Mail.

To see the list, choose View→Show Reminders (or press ⌘-Option-T). Add a new task by double-clicking a blank spot in the list that appears, or by choosing File→New Reminder. After the new item appears, you can type to name it.

To change the task's priority, alarm, and so on, double-click it. An Info balloon appears, just as it does for an appointment.

Tip: Actually, there's a faster way to change a To Do item's priority—click the tiny three-line ribbed handle at the right side of the list. Turns out it's a shortcut menu that lets you choose Low, Medium, or High priority (or None).

To sort the list (by priority, for example), use the pop-up menu at the top of the Reminders list. To delete a task, click it and then press the Delete key.

Tip: You have lots of control over what happens to a task listing *after* you check it off. In iCal→Preferences→Advanced, for example, you can make tasks auto-hide or auto-delete themselves after, say, a week or a month. And if you asked them to auto-hide themselves, you can make them reappear temporarily using the Show All Completed Items command in the pop-up menu at the top of the To Do list.

Also in that pop-up menu: the new Hide Items After Calendar View command. It declutters your Reminders list by omitting all appointments whose due dates fall after the currently displayed day, week, month, or year.

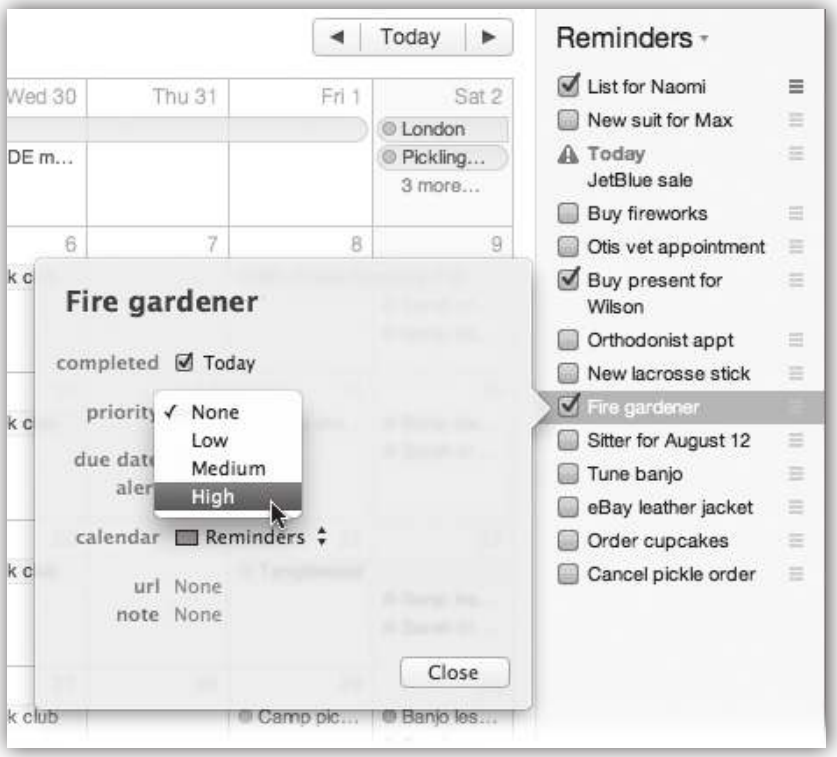

Figure 10-13: *Using the To Do Info balloon, you can give your note a priority, a calendar (category), or a due date. Tasks that come due won't show up on the calendar itself, but a little exclamation point triangle appears in the To Do Items list.*

Syncing iCal with Your iPhone, iPad, and Other Computers

Here's the real magic of iCal, iCloud, and the rest of Apple's software archipelago: Your calendar can be auto-synced among all your machines, like your iPhone, iPad, and Macs. Add an appointment on your phone, change an appointment on your iPad, whatever—all your other gadgets are wirelessly and automatically synced to match. See Chapter 17 for details on this amazing setup.

iChat

Details on the iChat instant-messaging program can be found in Chapter 20.

iDVD

iDVD isn't really part of Mac OS X, although you probably have a copy of it: As part of the iLife software suite, iDVD comes free on every new Mac. iDVD lets you turn your digital photos or camcorder movies into DVDs that work on almost any DVD player, complete with menus, slideshow controls, and other navigation features. iDVD handles the technology; you control the style.

Image Capture

This unsung little program was originally designed to download pictures from a camera and then process them automatically (turning them into a Web page, scaling them to emailable size, and so on). Of course, after Image Capture's birth, iPhoto came along, generally blowing its predecessor out of the water.

Even so, Apple includes Image Capture with Mac OS X for these reasons:

- Image Capture is a smaller, faster app for downloading all or only some pictures from your camera (Figure 10-14). iPhoto can do that nowadays, but sometimes that's like using a bulldozer to get out a splinter.

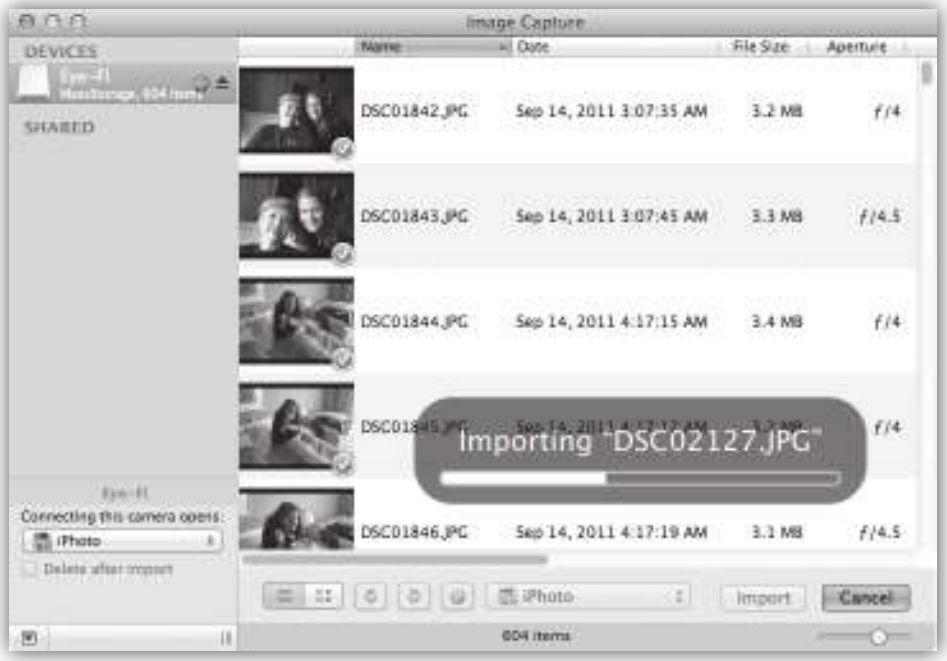

Figure 10-14: *Top: In many ways, Image Capture is like a mini iPhoto; use the slider in the lower right to change the thumbnail sizes. Use the "Delete after import" checkbox (lower left) if you want your camera's card erased after you slurp in its photos. You can choose the individual pictures you want to download, rotate selected shots (using the buttons at the top), or delete shots from the camera.*

- Image Capture can grab images from scanners, too, not just cameras.
- Image Capture can download your *sounds* (like voice notes) from a digital still camera; iPhoto can't.

You can open Image Capture in either of two ways: You can simply double-click its icon in your Applications folder, or you can set it up to open automatically whenever you connect a digital camera and turn it on. To set up that arrangement, open Image Capture manually. Using the "Connecting this camera opens:" pop-up menu, choose Image Capture.

Tip: Image Capture remembers your setting here separately for each camera. For example, you can set it up so that when you connect your fancy SLR camera, Aperture opens; when you connect your spouse's pocket camera, iPhoto opens; and when you connect your iPhone, Image Capture opens, so you can quickly grab the best shots and email them directly.

Once Image Capture is open, it looks like Figure 10-14. When you connect your camera, cellphone, or scanner, its name appears in the left-side list. To begin, click it. After a moment, Image Capture displays all the photos on the camera's card, in either list view or icon view (your choice).

Import To:

Use this pop-up menu to specify what happens to the imported pictures. Image Capture proposes putting photos, sounds, and movies from the camera into your Home folder's Pictures folder. But you can specify any folder (choose Other from the pop-up menu).

Furthermore, there are some other very cool options here:

- **iPhoto.** Neat that you can direct photos from your camera *to* iPhoto *via* Image Capture. Might come in handy when you didn't *expect* to want to load photos into your permanent collection, but you change your mind when you actually look them over in Image Capture.
- **Preview** opens the fresh pictures in Preview so you can get a better (and bigger) look at them.
- **Mail** sends the pix directly into the Mac's email program, which can be very handy when the whole point of getting the photos off the camera is to send them off to friends.
- **Build web page** creates an actual Web page of your downloaded shots. Against a dark-gray background, you get thumbnail images of the pictures in a Web page document called *index.html*. Just click one of the small images to view it at full size, exactly as your Web site visitors will be able to do once this page is actually on the Web. (Getting it online is up to you.)

Note: Image Capture puts the Web page files in a Home folder→Pictures→Webpage on [today's date and time] folder. It contains the graphics files incorporated into this HTML document; you can post the whole thing on your Web site, if you like.

Image Capture automatically opens up this page in your Web browser, proud of its work.

- **MakePDF.** What is MakePDF? It's a little app you didn't even know you had.

  When you choose this option, you wind up with what looks like a Preview window, showing thumbnails of your photos. If you choose Save right now, you'll get a beautiful, full-color PDF of the selected photos, ready to print out and then, presumably, cut apart with scissors or a paper cutter. But if you use the Layout menu, you can choose different layouts for your photos: 3 × 5, 4 × 6, 8 × 10, and so on.

  And what if a photo doesn't precisely fit the proportions you've selected? The Crop commands in the Layout menu (for example, "Crop to 4 × 6") center each photo within the specified shape and then trim the outer borders if necessary. The Fit commands, on the other hand, *shrink* the photo as necessary to fit into the specified dimensions, sometimes leaving blank white margins.

Note: The "crop" commands never touch the actual downloaded photos. The downloaded image files themselves retain their full sizes and resolutions.

- **Other.** The beauty of the Image Capture system is that people can, in theory, write additional processing scripts. Once you've written or downloaded them, drop them into your System→Library→Image Capture→Automatic Tasks folder. Then enjoy their presence in the newly enhanced Import To pop-up menu.

Tip: You can set up Image Capture to download everything on the camera *automatically* when you connect it. No muss, no options, no fuss.

To do that, connect the camera. Click its name in the Devices list. Then, from the "Connecting this camera opens" pop-up menu, choose AutoImporter. From now on, Image Capture downloads all pictures on the camera each time it's connected. When the downloading process is complete, a little green checkmark appears on the thumbnail of each imported photo.

Import Some, Import All

Clicking Import All, of course, begins the process of downloading the photos to the folder you've selected. A progress dialog box appears, showing you thumbnail images of each picture that flies down the wire.

If you prefer to import only *some* photos, select them first. (In list view, you click and Shift-click to select a bunch of *consecutive* photos, and ⌘-click to add *individual* photos to the selection. In icon view, you can both ⌘-click and *Shift*-click to select individual photos.) Then click Import.

Scanning

If you own a scanner, chances are good that you won't be needing whatever special scanning software came with it. Instead, Mac OS X gives you two programs that

can operate any standard scanner: Image Capture and Preview. In fact, the available controls are identical in both programs.

To scan in Image Capture, turn on your scanner and click its name in the left-side list. Put your photos or documents into the scanner.

Note: You can share a scanner on the network, if you like, by turning on Scanner Sharing in System Preferences→Sharing. That's sort of a weird option, though, for two reasons. First, what do you gain by sitting somewhere else in the building? Do you really want to yell or call up to whoever's sitting next to the scanner: "OK! Put in the next photo!"?

Second, don't forget that anyone else on the network will be able to see whatever you're scanning. Embarrassment may result. You've been warned.

Now you have a couple of decisions to make:

- **Separate and straighten?** If you turn on "Detect separate items" in the Scan Size menu, Mac OS X will perform a nifty little stunt indeed: It will check to see if you've put *multiple* items onto the scanner glass, like several small photos. (It looks for rectangular images surrounded by empty white space, so if the photos are overlapping, this feature won't work.)

  If it finds multiple items, Image Capture automatically straightens them, compensating for haphazard placement on the glass, and then saves them as individual files.

- **Where to file.** Use the "Scan to" pop-up menu to specify where you want the newly scanned image files to land—in the Pictures folder, for example. You have some other cool options beyond sticking the scans in a folder; for example, you can send the resulting image to iPhoto, Preview, or Mail.

Once you've put a document onto it or into it, click Scan. The scanner heaves to life. After a moment, you see on the screen what's on the glass. It's simultaneously been sent to the folder (or post-processing task) you requested using the "Scan to" pop-up menu.

More power to you

As you can see, Apple has tried to make *basic* scanning as simple as possible: one click. That idiotproof method gives you very few options, however.

If you click Show Details before you scan, though, you get a special panel on the right side of the window that's filled with useful scanning controls (Figure 10-15).

Here are some of the most useful options:

- **Resolution.** This is the number of tiny scanned dots per inch. 300 is about right for something you plan to print out; 75 is standard for graphics that will be viewed on the screen, like images on a Web page.

- **Name.** Here, specify how you want each image file named when it lands on your hard drive. If it says *Scan,* then the files will be called *Scan 1, Scan 2,* and so on.

- **Format.** Usually, the file format for scanned graphics is TIFF. That's a very high-res format that's ideal if you're scanning precious photos for posterity. But if these images are bound for the Web, you might want to choose JPEG instead; that's the standard Web format.
- **Image Correction.** If you choose Manual from this pop-up menu, then, incredibly, you'll be treated to a whole expando-panel of color correction tools: brightness, tint, saturation, a histogram, and so on.

Figure 10-15: *When you use the Show Details button, you get a new panel on the right, where you can specify all the tweaky details for the scan you're about to make: resolution, size, and so on. See how the three photos have individual dotted lines around them? That's because Detect Separate Items is turned on. These will be scanned into three separate files.*

Opening the Details panel has another handy benefit, too: It lets you scan only a *portion* of what's on the scanner glass.

Once you've put the document or photo into the scanner, click Overview. Image Capture does a quick pass and displays on the screen whatever is on the glass. You'll see a dotted-line rectangle around the entire scanned image—unless you've turned on "Detect separate images," in which case you see a dotted-line rectangle around *each* item on the glass.

You can adjust these dotted-line rectangles around until you've enclosed precisely the portion of the image you want scanned. For example, drag the rectangles' corner handles to resize them; drag inside the rectangles to move them; drag the right end of the line inside the rectangle to rotate it; preview the rotation by pressing Control and Option.

Finally, when you think you've got the selection rectangle(s) correctly positioned, click Scan to trigger the actual scan.

Note: These instructions apply to the most common kind of scanner–the *flatbed* scanner. If you have a scanner with a document feeder–a tray or slot that sucks in one paper document after another from a stack–the instructions are only slightly different.

You may, for example, see a Mode or Scan Mode pop-up menu; if so, choose Document Feeder. You'll want to use the Show Details option described above. You may also be offered a Duplex command (meaning, "scan both sides of the paper"–not all scanners can do this).

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iMovie, iPhoto

Here's another pair of iLife apps—not really part of Mac OS X, but kicking around on your Mac because iLife comes with all new Macs.

Tip: Masterfully written, in-depth guides to these programs are available in the form of iMovie '11 & iDVD: The Missing Manual and iPhoto '11: The Missing Manual. (Corresponding Missing Manual titles are available for earlier versions of these programs, too.)

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iTunes

iTunes is Apple's beloved digital music–library program. Chapter 11 tells all.

Launchpad

See Chapter 5 for the full story about Lion's new program-opening Home screen.

Mail

See Chapter 18 for the missing Mail manual.

Mission Control

Chapter 5 covers Lion's new window-management tool.

Photo Booth

It may be goofy, it may be pointless, but the Photo Booth program is a bigger time drain than Solitaire, the Web, and *Dancing with the Stars* put together. And it's been overhauled in Lion.

It's a match made in heaven for Macs that have a tiny video camera above the screen, but you can also use it with a camcorder, iSight, or Webcam. (Photo Booth doesn't even open if your Mac doesn't have *some* kind of camera.)

Open this program and then peer into the camera. Photo Booth acts like a digital mirror, showing whatever the camera sees—that is, you.

But then click the Effects button. You enter a world of special visual effects—and we're talking *very* special. Some make you look like a pinhead, or bulbous, or like a Siamese twin; others simulate Andy Warhol paintings, fisheye lenses, and charcoal sketches (Figure 10-16). In fact, there are five whole pages of effects, nine previews on a page. (The last two pages hold *backdrop* effects, described below.)

To page through them, click the left or right arrow buttons, or press ← or →, or swipe with two fingers on your trackpad (one finger on the Magic Mouse).

Lion Watch: The first page contains eight effects that are new in Lion. Some of them use sophisticated face-recognition smarts to track your face as it moves around the frame. That's how Dizzy and Lovestruck are able to keep the animated birds or hearts circling your head, and how Chipmunk, Nose Twirl, and Bug Out are able to distort your cheeks, nose, eyeballs even as you move around.

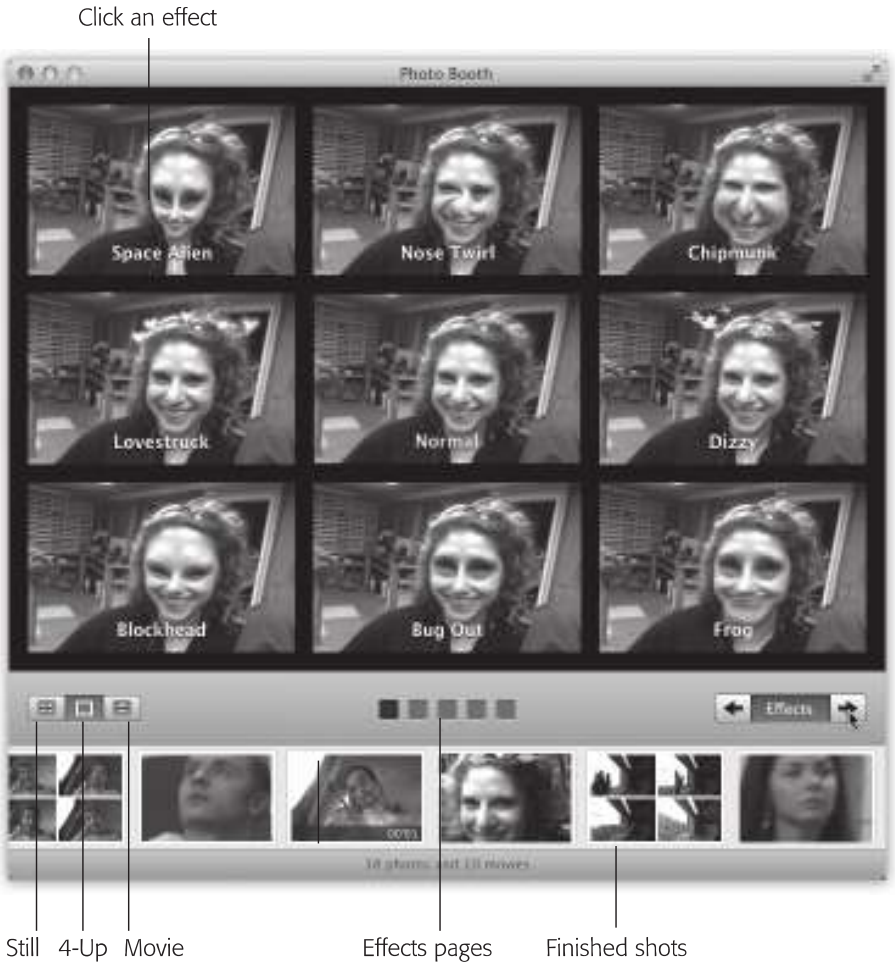


Figure 10-16:
The Photo Booth effects must have been dreamed up one night in the midst of a serious beer party at Apple. They're disturbingly creative. If you decide that you really look best without any help from Apple's warped imagery, click the Normal icon in the center.

Some of the effects have sliders that govern their intensity; you'll see them appear when you click the preview.

Still Photos

When you find an effect that looks appealing (or unappealing, depending on your goals here), click the camera button, or press ⌘-T. You see and hear a 3-second countdown, and then *snap!*—your screen flashes white to add illumination, and the resulting photo appears on your screen. Its thumbnail joins the collection at the bottom.

Tip: If that countdown is getting on your nerves, *Option*-click the camera button. You can get rid of the screen flash, too, by *Shift*-clicking. Needless to say, if you press Option *and* Shift, you get neither the countdown nor the flash.

4-Up Photos

If you click the 4-Up button identified in Figure 10-16, then when you click the Camera icon (or press ⌘-T), the 3-2-1 countdown begins, and then Photo Booth snaps *four* consecutive photos in 2 seconds. You can exploit the timing just the way you would in a real photo booth—make four different expressions, horse around, whatever.

The result is a single graphic with four panes, kind of like what you get at a shopping-mall photo booth. (In Photo Booth, they appear rakishly assembled at an angle; but when you export the image, they appear straight, like panes of a window.) Its icon plops into the row of thumbnails at the bottom of the window, just like the single still photos.

Movies

Photo Booth can also record *videos,* complete with those wacky distortion effects. Click the third icon below the screen, the Movie icon (Figure 10-16), and then click the camera button (or press ⌘-T). You get the 3-2-1 countdown—but this time, Photo Booth records a video, with sound, until you click the Stop button. (The little digital counter at left reminds you that you're still filming.) When it's over, the movie's icon appears in the row of thumbnails, ready to play or export.

GEM IN THE ROUGH

De-Mirrorizing Your Photos

Technically, Photo Booth acts like a mirror, not a camera. That is, every picture you take is actually flipped, left-to-right. If there's ever text in the picture—something written on your T-shirt, for example—or if you ever examine the way your hair is parted, you'll realize that every image is backwards.

That's why you can click a thumbnail at the bottom of the window and then choose Edit→Flip Photo (⌘-F). You've just made the photo match what a camera would have seen.

Or choose Edit→Auto Flip New Photos if you want Photo Booth to do the flipping *for* you from now on.

Tip: If you click a movie's thumbnail after recording it, a Trim button appears at the right end of the scroll bar. When you click it, yellow trim handles appear at both ends of the scroll bar (the same ones you'd see when trimming a video on the iPhone or iPad, or in iPhoto). Drag them inward to trim off any dead air at the beginning or end of your video clip. Hit the space bar to check your work. If the trim is OK, click the ✔ button to confirm the trim.

Exporting Shots and Movies

To look at a photo or movie you've captured, click its thumbnail in the scrolling row at the bottom of the screen. (To return to camera mode, click the ⊙ button.)

Fortunately, these masterpieces of goofiness and distortion aren't locked in Photo Booth forever. You can share them with your adoring public in any of these ways:

- Click the photo or movie, and then choose File→Export. You're asked to name and save the exported image or video.

GEM IN THE ROUGH

Still and Video Backdrops

Photo Booth and iChat are cousins, and they're closer than ever. One particular feature, in fact, is identical in each: custom backdrops. You can replace the actual, mundane background of your office or den with something far more exciting: a rushing waterfall, for example, or a rider's-eye view of a roller coaster. In fact, you can use any photo or video you want as the background.

It's just like the bluescreen or greenscreen technology that Hollywood uses to put actors someplace they're not—but without the bluescreen or greenscreen.

To replace your background in Photo Booth, click Effects. The fourth page of effects offers eight *canned* backgrounds, prepared by Apple for your enjoyment: various spectacular stills (cloudscape, color dots, the moon) and videos (Eiffel Tower plaza, aquarium, roller coaster, tropical beach, Yosemite waterfall).

The final page offers eight empty preview squares. You're supposed to drag a still or a video from your desktop (or iPhoto) into these empty squares, making them not so empty.

In any case, prepare the backdrop by clicking one of the preview squares. Photo Booth says, "Please step out of the frame." Do it. Photo Booth is going to memorize what its field of view looks like without you in it, so that when you reappear, it can tell *you* apart from your boring office background.

Now, when you record the movie or take the photo, you'll be amazed to discover that Photo Booth has just transplanted you to the far more exotic locale you selected. (Alas, blotches may result if the background includes movement or highly contrasting elements.)

Tip: If you choose File→Export Original instead, the exported photo or video lacks any of the effects that you've applied. You get the original, undistorted, underlying photo—a useful new option in Lion.

- Drag a thumbnail out of the window to your desktop.
- Control-click (or right-click) a thumbnail. From the shortcut menu, choose Reveal in Finder. You're taken to the actual image or movie file on your hard drive, ready for copying, moving, deleting, renaming, or whatever.

Lion Watch: These files are now stored in a single icon, a package file (page 166), that sits in your Home→Pictures folder. It's called Photo Booth Library. You'll find one JPEG apiece for single shots, four JPEG files for a 4-up, and a MOV file for videos.

- Click Email to send the photo or movie as an outgoing attachment in Mail.
- Click the Add to iPhoto button to import the shot or movie into iPhoto.
- Click User Picture to make this photo represent you on the Login screen (page 15).
- Click Buddy Picture to make this photo represent you in iChat (Chapter 20).

Tip: You can choose one frame of a Photo Booth movie to represent you. As the movie plays, click the Pause button, and then drag the scroll-bar handle to freeze the action on the frame you want. Then click User Picture or Buddy Picture.

Similarly, you can click your favorite *one pane* of a 4-up image to serve as your account photo—it expands to fill the Photo Booth screen—before clicking User Picture or Account Picture.

And speaking of interesting headshots: If you export a 4-up image and choose it as your Buddy Picture, you'll get an *animated* buddy icon. That is, your tiny icon cycles among the four images, creating a crude sort of animation. It's sort of annoying, actually, but all the kids are doing it.

As you set off on your Photo Booth adventures, a note of caution: Keep it away from children. They won't move from Photo Booth for the next 12 years.

Tip: Photo Booth is one of the certified full-screen apps. Click the ⤢ icon in the upper right to make the app fill your screen, for added graphic juiciness.

Preview

Preview is Mac OS X's scanning software, graphics viewer, fax viewer, and PDF reader. It's always been teeming with features that most Mac owners never even knew were there—but in Lion, it's been given even more horsepower. In fact, it's a flagship Lion program, offering all the cutting-edge new features, like Autosave, Versions, and full-screen mode.

Lion Watch: For the first time, Preview can open Microsoft Office documents (Word, PowerPoint, Excel) and iWork documents (Pages, Numbers, Keynote). You can't edit them in Preview, but you can read them, search them, and print them. No longer must you pay homage to Microsoft's bottom line just to have a look at the documents people send you.

Importing Camera Photos

Preview can import pictures directly from a digital camera (or iPhone), meaning that there are now *three* Mac OS X apps that can perform that duty. (iPhoto and Image Capture are the other two.) It's sometimes handy to use Preview for this purpose, though, because it has some great tools for photos: color-correction controls, size/resolution options, format conversion, and so on.

The actual importing process, though, is *exactly* like using Image Capture. Connect your camera, choose File→Import from [your camera's name], and carry on as described on page 396.

Operating Your Scanner

Preview can also operate a scanner, auto-straighten the scanned images, and export them as PDF files, JPEG graphics, and so on.

This, too, is *exactly* like using Image Capture to operate your scanner. Only the first step is different. Open Preview, choose File→Import from Scanner→[your scanner's name], and proceed as described on page 398.

Clearly, Apple saved some time by reusing some code.

Multiple Pages, Multiple Views

One hallmark of Preview is its effortless handling of *multiples:* multiple fax pages, multiple PDF files, batches of photos, and so on. The key to understanding the possibilities is mastering the Sidebar, shown in Figure 10-17. The idea is that these thumbnails let you navigate pages or graphics without having to open a rat's nest of individual windows.

Tip: You can drag these thumbnails from one Preview window's Sidebar into another. That's a great way to mix and match pages from different PDF documents into a single new one, for example.

To hide or show the Sidebar, chose one of these three commands from the View menu:

- **Thumbnails.** This standard view (Figure 10-17, left) offers a scrolling vertical list of miniature pages or photos. Click one to see it at full size in the main window. Make the thumbnails larger or smaller by dragging the window/Sidebar dividing line.
- **Table of Contents.** If you're looking over photos, this option turns the Sidebar into a scrolling list of their names. If you've opened a group of PDFs all at once, you see a list of them. Or, if you have a PDF that contains chapter headings, you see them listed in the Sidebar as, yes, a table of contents.

- **Contact Sheet.** When you choose this view, the *main* window scrolls away, leaving you with a full screen of thumbnail miniatures. It's like a light table where you can look over all the photos or PDF pages at once. Make them bigger or smaller using the slider in the lower left.

Tip: You can also change among these views by pressing the keyboard shortcuts Option-⌘-1, -2, -3, and -4.

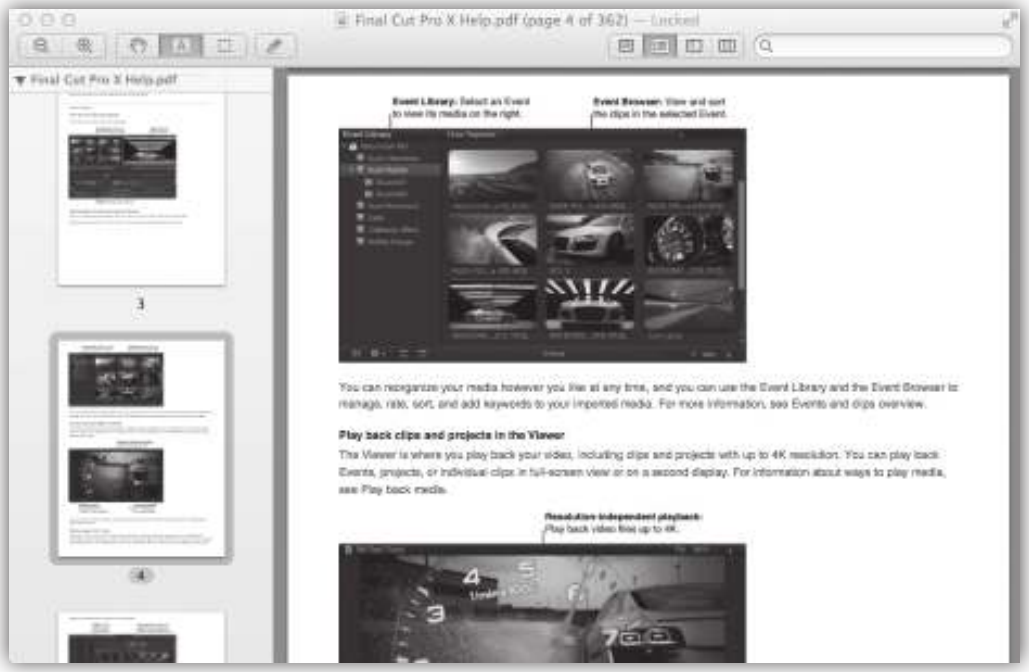


Figure 10-17: *The Sidebar can display thumbnails, a table of contents, or annotations, or it can appear as a full-screen array of thumbnail images. Drag the central scroll bar to make the Sidebar bigger; drag the lower-right corner of the Sidebar to make the whole Preview window bigger.*

Preview as Graphics Viewer

Preview is surprisingly versatile. It can display and manipulate pictures saved in a wide variety of formats, including common graphics formats like JPEG, TIFF, PICT, and GIF; less commonly used formats like BMP, PNG, SGI, and TGA; and even Photoshop, EPS, and PDF graphics.

Lion Watch: Don't miss the new Tools→Show Magnifier command. It gives you a loupe: a magnifying circle (or, in a PDF document, a magnifying rectangle) that lets you inspect part of your graphic or PDF file more closely.

Bunches o' graphics

If you highlight a group of image files in the Finder and open them all at once (for example, by pressing ⌘-O), Preview opens the first one but lists the thumbnails of the whole group in the Sidebar. You can walk through them with the ↑ and ↓ keys, or you can choose View→Slideshow (Shift-⌘-F) to open a full-screen slideshow.

Tip: You can change the order of the photos just by dragging them around in the Sidebar, in any of its views.

Cropping graphics

To crop graphics in Preview, drag across the part of the graphic that you want to keep. To redraw, drag the round handles on the dotted rectangle; or, to proceed with the crop, choose Tools→Crop. (The keyboard shortcut is ⌘-K.)

Since Preview is an Autosave program, you can always return to the original if you change your mind someday.

Tip: You can also rotate an image—even a PDF document—in 90-degree increments and then flip it vertically or horizontally, using the commands in the Tools menu. In fact, if you select several thumbnails in the Sidebar first, you can rotate or flip them all simultaneously.

Fixing up photos

Preview is no Photoshop, but it's getting closer every year. Let us count the ways:

- **Choose Tools→Show Inspector.** A floating palette appears. Click the first tab to see the photo's name, when it was taken, its pixel dimensions, and so on. Click the second one for even more geeky photo details, including camera settings like the lens type, ISO setting, focus mode, whether the flash was on, and so on. The third tab lets you add keywords, so you'll be able to search for this image later using Spotlight. (The fourth is for PDF documents only, not photos; it lets you add

Figure 10-18: *Humble little Preview has grown up into a big, strong mini-Photoshop. You can really fix up a photo if you know what you're doing, using these sliders. Or you can just click the Auto Levels button. It sets all those sliders for you, which generally does an amazing job of making almost any photo look better.*

annotations. A fifth tab appears only in PDF documents—for rotating, cropping, and resizing the file.)

- **Choose Tools→Adjust Color.** A translucent, floating color-adjustment palette appears, teeming with sliders for brightness, contrast, exposure, saturation (color intensity), temperature and tint (color cast), sharpness, and more. See Figure 10-18.
- **Choose Tools→Adjust Size.** This command lets you adjust a photo's resolution, which comes in handy a lot. For example, you can scale an unwieldy 10-megapixel, gazillion-by-gazillion-pixel shot down to a nice 640 × 480 JPEG that's small enough to send by email. Or you can shrink a photo down so it fits within a desktop window, for use as a window background (page 41).

  There's not much to it. Type in the new print dimensions you want for the photo, in inches or whatever units you choose from the pop-up menu. If you like, you can also change the resolution (the number of pixels per inch) by editing the Resolution box.

Cutting people out of backgrounds

Here's a Photoshoppy feature you would never, ever expect to find in a simple viewer like Preview: You can extract a person (or anything, really) from its background. That's handy when you want to clip yourself out of a group shot to use as your iChat portrait, when you want to paste somebody into a new background, or when you break up with someone and want them out of your photos.

POWER USERS' CLINIC

Scaling and Resampling

When you're fooling around with a picture's size and resolution in the Change Size dialog box, you might find that a couple of the options take a little explaining.

If "Scale proportionally" is turned on, Preview changes the Height number when you change the Width number, and vice versa. In other words, it won't let you change the *shape* of the photo; that's why a little padlock icon appears to bracket the Height and Width boxes.

If "Resample image" is turned off, then Preview adjusts the image's size by making the existing dots bigger or smaller—but never changes the *number* of dots. (That's why a padlock bracket links all three boxes together. For example, you can make the image larger—but you'll lower the number of dots per inch.)

If "Resample image" is turned *on,* then you're giving Preview permission to add or subtract pixels as necessary to scale the photo up or down. Of course, it can't create detail that wasn't there in the original, but if you're scaling the picture *up,* it does a decent job of generating new pixels by averaging the colors of the neighboring ones.

If the background is simple—mostly a solid color or two—you can do this job quickly. Start by making sure the toolbar is visible (⌘-B). From the Select pop-up menu, choose Instant Alpha.

This feature is extremely weird, but here goes: Click the first background color you want to eliminate. Preview automatically dims out *all* the pixels that match the color you clicked. Click again in another area to add more of the background to the dimmed patch.

Actually, if you click and *drag* a tiny distance, you'll see sensitivity-percentage numbers appear next to your cursor. They indicate that the more you drag, the more you're expanding the selection to colors *close* to the one you clicked. The proper technique, then, isn't click-click-click; it's drag-drag-drag.

When it looks like you've successfully isolated the subject from the background, press the Delete key. You've just chopped out the background.

You've just created a graphic with an *alpha channel,* which, in computer-graphics terms, is a special mask that can be used for transparency or blending. The background you deleted—the empty gray part—appears transparent when you export it (File→Export) and then import it into certain graphically sophisticated programs. For example:

- **iMovie.** You can drag your exported graphic directly onto a filmstrip in an iMovie project. The white areas of the exported Preview image become transparent, so whatever video is already in the filmstrip plays through it. Great for opening credits or special effects.
- **Preview.** Yes, Preview itself recognizes incoming alpha channels. So after you cut the background out of Photo A, you can select what's left (press ⌘-A), copy it to the Clipboard (⌘-C), open Photo B, and then paste (⌘-V). The visible part of Photo A gets pasted into the background of Photo B.

UP TO SPEED

Another Way to Cut People Out of Backgrounds

If the background of your graphic isn't primarily solid colors, the Instant Alpha feature won't help you much. Fortunately, you have another, cruder option: Manually drag around the person.

Again, start by making sure the toolbar is visible (⌘-B). From the Select pop-up menu, choose Smart Lasso.

Now carefully trace the person or thing that you'll want to extract. Preview marks your tracing with a fat red line. (Zoom in for tight corners by pressing ⌘-+.) Continue until you've made a complete closed loop. Or just let go to say, "Connect where I am now with where I started."

(Hit Esc to erase the line and start over—or give up.)

Once you've isolated the person you want to keep, you can use Edit→Copy so that the person is ready to paste somewhere else. Or you can reverse the selection, so that the background is selected, so that you can get rid of it. Do that with a quick Edit→Invert Selection. Now you can hit the Delete key to lose the background.

- **Photoshop, Photoshop Elements.** Of course, these advanced graphics programs recognize alpha channels, too. Paste in your Preview graphic; it appears as a layer, with the existing layers shining through the empty areas.

Tip: Here's a great way to create a banner or headline for your Web page: Create a big, bold-font text block in TextEdit. Choose File→Print; from the PDF pop-up button, choose Open PDF in Preview.

In Preview, crop the document down and save it as a PNG-format graphic (because PNG recognizes alpha channels). Then use the Instant Alpha feature to dab out the background and the gaps inside the letters. When you import this image to your Web page, you'll find a professional-looking text banner that lets your page's background shine through the empty areas of the lettering.

Converting file formats

Preview doesn't just open all these file formats—it can also convert among most of them. You can pop open some old Mac PICT files and turn them into BMP files for a Windows user, pry open a TIFF file from a scanner and turn it into a JPEG for use on your Web site, and so on.

Tip: What's even cooler is you can open raw PostScript files right into Preview, which converts them into PDF files on the spot. You no longer need a PostScript laser printer to print out high-end diagrams and page layouts that come to you as PostScript files. Thanks to Preview, even an inkjet printer can handle them.

All you have to do is open the file you want to convert and choose File→Export. In the dialog box that appears, choose the new format for the image using the Format pop-up menu (JPEG, TIFF, PNG, or Photoshop, for example). Finally, click Save to export the file.

Preview as PDF Reader

Preview is a nearly full-blown equivalent of Adobe Reader, the free program used by millions to read PDF documents. It lets you search PDF documents, copy text out of them, add comments, fill in forms, click live hyperlinks, add highlighting, circle certain passages, type in notes—features that used to be available only in Adobe's Acrobat Reader. And now, in the Lion version, you can even *sign PDF contracts*, slapping your actual signature onto the electronic document.

Tip: Don't forget that Preview is one of Lion's certified full-screen apps. That is, you can make it fill your screen, border to border, by clicking the ⤢ icon in the upper-right corner, as described on page 11. You can also flip through the pages of a PDF using the "next page" gesture: a two-finger swipe on the trackpad.

Here are the basics:

- Zoom in and out using ⌘-plus and ⌘-minus.

Lion Watch: Another way to get a closer look: press the ` key (upper-left of your keyboard), or choose Tools→ShowMagnifier. Now a big magnifying glass follows your cursor; you can even press + or – to zoom in or out within it. Dismiss the magnifier by pressing ` again.

- Use the View menu commands to control how the PDF document appears: as two-page spreads; as single scrolling sheets of "paper towel"; with borders that indicate ends of pages; and so on.
- Press the space bar to page through a document (add Shift to page *upward*. The Page Up and Page Down keys do the same thing.)

Tip: Some PDF documents include a table of contents, which you'll see in Preview's Sidebar, complete with flippy triangles that denote major topics or chapter headings (Figure 10-17). You can use the ↑ and ↓ keys alone to walk through these chapter headings, and thenexpand one that looks good by pressing the → key. Collapse it again with the ← key.

In other words, you expand and collapse flippy triangles in Preview just as you do in a Finder list view. (The View→Sidebar submenu also includes Expand All and Collapse All commands.)

- Bookmark your place by choosing Bookmarks→Add Bookmark (⌘-D); type a clever name. In future, you'll be able to return to that spot by choosing its name from the Bookmarks menu.
- You can type in notes (in a box or a bubble), add clickable links (to Web addresses or other spots in the document), or use circles, arrows, rectangles, strikethrough, underlining, or yellow highlighting to draw your readers' attention to certain sections, as shown in Figure 10-19.

Tip: Preview ordinarily stamps each text note with your name and the date. If you'd rather not have that info added, choose Preview→Preferences, click PDF, and then turn off "Add name to annotations."

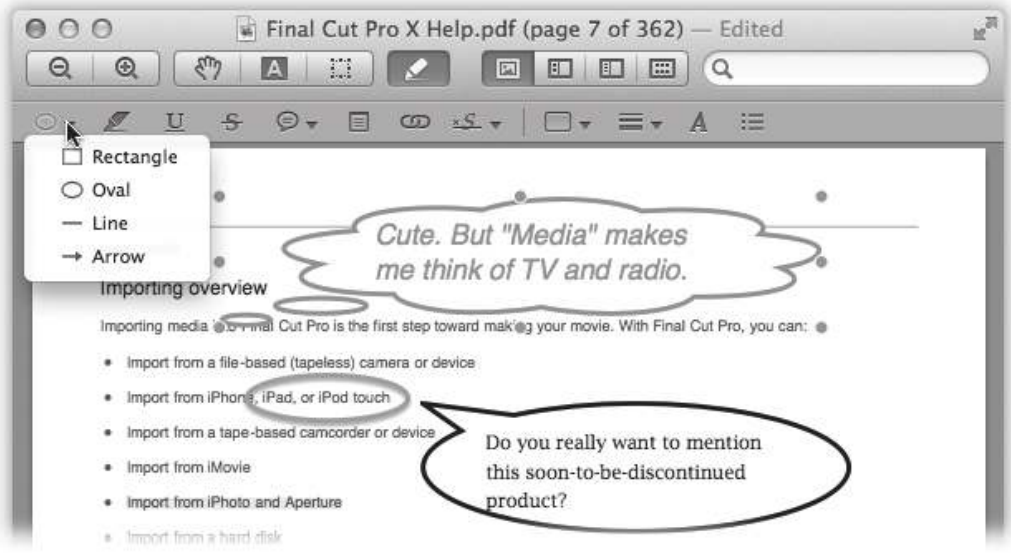


Figure 10-19: *Click the button you want, then drag diagonally to define a rectangle, oval, arrow, link, speech bubble, or thought bubble. You can look over the master list of notes using the Tools→Show Inspector palette.*

These remain living, editable entities even after the document is saved and reopened. These are full-blown Acrobat annotations; they'll show up when your PDF document is opened by Acrobat Reader or even on Windows PCs.

Tip: You can add circles, arrows, rectangles, and text boxes, even on image files like photos.

- Turn smoothing on or off to improve readability. To find the on/off switch, choose Preview→Preferences, and click the PDF tab. Turn on "Smooth line art and text." (Though antialiased text generally looks great, it's sometimes easier to read very small type with antialiasing turned off. It's a little jagged, but clearer nonetheless.)
- To find a word or phrase somewhere in a PDF document, press ⌘-F (or choose Edit→Find→Find) to open the Find box—or just type into the 🔍 box at the top of the Sidebar, if it's open. Proceed as shown in Figure 10-20.

Lion Watch: The search results in Lion have been beefed up considerably. Now you get to see a snippet of the actual text surrounding each "find," along with the number of matches per page, and even a thumbnail of the page itself. It's all about context, baby.

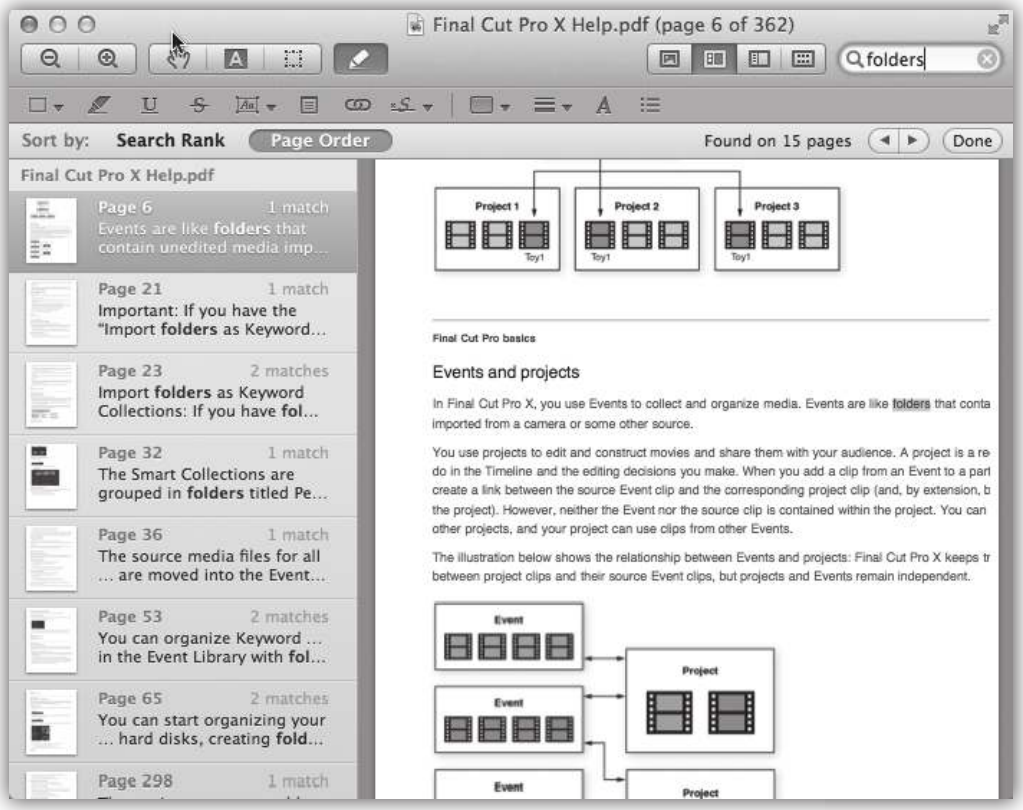


Figure 10-20: *Type into the search box. Matches appear in the Sidebar, with page numbers; click one to go there. You can sort the found list either by rank (how likely Preview thinks it is to be what you're looking for) or in page order; click the appropriate phrase about the list to sort.*

- If you want to copy material out of a PDF document—for pasting into a word processor, for example, where you can edit it—click the Text tool (the letter A on

the toolbar) or choose Tools→Text Tool. Now you can drag through some text (and even graphics) and then choose Edit→Copy, just as though the PDF document were a Web page. You can even drag across page boundaries.

Tip: Ordinarily, dragging across text selects the text from one edge of the page to the other, even if the PDF document is laid out in columns. But Preview is a bit smarter. It can tell if you're trying to get the text in only one column and highlights just that part automatically.

- You can save a single page from a PDF as a TIFF file to use it in other graphics, word processing, or page layout programs that might not directly recognize PDF.

  To extract a page, use the usual File→Export command, making sure to choose the new file format from the pop-up menu. (If you choose a format like Photoshop or JPEG, Preview converts only the currently selected page of your PDF document.

GEM IN THE ROUGH

A Lion Special: Sign PDF Documents with Your Real Signature

Of Lion's 250 new features, very few are quite as slick or useful as the PDF signature option. It lets your Mac *take a picture* of your actual written signature, which Preview then stores so that you can slap it into the PDF documents that will come through your life.

The first step is to teach Preview what your signature looks like. To do that, sign your name on a piece of plain white paper, using black ink. On the Annotations toolbar, click the Signature pop-up menu ✒, and choose Create Signature from Built-in Camera. (You'll see your actual camera name, like iSight Camera or FaceTime HD Camera. And if you don't see the Annotations toolbar, which is shown in Figure 10-19, choose View→Show Annotations Bar.)

Now hold up your written signature page in front of your Mac's camera. Make sure it's big enough to fill the box on the left side—never mind that it appears backwards—and position it so that it sits on the blue line, as shown here. After a moment, your isolated, beautifully photographed signature appears in the Preview box.

When the positioning looks good, click Accept. You've just stored your signature. (You have to do this only once—per signature, anyway.)

When the time comes to sign a document, make the Annotations bar visible. From the ✒ pop-up menu, choose the signature's name. (Preview can store more than one signature; that's why this step is necessary.)

Now just click the document where you want the signature to appear. If there's a line you're supposed to sign on (such as a "Sign here" line), Preview is smart enough to shrink your scanned signature so that it fits on the line. Nice, huh? Xx

You can delete signatures (and add new ones), if you like, using the Manage Signatures dialog box. Choose Manage Signatures from the ✒ pop-up menu on the Annotate bar.

That's because there's no such thing as a multipage Photoshop or JPEG graphic. But you already knew that.)

- Add keywords to a graphic or PDF (choose Tools→Show Inspector, click the 🔍 tab, click the + button). Later, you'll be able to call up these documents with a quick Spotlight search for those details.

The Toolbar

You can have hours of fun with Preview's toolbar. You can customize it (by choosing View→Customize Toolbar), rearrange its icons (by ⌘-dragging them sideways), and remove icons (by ⌘-dragging them downward).

QuickTime Player

There's a lot to say about QuickTime player, but it's all in Chapter 15.

Safari

Apple's Web browser harbors enough tips and tricks lurking inside to last you a lifetime. Details in Chapter 19.

Stickies

Stickies creates virtual Post-it notes that you can stick anywhere on your screen—a triumphant software answer to the thousands of people who stick notes on the edges of their actual monitors. Like the Stickies widget in Dashboard, you can open this program with a keystroke (highlight some text, and then press Shift-⌘-Y)—but the program is a lot more powerful than the widget.

You can use Stickies to type quick notes and to-do items, paste in Web addresses or phone numbers you need to remember, or store any other little scraps and snippets of text you come across. Your electronic Post-it notes show up whenever the Stickies program is running (Figure 10-22).

Creating Sticky Notes

The first time you launch Stickies, a few sample notes appear automatically, describing some of the program's features. You can quickly dispose of each sample by clicking the close button in the upper-left corner of each note or by choosing File→Close (⌘-W). Each time you close a note, a dialog box asks if you want to save it. If you click Don't Save (or press ⌘-D), the note disappears permanently.

To create a new note, choose File→New Note (⌘-N). Then start typing or:

- Drag text in from any other program, such as TextEdit, Mail, or Microsoft Word. Or drag text clippings from the desktop directly into your note. You can also drag a PICT, GIF, JPEG, or TIFF file into a note to add a picture. You can even drag a sound or movie in. (A message asks if you're sure you want to copy the whole whopping QuickTime movie into a little Stickies note.)

- Drag the icon of a PDF file into a note. (Stickies can even accommodate multipage PDF files. At first, you see only the first page, but a scroll bar is available to see the rest.)
- Choose File→Import and select any plain text file or RTF (Rich Text Format) document to bring it into a note.
- Drag URLs into a note directly from a Web browser's address bar.

Tip: If one particular note contains your most important information–your to-do list, say–you can force it to remain in front of all other windows, even if Stickies itself gets shunted to the background. Just click the note, and then choose Note→Floating Window.

Figure 10-22:
In the old days of the Mac, the notes you created with Stickies were text-only, single-font deals. Today, however, you can use a mix of fonts, text colors, and styles within each note. You can even paste in graphics, sounds, and movies (like PICT, GIF, JPEG, QuickTime, AIFF, whole PDF files, and so on), creating the world's most elaborate reminders and to-do lists.

- In TextEdit, Mail, Pages, Safari, iChat, Stickies itself, and other standard Apple programs, you can select a chunk of text and then choose Make New Sticky Note from the program's Services menu, or press Shift-⌘-Y. This command launches Stickies, creates a new note, and fills it with your selected text—all in one step.

Note: All your notes are stored in a file called *StickiesDatabase*, located in your Home→Library folder. You're free to copy it, pass it along, and so on, just as you would any file.

Have a favorite style for your sticky notes? First create a new note, choosing the color and text style you like and setting it to the size you prefer. Then choose Note→Use as Default. All new notes you create now appear in the size, font, and color you've chosen.

Growing and Shrinking Notes

Stickies includes a few built-in tricks for managing a deskful of notes:

- There's a small resize handle on the lower-right corner of each note. Drag it to make notes larger or smaller onscreen.
- Use the small triangle in the upper-right corner of each note to zoom and shrink note windows with a single click. The first click expands a note nearly to full-screen size. Another click pops the note back down to normal size.
- The best option: Double-click anywhere along the dark strip at the top of each note to collapse it into a compact one-line mininote, as shown in Figure 10-23. You also can collapse a selected note by choosing Window→Collapse (⌘-M).

Tip: The most efficient way to use Stickies is to keep the notes in their collapsed state, as shown in Figure 10-23. When a note is collapsed, the first line of text shows up in tiny type in the collapsed title bar of the note, so you don't have to expand the note to remember what's in it. And since many–if not most–of your notes can probably be summed up in a couple of words ("Pick up dry cleaning," "Call Mom"), it's possible to keep your sticky notes in their collapsed state permanently.

Figure 10-23:
If the first line of text gets truncated, as in the third note shown here, you can tug the right corner of the note and drag it wider without de-miniaturizing it.

Formatting Notes

Stickies has word processor-like commands for creating designer sticky notes, with any combination of fonts, colors, and styles (explore the Font menu). You can also choose from six background colors from the Color menu.

Saving Sticky Notes

The notes you create in Stickies last only as long as you keep them open. If you close a note to get it out of the way (and click Don't Save in the confirmation box), it vanishes permanently.

If you want to preserve the information you've stuffed into your notes in a more permanent form, use File→Export Text to save each note as a standalone TextEdit document. When you use the Export Text command, you have the following options:

- **Plain Text.** This option saves your note as a plain text file, with neither formatting nor pictures.
- **RTF.** RTF stands for Rich Text Format, a special exchange format that preserves most formatting, including font, style, and color choices. You can open the resulting RTF file in just about any word processor with all your formatting still intact.
- **RTFD.** RTFD, a strange and powerful variant of RTF, is a Rich Text Format document *with attachments*. How do you "attach" items to an RTFD file? Drag the icon of an actual application (Preview, Calculator, or whatever) or a multipage PDF file, into a sticky note. The icon for the program or document appears in the note, but double-clicking the icon doesn't do anything. When you export the note as an RTFD file, the result is a TextEdit document that has embedded within it the *entire* program or document you dragged in. The program icon appears just as it did in the sticky note, but if you double-click the icon, the program actually opens. (For more about RTFD files, see the box on page 426.)

  You can also paste a graphic into your sticky note. When you export the note as an RTFD document, the resulting *package* file includes a graphics file of the format you pasted.

  If you don't have embedded programs or documents in your notes, then exported RTFD files are exactly the same as their RTF counterparts.

System Preferences

This program opens the door to the nerve center of Mac OS X's various user preferences, settings, and options. Chapter 9 covers every option in detail.

TextEdit

TextEdit is a basic word processor—but it's not nearly as basic as people think it is. You can create real documents with real formatting, using style sheets, colors, automatic numbering and bullets, tables, and customized line spacing. You can even open, edit, and create Microsoft Word documents. If you had to, you could write a children's book in TextEdit, and it would look pretty decent.

Better yet, TextEdit (Figure 10-24) is now a showcase for Lion's iPaddish new features, like full-screen mode, Autosave, and Versions (see Chapter 5). And TextEdit works with Mac OS X's long list of built-in text-editing features: smart links, smart quotes, smart dashes, smart copy/paste, abbreviation expansion, auto–typo correction, data detectors, and so on. They're all described in Chapter 6.

TextEdit's Two Personalities

The one confusing aspect of TextEdit is that it's both a *plain text editor* (no formatting; globally compatible) and a true *word processor* (fonts, sizes, styles; compatible with other word processors). Here's the scheme:

- You can change a plain text document to a formatted one by choosing Format→Make Rich Text. The ruler appears automatically to remind you that a new world of formatting has just become available.
- Conversely, you can change a formatted document (a Word file you've opened, for example) to a plain text document by choosing Format→Make Plain Text. An alert message appears to point out that you're about to lose all formatting.
- If you know what kind of document you *always* want to open, go to the TextEdit→Preferences dialog box; on the New Document tab, select Rich Text or Plain Text. That's what you'll get each time you choose File→New.

Tip: Here's also where you can turn on smart links, smart quotes, smart dashes, and the other smart text-processing features described in Chapter 6.

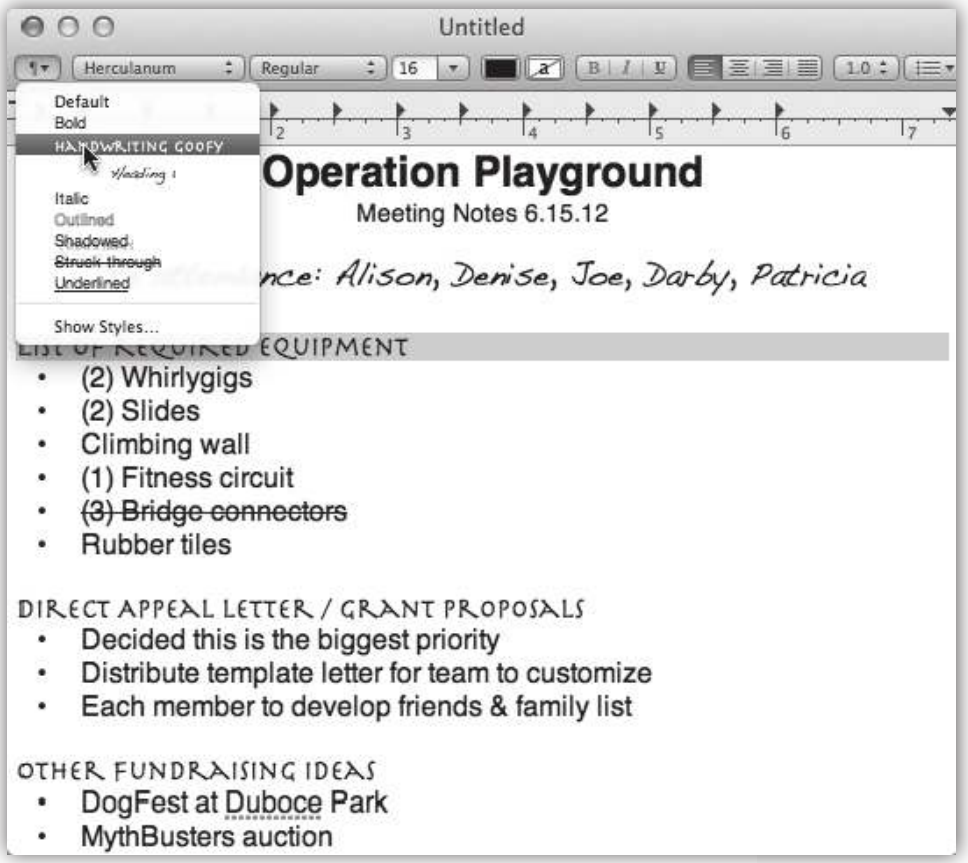


Figure 10-24: *The text ruler gives you control over tab stops, paragraph justification, and so on. Pressing ⌘-R makes it appear and disappear. On the toolbar, the Style pop-up menu lists canned sets of character and paragraph formatting, so you can apply them consistently throughout a document.*

Working in TextEdit

As you begin typing, all the usual word processing rules apply, with a few twists:

- Choose bold, italic, and font sizes using the new formatting toolbar. (You can still use the commands in the Format menu.) You can even create subscripts or superscripts, change the color of the text (Format→Font→Show Colors), and so on.

- Common paragraph-alignment options—Align Left, Align Right, Center, Justify—are all available as toolbar buttons and also reside in the Format→Text submenu. Adjust the line spacing (single, double, or any fraction or multiple) using the Spacing pop-up menu in the toolbar.
- The toolbar also offers automatic bulleting and numbering of paragraphs. Just choose the numbering style you prefer from the pop-up menu at the right end of the toolbar.
- You can select several nonadjacent bits of text *simultaneously.* To pull this off, highlight your first piece of text by dragging, and then press ⌘ as you use the mouse to select more text. Bingo: You've highlighted two separate chunks of text.

  When you're done selecting bits of text here and there, you can operate on them en masse. For example, you can make them all bold or italic in one fell swoop. You can even use the Cut, Copy, and Paste commands, as described in the next section. When you cut or copy, the command acts upon all your selections at once.

  You can also drag any *one* of the highlighted portions to a new area, confident that the other chunks will come along for the ride. All the selected areas wind up consolidated in their new location.

Tip: If you *Option*-drag one of the highlighted bits, you *copy* all selected chunks, leaving the originals in place.

UP TO SPEED

The Deal with Microsoft Word

Yes, it's true: Humble TextEdit can open and create Microsoft Word documents! Your savings: the $400 price of Microsoft Office!

Well, sort of.

When you open a Microsoft Word document in TextEdit, most of the formatting comes through alive: bold, italic, font choices, colors, line spacing, alignment, and so on. Even very basic tables make it into TextEdit, although with different column widths.

A lot of Word-specific formatting does not survive crossing the chasm, however: borders, style sheets, footnotes, and the like. Bullets and numbered lists don't make it, either, even though TextEdit can create its own versions of these. And TextEdit doesn't recognize the comments and tracked changes your collaborators might use to mark up your manuscript.

Saving a new TextEdit document as a Word document is a better bet, because Word understands the many kinds of formatting that TextEdit can produce—including bullets, numbering, and tables. (You can create a Word file the first time you save it from TextEdit, or you can convert a document into Word format later by choosing File→Duplicate, then File→Save.)

The one disappointment is that Word doesn't recognize any style sheets you've set up in TextEdit. The formatting applied by those style names survives—just not the style names themselves.

Even so, a built-in Word-document editor is a huge, huge step for the Mac OS. It means that in many cases, you can be a first-class citizen on the playing field of American business. Nobody ever needs to know that you're (a) using a Mac, and (b) not using the real Microsoft Word.

- Similarly, you can use the Find command. To do that, choose Edit→Find→Find (or just press ⌘-F). Fill in the search box; the sought-for term appears highlighted everywhere in your document at once. (You can also search and *replace*, using the other commands in the Edit→Find submenu.)
- If you Option-drag vertically, you can freely select an arbitrary column of text (not necessarily the entire page width). This technique is very useful when you want to select only one column in a multicolumn layout, or when you want to select the numbers in a list and format them all at once. (As noted earlier, this trick also works in Preview PDF documents.)

Style Sheets

A *style* is a prepackaged collection of formatting attributes that you can apply and reapply with a click of the mouse (bold, 24-point Optima, double-spaced, centered,

POWER USERS' CLINIC

Advanced Typography in TextEdit

If you just sprayed your coffee upon reading the heading of this sidebar, you're forgiven. Advanced typography in TextEdit? Isn't that a little bit like saying, "advanced page layout in Notepad"?

Not at all. TextEdit is a gleaming showcase for Mac OS X's typographical smarts.

Most of the commands in the Format→Font submenu should be familiar to you: Bold, Italic, Underline, and so on. But a few were once found only in expensive page-layout programs like InDesign and QuarkXPress. For example:

Kern. Use these commands, such as Tighten and Loosen, to nudge the letters of the selected text closer together or farther apart–an especially useful feature when you're fiddling with headlines and headings.

There are no controls to set how much you want to kern the text, but you can apply these commands repeatedly to the same text selection to intensify them. If you want your text to be very tight, for example, just keep choosing the Tighten command. The characters creep closer and closer together until they crash into one another.

Ligature. Ligatures are letter pairs, such as fl and ff, that, in fancy typesetting, are often conjoined into special combination characters, as shown here. If you choose Format→Font→Ligature→Use Default (or Use All), then TextEdit displays these letter pairs with the appropriate ligatures. (This works only if the font you're using has those ligatures built into it. New York, Charcoal, Apple Chancery, and all Adobe Expert fonts do, for example, but many other fonts don't.)

Baseline. The baseline is the imaginary "floor" for text characters in a line of type. You can push text above this line or sink it below the baseline using the Raise and Lower commands in the Baseline submenu. The Superscript and Subscript commands, meanwhile, shift characters far above or below the baseline, so you can write stuff like "H_2O."

Character Shape. In a few fonts, such as Adobe Expert fonts, this submenu offers a choice between Traditional Form and specialized type treatments like Small Caps.

Copy Style/Paste Style. If mastering the Styles pop-up menu (described on the next page) is too much effort, these commands offer another way to copy and paste just the font formatting to other text–the font, color, style, and size, but none of the actual text or paragraph attributes, such as alignment.

for instance). You can create as many styles as you need: chapter headings, sidebar styles, and so on. You end up with a collection of custom-tailored styles for each of the repeating elements of your document.

Once you've created your styles, you can apply them as you need them, safe in the knowledge that they'll be consistent throughout the document. During the editing process, if you notice that you accidentally styled a *headline* using the *Subhead* style, you can fix the problem by simply reapplying the correct style.

Note: Unlike a real word processor, TextEdit doesn't let you *change* a style's formatting and thereby update every occurrence of it. In Lion, though, you *can* search for all occurrences of a style and change them all simultaneously (see the next page).

- **Creating a named style.** To create a style, format some text so it looks the way you like it, complete with font, color, line spacing, tab settings, and so on.

  Then, from the ¶ pop-up menu at the left end of the toolbar, choose Show Styles (Figure 10-25, top). Click Add to Favorites, type a name for the style, turn on both checkboxes (Figure 10-25, bottom), and then click Add.

Figure 10-25:
Top: Highlight the text you want to format. Then, from the ¶ pop-up menu in the toolbar, choose Show Styles. With each click of the ▶ button, you summon a snippet of the next chunk of formatting. When you find one you like, you can either click Apply (to zap the highlighted text into submission) or Add To Favorites (to reuse this canned style later). In the latter case, you can give the new style a name (bottom).

- **Applying a style.** Later, when you want to reuse the formatting you set up, highlight some text and then choose the appropriate name from the ¶ pop-up menu. TextEdit applies the formatting immediately.

Tip: If you simply click inside a paragraph, applying a style affects only paragraph attributes, like line spacing, tab stops, and alignment. If you highlight a random chunk of text instead, applying a style affects only character attributes, like the font and type size. If you highlight an entire paragraph, however, both text and paragraph formatting appear.

- **Deleting a style.** To delete a superfluous style, choose Show Styles from the ¶ pop-up menu on the toolbar. Click the Favorite Styles button, choose the unwanted style's name from the pop-up menu, and then click Remove From Favorites. (Deleting a style doesn't affect any formatting that's already in your document; it just removes the name from the Styles menu.)

- **Replacing all occurrences.** In Lion, you can highlight every occurrence of a certain style at once—and then change, copy, or delete them all at once.

  To make this work, choose Show Styles from the ¶ pop-up menu. Choose the style you want to work on. (If "Document styles" is selected, click the ▶ button to page through the styles; if "Favorite styles" is selected, choose from the pop-up menu.) Then click Select.

  In the little details sheet that appears, click the options you want, and then click Select. TextEdit highlights every occurrence of that style in the entire document (or selection). At this point, you can use any of the usual text-formatting controls to modify them all simultaneously.

- **Formatting by example.** In TextEdit, you can also use Option-⌘-C and Option-⌘-V (Format→Font→Copy Style and Format→Font→Paste Style) to grab formatting from one place in your document and reuse it elsewhere. (Of course, you can't apply styles in text-only documents.)

Tables

Tables can make life a heck of a lot easier when you want to create a resumé, agenda, program booklet, list, multiple-choice test, Web page, or another document where numbers, words, and phrases must be aligned across the page. In the bad old days, people did it by pressing the Tab key to line up columns—a technique that turned into a nightmare as soon as you tried to add or delete text. But using a word processor's *table* feature is light-years easier and more flexible, because each row of a table expands to contain whatever you put into it. Everything else in its row remains aligned.

Tip: Tables are sometimes used for designing Web pages. Even though you can't see the table outlines, many a Web page is filled with columns of text that are aligned invisibly by tables. And now that TextEdit can save your work as an HTML document, it's suddenly a viable candidate for designing basic Web pages.

- **Create a table** by choosing Format→Table. The floating Table palette appears (Figure 10-26). Use it to specify how many rows and columns you want. The placeholder table in your document adjusts itself in real time.
- **Format the table** using the other controls in the Table palette. The Alignment controls let you specify how the text in the table cells hugs its border. Cell Border controls the thickness of the line around the selected cells' borders (or, if you enter 0, makes the table walls invisible). The color swatch next to Cell Border specifies the color of the solid lines. The Cell Background controls let you color in the table cells with colors of your choice. (Choose Color Fill from the pop-up menu, and then click the color swatch.) This is an especially valuable option for Web designers.
- **Adjust the rows and columns** by dragging the cell borders.
- **Merge two selected cells** by clicking Merge Cells in the Table palette. Once you've done that, you can use the Split Cell button to split them apart again. (Split Cell doesn't work except in cells you've previously merged.)
- **Nest one table inside a cell of another** by clicking in the cell and then clicking Nest Table. Change the numbers in the Rows and Columns boxes to set up its dimensions (Figure 10-26).

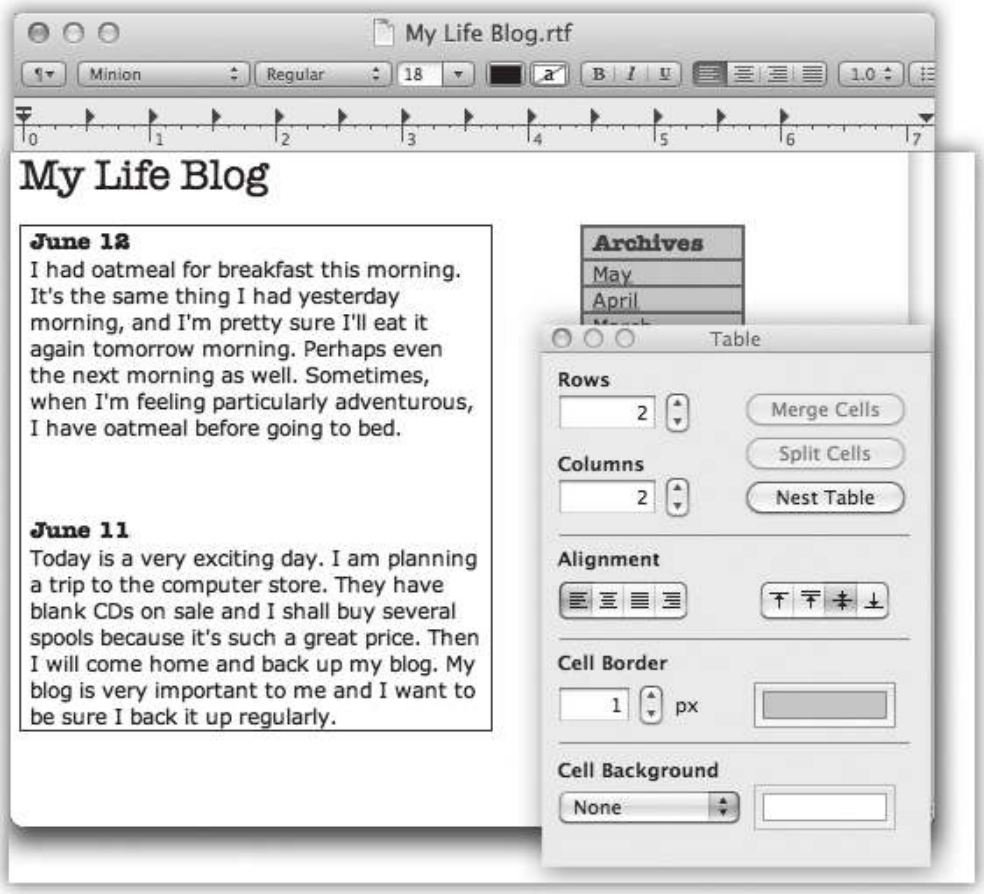


Figure 10-26: *Note to Web designers: TextEdit may not be Dreamweaver, but it's great for spinning out quick Web pages, thanks to the table features. Here you can see that a big table forms the underlying structure for this Web page, along with a couple of nested ones and color selections.*

TextEdit as Web Designer

The Table palette isn't the only clue that Apple intends TextEdit to be a quick-and-dirty Web page design program. Consider these other tools:

- You can easily add graphics to the page by dragging or pasting them into a document. The program understands TIFF, PICT, JPEG, and GIF formats.
- You can add Web-style hyperlinks by highlighting "Click here" (or whatever the link says), choosing Edit→Add Link, and then entering the Web address in the resulting dialog box. Or just drag a link in from Safari, Mail, or another program. (To edit the link later, Control-click it, and then choose Edit Link.)

Tip: Of course, you can also have TextEdit convert typed links into clickable ones *automatically* as you type them. That's the purpose of the Smart Links option in TextEdit→Preferences.

- To save a brand-new document as an HTML (Web page) file, choose File→Save; from the File Format pop-up menu, choose Web Page. (To save an existing TextEdit document as an HTML file, choose File→Duplicate, then File→Save; choose Web Page from the pop-up menu.)
- Don't miss the HTML options in TextEdit→Preferences. On the Open and Save tab, you can specify what kind of HTML document you want to produce, what cascading style sheets (CSS) setting you want, and whether or not you want TextEdit to include code to preserve blank areas (white space) in your layout.

Tip: When you open a Web page document–that is, an HTML document–TextEdit is faced with a quandary. Should it open up the page as though it's a Web page, interpreting the HTML code as though it's a browser? Or should it reveal the underlying HTML code itself?

Actually, that's up to you. When you choose File→Open, turn on "Ignore rich text commands" to make the document open up as HTML code. (To make this change permanent, turn on the same checkbox on the Open and Save pane of the TextEdit→Preferences dialog box.)

The TextEdit Preferences

Most of the settings in the TextEdit Preferences→New Document pane have no effect on documents that are *already* open—only on documents you open or create from now on. Most of the settings are self-explanatory; nonetheless, handy explanatory balloons appear if you point to an option without clicking. Here are a few settings that may not be immediately clear:

- **Font.** If Helvetica 12 doesn't float your boat, you can change TextEdit's starting font. In fact, you can set *two* default fonts—one for Rich Text documents and another one for Plain Text files.

Note: By definition, plain text files don't have any formatting. So whatever font you choose here for plain text files is for your viewing pleasure only. If you plan to send the file to anyone else, remember that the font choice won't be saved with the document.

- **Window Size.** These settings have no effect unless you're in Wrap to Window mode, in which the text rewraps to fit the window width, as opposed to Wrap to Page mode. (You choose these options from TextEdit's Format menu.)

  If you *are* in Wrap to Window mode, then these dimensions determine the size of the window that appears each time you create a new TextEdit document.

- **Properties.** These boxes—Author, Company, and Copyright—are some of the tags that Spotlight inspects when it searches your Mac. If you'd like to be able to round up your documents by these characteristics, fill them in here to specify the information you want to use for *most* documents. (To fill them in differently for individual documents, choose File→Show Properties instead.)

- **Options.** These are the on/off switches for the various typing aids described in Chapter 6: smart quotes, data detectors, text replacement, and so on.

TextEdit's Other Writing Tools

TextEdit includes a few other very useful document-editing tools:

- **Allow Hyphenation.** When you select this command from the Format menu, TextEdit breaks up words by syllable and inserts hyphens when necessary in order to create more visually pleasing line breaks.

Tip: It's especially important to turn this feature on if your paragraph alignment is set to Justify, or if you create narrow columns of text. If hyphenation is turned off, TextEdit won't break up long words at the end of a line–even if it leaves big, ugly gaps between words.

GEM IN THE ROUGH

Files Within Files Within Files

It's no surprise that you can include formatted text and pictures in a TextEdit document, but here's a shocker: You can also embed an entire program or document within a TextEdit file.

Try this experiment: Create a new TextEdit document in Rich Text mode. Drag a couple of program icons into the TextEdit document. Do the same with some documents that were created using native Mac OS X programs (another TextEdit document, for example).

When you save the file, Mac OS X saves embedded copies of the applications and documents you dragged into the TextEdit document itself. (The TextEdit file is saved in RTFD, a Rich Text Format document with attachments.)

Once you've saved the file, you can double-click any of the icons in it to launch the embedded items. In a single TextEdit document, you could launch the Chess, DVD Player, and Mail programs–all right from within the file.

To make things even wilder, it's possible to drag a TextEdit file containing embedded items into another TextEdit file, saving a file within a file within a file.

One important point: The double-clickable icons you create in TextEdit using this method are not aliases or links to your original documents and programs. They're actual, full copies. If you embed a 100 MB program into a TextEdit document, you'll end up with a 100 MB TextEdit file!

- **Prevent Editing.** When you turn this option on (again, in the Format menu), you're locked out. You can select and copy text to your heart's content, but you can't change anything. Prevent Editing mode can be useful if you want to prevent yourself from making accidental changes to a file, but it's not much of a security feature. (All anyone has to do is choose Format→Allow Editing to regain full editing privileges.)
- **Spelling and Grammar.** These aren't TextEdit features; they're system-wide Mac OS X features, and they're described in Chapter 6.

Time Machine

This marquee feature of Mac OS X is described in Chapter 6.

Utilities: Your Mac OS X Toolbox

The Utilities folder (inside your Applications folder) is home to another batch of freebies: a couple of dozen tools for monitoring, tuning, tweaking, and troubleshooting your Mac.

The truth is, you're likely to use only about six of these utilities. The rest are very specialized gizmos primarily of interest to network administrators or Unix geeks who are obsessed with knowing what kind of computer-code gibberish is going on behind the scenes.

Tip: Even so, Apple obviously noticed that as the sophistication of Mac OS X fans grows, more people open the Utilities folder more often. That's why there's a menu command and a keystroke that can take you there. In the Finder, choose Go→Utilities (Shift-⌘-U).

Activity Monitor

Activity Monitor is designed to let the technologically savvy Mac fan see how much of the Mac's available power is being tapped at any given moment.

The Processes table

Even when you're only running a program or two on your Mac, dozens of computational tasks (*processes*) are going on in the background. The top half of the dialog box, which looks like a table, shows you all the different processes—visible and invisible—that your Mac is handling at the moment.

Check out how many items appear in the Process list, even when you're just staring at the desktop. It's awesome to see just how busy your Mac is! Some are easily recognizable programs (such as Finder), while others are background system-level operations you don't normally see. For each item, you can see the percentage of the CPU being used, who's using it (either your account name, someone else's, or *root*, meaning the Mac itself), whether or not it's been written as a 64-bit app, and how much memory it's using.

Or use the pop-up menu above the list to see views like these:

- **All Processes.** This is the complete list of running processes; you'll notice that the vast majority are little Unix applications you never even knew you had.
- **All Processes, Hierarchically.** In Unix, one process launches another, creating a tree-like hierarchy. The big daddy of them all is the process called *launchd*. Here and there, you'll see some other interesting relationships: For example, the Dock launches DashboardClient.
- **My Processes.** This list shows only the programs that pertain to *your* world, your login. There are still plenty of unfamiliar items, but they're all running to serve *your* account.
- **System Processes.** These are the processes run by *root*—that is, opened by Mac OS X itself.
- **Other User Processes.** Here's a list of all *other* processes—"owned" by neither root nor you. Here you might see the processes being run by another account holder, for example (using Fast User Switching), or people who have connected to this Mac from across a network or the Internet.
- **Active Processes, Inactive Processes.** Active processes are the ones that are actually doing something right now; inactive are the ones that are sitting there, waiting for a signal (like a keypress or a mouse click).
- **Windowed Processes.** Now *this* is probably what you were expecting: a list of actual programs with actual English names, like Activity Monitor, Finder, Safari, and Mail. These are the only ones running in actual windows, the only ones that are *visible*.

The System monitor tabs

At the bottom of Activity Monitor, you're offered five tabs that reveal intimate details about your Mac and its behind-the-scenes efforts (Figure 10-27):

- **CPU.** As you go about your usual Mac business, opening a few programs, playing QuickTime movies, playing a game, and so on, you can see the CPU graphs rise and fall, depending on how busy you're keeping the CPU. You see a different bar for each of your Mac's cores (independent sub-chips on your processor), so you can see how efficiently Mac OS X is distributing the work among them.

Tip: You may also want to watch this graph right in your Dock (choose View→Dock Icon→Show CPU Usage) or in a bar at the edge of your screen (choose Window→Floating CPU Window→Horizontally).

Finally, there's the View→Show CPU History command. It makes a resizable, real-time monitor window float on top of all your other programs, so you can't miss it.

- **System Memory.** Here's a colorful graph that reveals the state of your Mac's RAM at the moment.

  The number below the graph shows how much memory is installed in your Mac. If, when your Mac is running a typical complement of programs, the Wired number

plus the Active number nearly equals your total RAM amount, it's time to consider buying more memory. You're suffocating your Mac.

Figure 10-27: *The many faces of Activity Monitor.*

Top: It can be a graph of your processor (CPU) activity, your RAM usage at the moment, your disk capacity, and so on. For most people, only the processes listed here with tiny icons beside their names are actual windowed programs–those with icons in the Finder, the ones you actually interact with.

Don't miss the top-left Quit Process button. It's a convenient way to jettison a locked-up program when all else fails.

Bottom: If you double-click a process's name, you get a two- or three-tab dialog box that offers stunningly complete reams of data (mostly of interest only to programmers) about what that program is up to. (The Open Files and Ports tab, for example, shows you how many files that program has opened, often invisibly.)

- **Disk Activity.** Even when you're not opening or saving a file, your Mac's hard drive is frequently hard at work, shuffling chunks of program code into and out of memory, for example. Here's where the savvy technician can see exactly how frantic the disk is at the moment.
- **Disk Usage.** This little graph offers one of the quickest ways to check out how full your hard drive is. (If you have more than one drive—say, a flash drive, tape-backup drive, or whatever—choose another drive's name from the pop-up menu.)
- **Network.** Keep an eye on how much data is shooting across your office network with this handy EKG-ish graph.

AirPort Utility

You use the AirPort Utility to set up and manage AirPort base stations (Apple's wireless WiFi networking routers).

If you click Continue, it presents a series of screens, posing one question at a time: what you want to name the network, what password you want for it, and so on. Once you've followed the steps and answered the questions, your AirPort hardware will be properly configured and ready to use.

AppleScript Editor

This little program, formerly called Script Editor, is where you can type up your own *AppleScripts,* as described at the end of Chapter 7.

Audio MIDI Setup

This program has a split personality; its name is now a literal description of its two halves:

- **Audio.** When you first open Audio MIDI Setup, you see a complete summary of the audio inputs and outputs available on your Mac right now. It's a lot like the Sound pane of System Preferences, but with a lot more geeky detail. Here, for example, you can specify the recording level for your Mac's microphone, or even change the audio quality it records.

  For most people, this is all meaningless, because most Macs have only one input (the microphone) and one output (the speakers). But if you're sitting in your darkened music studio, which is humming with high-tech audio gear whose software has been designed to work with this little program, you'll smile when you see this tab.

  There's even a Configure Speakers button, for those audiophilic Mac fans who've attached stereo or even surround-sound speaker systems to their Macs.

Tip: Using the ⚙ menu at the bottom of the window, you can turn your various audio inputs (that is, microphones, line inputs, and so on) on or off. You can even direct your Mac's system beeps to pour forth from one set of speakers (like the one built into your Mac), and all other sound, like music, through a different set.

- **MIDI.** MIDI stands for Musical Instrument Digital Interface, a standard "language" for inter-synthesizer communication. It's available to music software companies who have written their wares to capitalize on these tools.

  When you choose Window→Show MIDI Window, you get a window that represents your recording-studio configuration. By clicking Add Device, you create a new icon that represents one of your pieces of gear. Double-click the icon to specify its make and model. Finally, by dragging lines from the "in" and "out" arrows, you teach your Mac and its MIDI software how the various components are wired together.

Bluetooth File Exchange

One of the luxuries of using a Mac that has Bluetooth is the ability to shoot files (to colleagues who own similarly clever gadgets) through the air, up to 30 feet away. Bluetooth File Exchange makes it possible, as described on page 257.

Boot Camp Assistant

This program helps you create (or destroy) a partition of your hard drive to hold a copy of Microsoft Windows. Details in Chapter 8.

ColorSync Utility

If you use ColorSync, then you probably know already that this utility is for people in the high-end color printing business. Its tabs include these two:

- **Profile First Aid.** This tab performs a fairly esoteric task: repairing ColorSync profiles that may be "broken" because they don't strictly conform to the *ICC profile* specifications. (ICC [International Color Consortium] profiles are part of Apple's ColorSync color management system, as described on page 585.) If a profile for your specific monitor or printer doesn't appear in the Profiles tab of this program when it should, Profile First Aid is the tool you need to fix it.
- **Profiles.** This tab lets you review all the ColorSync profiles installed on your system. The area on the right side of the window displays information about each ColorSync profile you select from the list on the left.

The **other tabs** are described on page 585.

Console

Console is a viewer for all of Mac OS X's logs—the behind-the-scenes, internal Unix record of your Mac's activities.

Opening the Console log is a bit like stepping into an operating room during a complex surgery: You're exposed to stuff the average person just isn't supposed to see. (Typical Console entries: "kCGErrorCannotComplete" or "doGetDisplayTransferByTable.") You can adjust the font and word wrapping using Console's Font menu, but the truth is that the phrase "CGXGetWindowType: Invalid window -1" looks ugly in just about *any* font!

Console isn't useless, however. These messages can be of significant value to programmers who are debugging software or troubleshooting a messy problem, or, occasionally, to someone you've called for tech support.

For example, your *crash logs* are detailed technical descriptions of what went wrong when various programs crashed, and what was stored in memory at the time.

Unfortunately, there's not much plain English here to help you understand the crash, or how to avoid it in the future. Most of it runs along the lines of "Exception: EXC_BAD_ACCESS (0x0001); Codes: KERN_INVALID_ADDRESS (0x0001) at

0x2f6b657d." In other words, it's primarily for the benefit of programmers. Still, tech-support staff may occasionally ask to see the information in one of these logs.

DigitalColor Meter

DigitalColor Meter can grab the exact color value of any pixel on your screen, which can be helpful when matching colors in Web page construction or other design work. After launching the DigitalColor Meter, just point anywhere on your screen. A magnified view appears in the meter window, and the RGB (red-green-blue) color value of the pixels appears in the meter window.

Lion Watch: This program can no longer display the color values in hexadecimal format (for use in coding Web pages) or copy values to the Clipboard.

Here are some tips for using the DigitalColor Meter to capture color information from your screen:

- To home in on the exact pixel (and color) you want to measure, drag the Aperture Size slider to the smallest size—one pixel.
- Press ⌘-X (View→Lock X) to freeze your cursor at its current horizontal position; you can now move it only horizontally. Or press ⌘-Y (View→Lock Y) to freeze your cursor at its current vertical position. You can also lock the cursor in both directions. (Press the keystroke again to unlock.) The idea is to make it easier for you to snap exactly the pixel you want.
- When the Aperture Size slider is set to view more than one pixel, DigitalColor Meter measures the *average* value of the pixels being examined.

Disk Utility

This important program serves two key functions:

- It serves as Mac OS X's own little Norton Utilities: a powerful hard drive administration tool that lets you repair, erase, format, and partition disks. In everyday life, you'll probably use Disk Utility most often for its *Repair Permissions* feature, which solves an uncanny number of weird little Mac OS X glitches. But it's also worth keeping in mind in case you ever find yourself facing a serious disk problem.
- Disk Utility also creates and manages *disk images,* electronic versions of disks or folders that you can exchange electronically with other people.

The following discussion tackles the program's two personalities one at a time.

Disk Utility, the hard drive repair program

Here are some of the tasks you can perform with this half of Disk Utility:

- Repair folders, files, and programs that don't work because you supposedly don't have sufficient "access privileges." This is by far the most common use of Disk Utility, not to mention the most reliable and satisfying. Using the Repair Disk Permissions button fixes an *astonishing* range of bizarre Mac OS X problems, from programs that won't open to menulets that freeze up the works.
- Get size and type information about any disks attached to your Mac.
- Fix disks that won't appear on your desktop or behave properly.
- Completely erase disks—including rewritable CDs and DVDs (such as CD-RW and DVD-RW discs).
- Partition a disk into multiple *volumes* (that is, subdivide a drive so that its segments appear on the desktop with separate disk icons).

Tip: Disk Utility can even create or enlarge disk partitions without requiring you to erase the entire hard drive. Details below.

- Set up a *RAID array* (a cluster of separate disks that acts as a single volume).

Note: Disk Utility can perform *some* of its magic on the startup disk–the disk that's running Mac OS X at the moment. For example, it can check the disk for damage, fix the permissions of the disk, or even adjust its partitions.

But any other operation, like reformatting, erasing, or actually repairing the disk, still requires the Mac to start up from a different disk (an external hard drive, for example, or Lion's secret recovery partition). Otherwise, it'd be like a surgeon performing an appendectomy on himself–not a great idea.

The left Disk Utility panel lists your hard drive and any other disks in or attached to your Mac at the moment. When you click the name of your hard drive's mechanism, like "500 GB Hitachi iC25N0…" (not the "Macintosh HD" volume label below it), you see a panel with five tabs, one for each of the main Disk Utility functions:

- **First Aid.** This is the disk-repair part of Disk Utility, and it does a terrific job at fixing many disk problems. When you're troubleshooting, Disk Utility should always be your first resort.

  To use it, click the icon of a disk and then click either Verify Disk (to get a report on the disk's health) or Repair Disk (which fixes whatever problems the program finds). In other words, First Aid attempts to perform the same healing effects on a sick hard drive as, say, a program like Norton Utilities.

  If Disk First Aid reports that it's unable to fix the problem, *then* it's time to invest in a program like DiskWarrior (*www.alsoft.com*).

  You may wind up using the Verify and Repair Disk *Permissions* buttons even more often. Their function is to straighten out problems with the invisible Unix file permissions that keep you from moving, changing, or deleting files or folders.

(The occasional software installer can create problems like this.) You'd be surprised how often running one of these permission checks solves little Mac OS X glitches.

Chapter 12 has a much more detailed discussion of permissions.

- **Erase.** Select a disk, choose a format—*always* Mac OS Extended (Journaled), unless you're formatting a disk for use on a Windows PC—give it a name, and then click Erase to wipe a disk clean.

Tip: The Erase tab is the key to using FileVault on flash drives and other external drives, as described in Chapter 12. In other words, you can encrypt external disks so that nobody can access them without a password. The trick is to erase the drive using "Mac OS Extended (Journaled, Encrypted)" format.

- **Partition.** With the Partition tools, you can erase a hard drive in such a way that you subdivide its surface. Each chunk is represented on your screen by another hard drive icon (Figure 10-28).

Figure 10-28: *Partitioning your drive with Disk Utility no longer involves erasing it completely. Select the drive you want to partition from the list on the left, and then click the Partition tab. Click the + button for each new partition you want.*

Now drag the horizontal dividers in the Volumes map to specify the relative sizes of the partitions you want to create. Assign a name and a format for each partition in the Volume Information area, and then click Apply.

There are some very good reasons *not* to partition a drive these days: A partitioned hard drive is more difficult to resurrect after a serious crash, requires more navigation when you want to open a particular file, and offers no speed or safety benefits.

On the other hand, there's one very good reason *to* do it: Partitioning is the only way to use Boot Camp, described in Chapter 8. When you're using Boot Camp, your Mac is a Mac when running off of one partition, and a Windows PC when starting up from another one. (But you don't use Disk Utility in that case; use Boot Camp Assistant.)

- **RAID.** RAID stands for Redundant Array of Independent Disks and refers to a special formatting scheme in which a group of separate disks are configured to work together as one very large, very fast drive. In a RAID array, multiple disks share the job of storing data—a setup that can improve speed and reliability.

  Most Mac owners don't use or set up RAID arrays, probably because most Mac owners have only one hard drive (and Disk Utility can't make your startup disk part of a RAID array).

  But if you're using multiple hard disks—in a Mac Pro, for example—you can use Apple RAID to merge them into one giant disk. Just drag the icons of the relevant disks (or disk partitions) from the left-side list of disks into the main list (where it says, "Drag disks or volumes here to add to set"). Use the RAID Type pop-up menu to specify the RAID format you want to use. (Stripe is a popular choice for maximizing disk speed; Mirror RAID is extra safe, because it creates a perfect backup clone of your main drive.) Name your new mega-disk, and then click Create. The result is a single "disk" icon on your desktop that actually represents the combined capacity of all the RAID disks.

POWER USERS' CLINIC

Partition Adjustments on the Fly

You can expand, shrink, or create partitions without having to erase the whole hard drive. If you're into partitioning at all, this is a *huge* convenience.

Expanding a partition. Suppose, for example, that your main hard drive has two partitions: a main one (200 gigs) and a secondary one (50 gigs) that used to hold all your photos and movies. But you've outgrown the second partition and have moved all those photos and movies to their own external hard drive. Wouldn't it be nice to add the newly unoccupied 50 gigs to your main partition?

You can do that without having to erase the whole hard drive. (This process, however, nukes everything on the *second* partition, so make sure you're prepared to lose it all.)

Open Disk Utility. Click the name of the hard drive (for example, "Hitachi HTS541616J9SA00"–*not* "Macintosh HD"). Click Partition. You see a display like the one in Figure 10-28.

Click the second partition (or third, or whatever partition is *just after* the one you want to expand) and then click the **–** button below the list. Poof! It's gone.

Now you can drag the main partition's bottom edge downward (or type a new size into the Size box), expanding it into the free area. Take a deep breath, and then click Apply.

Shrinking a partition. In Figure 10-28, you can see that a portion of the first partition is lightly shaded. (It's blue in real life.) The blue represents data; you can't shrink a partition so much that it crowds out your files. You can, however, shrink the partition to eliminate empty space. Just drag the lower edge of its map chunk upward.

Creating new partitions. Anytime there's leftover space on the drive, you can create *new* partitions from it. To do that, click the **+** button, and proceed as described in Figure 10-28.

- **Restore.** This tab lets you make a perfect copy of a disk or a disk image, much like the popular shareware programs Carbon Copy Cloner and SuperDuper. You might find this useful when, for example, you want to make an exact copy of your old Mac's drive on your new one. You can't do that just by copying your old files and folders manually. If you try, you won't get the thousands of *invisible* files that make up Mac OS X. If you use the Restore function, though, they'll come along for the ride.

  Start by dragging the disk or disk image you want to copy *from* into the Source box. Then drag the icon of the disk you want to copy *to* into the Destination box.

Tip: If you want to copy an online disk image onto one of your disks, you don't have to download it first. Just type its Web address into the Source field.

If you turn on Erase Destination, then Disk Utility obliterates all the data on your target disk before copying the data. If you leave this checkbox off, however, Disk Utility simply copies everything onto your destination, preserving all your old data in the process (although it replaces files that have the same names and locations as the ones you're copying).

Finally, click the Restore button. (You might need to type in an administrator password.) Restoring can take a long time for big disks, so go ahead and make yourself a cup of coffee while you're waiting.

Disk Utility, the disk-image program

Disk images are very cool. Each one is a single icon that behaves precisely like an actual disk—a flash drive or hard drive, for example—but can be distributed electronically. For example, a lot of Mac OS X add-on software arrives from your Web download in disk-image form, as shown below.

Disk images are popular for software distribution for a simple reason: Each image file precisely duplicates the original master disk, complete with all the necessary files in all the right places. When a software company sends you a disk image, it ensures that you'll install the software from a disk that *exactly* matches the master disk.

As a handy bonus, you can password-protect a disk image, which is the closest Mac OS X comes to offering the ability to password-protect an individual folder.

It's important to understand the difference between a *disk-image file* and the *mounted disk* (the one that appears when you double-click the disk image). If you flip back to page 161 and consult Figure 5-2, this distinction should be clear.

Tip: After you double-click a disk image, click Skip in the verification box that appears. If something truly got scrambled during the download, you'll know about it right away—your file won't decompress correctly, or it'll display the wrong icon, for example.

In fact, you can make Disk Utility always skip that verification business, which is a relic from the days of floppy disks. To do so, choose Disk Utility→Preferences, and turn off "Check images on locked media."

You can create disk images, too. Doing so can be very handy in situations like these:

- You want to create a backup of an important CD. By turning it into a disk-image file on your hard drive, you'll always have a safety copy, ready to burn back onto a *new* CD. (This is an essential practice for educational CDs that kids will be handling soon after eating peanut butter and jelly.)
- You want to replicate your entire hard drive—complete with all its files, programs, folder setups, and so on—onto a new, bigger hard drive (or a new, better Mac), using the Restore feature described earlier.
- You want to back up your entire hard drive, or maybe just a certain chunk of it, onto an iPod or another disk. (Again, you can later use the Restore function.)
- You want to send somebody else a copy of a disk via the Internet. You simply create a disk image, and then send *that*—preferably in compressed form.

Here's how to make a disk image.

- **To image-ize a disk or partition.** Click the name of the disk in the list, where you see the disks currently in, or attached to, your Mac. (The topmost item is the name of your *drive,* like "484.0 MB MATSHITA DVD-R" for a DVD drive or "74.5 GB Hitachi" for a hard drive. Beneath that entry, you generally see the name of the actual partition, like "Macintosh HD," or the CD's name as it appears on the screen.)

  Then choose File→New→Disk Image from [whatever the disk or partition's name is].

- **To image-ize a folder.** Choose File→New→Disk Image from Folder. In the Open dialog box, click the folder you want, and then click Image.

Tip: Disk Utility can't turn an individual file into a disk image. But you can put a single file into a folder, and then make a disk image of it.

Either way, the next dialog box (Figure 10-29) offers some fascinating options.

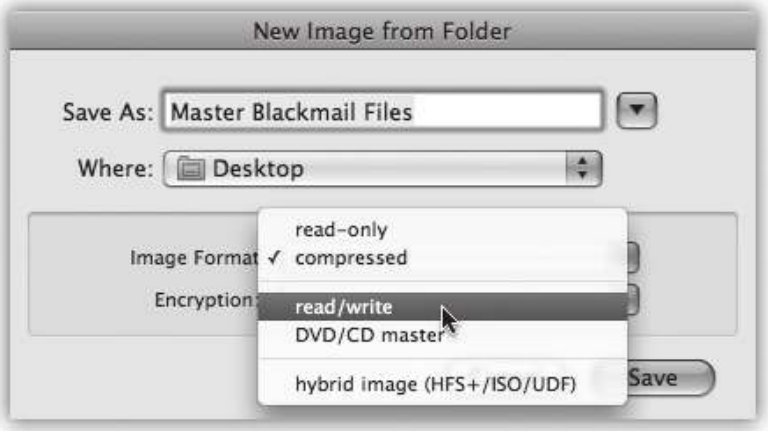


Figure 10-29:
These two pop-up menus let you specify (a) what kind of disk image you want, and (b) whether or not you want it password-protected. The latter option is great when you want to password-protect one folder, without bothering with your entire Home folder.

- **Image Format.** If you choose "read/write," your disk image file, when double-clicked, turns into a superb imitation of a hard drive. You can drag files and folders onto it, drag them off of it, change icons' names on it, and so on.

  If you choose "read-only," however, the result behaves more like a CD. You can copy things off of it but not make any changes to it.

  The "compressed" option is best if you intend to send the resulting file by email, post it for Web download, or preserve the disk image on some backup disk for a rainy day. It takes a little longer to create a simulated disk when you double-click the disk image file, but it takes up a lot less disk space than an uncompressed version.

  Finally, choose "DVD/CD master" if you're copying a CD or a DVD. The resulting file is a perfect mirror of the original disc, ready for copying onto a blank CD or DVD when the time comes.

- **Encryption.** Here's an easy way to lock private files away into a vault that nobody else can open. If you choose one of these two AES encryption options (choose

GEM IN THE ROUGH

The Sparse Image

One of the coolest Disk Utility features is also one of the most buried.

Turns out you can make a nice, hermetically sealed, password-protected disk image that starts out small but magically increases as you stuff more files into it. If the usual disk image is like a steel bucket–a fixed size forever–a sparse image is like an accordion file folder.

Choose File→New→Blank Disk Image. In the resulting dialog box, name the file you're creating (which you'll double-click to make the virtual disk appear), as well as the virtual disk itself.

From the Volume Size pop-up menu, choose the maximum size this disk image will ever be. The beautiful part is that it will probably never occupy that much disk space; it starts out small and slowly expands only as necessary. But you're setting the maximum here.

From the Encryption pop-up menu, choose one of the two scrambling methods that will password-protect your disk image. Finally, from the Image Format pop-up menu–this is the key step–choose "sparse disk image."

Click Create. Make up a password (type it twice); store in your Keychain, if you like (meaning you won't need to enter the password whenever you are logged into your Mac). Then click Create.

Now, on your desktop, there's a disk image file with the suffix ".sparseimage." It occupies only 26 MB on your hard drive to start with.

Double-click it and enter your password to bring the actual virtual disk icon to your desktop. You can now start filling the disk image up with private stuff. The .sparseimage file will grow automatically to accommodate it–but only as necessary.

AES-128, if you value your time), you'll be asked to assign a password to your new image file. Nobody can open it without the password—not even you. On the other hand, if you save it into your Keychain (page 518), it's not such a disaster if you forget the password.

- **Save As.** Choose a name and location for your new image file. The name you choose here doesn't need to match the original disk or folder name.

When you click Save (or press Return), if you opted to create an encrypted image, you're asked to make up a password at this point.

Otherwise, Disk Utility now creates the image and then *mounts* it—that is, turns the image file into a simulated, yet fully functional, disk icon on your desktop.

When you're finished working with the disk, eject it as you would any disk (Control-click it and choose Eject, for example). Hang onto the .dmg disk image file itself, however. This is the file you'll need to double-click if you ever want to recreate your "simulated disk."

Turning an image into a CD

One of the other most common disk-image tasks is turning a disk image *back* into a CD or DVD—provided that your Mac has a CD or DVD burner, of course.

All you have to do is drag the .dmg file into the Disk Utility window, select it, and click the Burn icon on the toolbar (or, alternatively, Control-click the .dmg icon and choose Burn from the shortcut menu). Insert a blank CD or DVD, and then click Burn.

Grab

Grab takes pictures of your Mac's screen, for use when you're writing up instructions, illustrating a computer book, or collecting proof of some secret screen you found buried in a game. You can take pictures of the entire screen (press ⌘-Z, which for once in its life does *not* mean Undo) or capture only the contents of a rectangular selection (press Shift-⌘-A). When you're finished, Grab displays your snapshot in a new window, which you can print, close without saving, or save as a TIFF file, ready for emailing or inserting into a manuscript.

Now, as experienced Mac enthusiasts already know, the Mac OS has long had its *own* built-in shortcuts for capturing screenshots: Press Shift-⌘-3 to take a picture of the whole screen, and Shift-⌘-4 to capture a rectangular selection. (See page 589 for all the details.)

Tip: Don't forget that you can choose different, easier-to-remember keyboard shortcuts for these functions, if you like. Just open System Preferences→Keyboard→Keyboard Shortcuts, click Screen Shots, click where it now says Shift-⌘-3 (or whatever), and then press the new key combo.

So why use Grab instead? In many cases, you shouldn't. The Shift-⌘-3 and Shift-⌘-4 shortcuts work like a dream. But there are some cases when it might make more sense to opt for Grab. Here are three:

- Grab can make a *timed* screen capture (choose Capture→Timed Screen, or press Shift-⌘-Z), which lets you enjoy a 10-second delay before the screenshot is actually taken. After you click the Start Timer button, you have an opportunity to activate windows, pull down menus, drag items around, and otherwise set up the shot before Grab shoots the picture.
- With Grab, you have the option of including the cursor in the picture, which is extremely useful when you're showing a menu being pulled down or a button being clicked. (Mac OS X's screenshot keystrokes, by contrast, always eliminate the pointer.) Use the technique described in Figure 10-30 to add the pointer style of your choice to a Grab screenshot.

Tip: Actually, if you're going to write a book or manual about Mac OS X, the program you really need is Snapz Pro X; a trial version is available from this book's "Missing CD" at *www.missingmanuals.com*, among other places. It offers far more flexibility than any of Mac OS X's own screenshot features. For example, you have a choice of file format, you can neatly snip out just one dialog box or window with a single click, and you can even capture movies of screen activity.

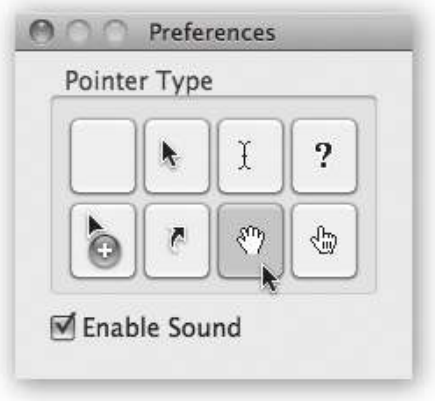


Figure 10-30:
Unlike the Shift-⌘-3 or Shift-⌘-4 keystrokes, Grab lets you include the pointer/cursor in the picture–or hide it. Choose Grab→Preferences and pick one of the eight pointer styles, or choose to keep the pointer hidden by activating the blank button in the upper-left corner.

Grapher

This little unsung app is an amazing piece of work. It lets you create 2-D or 3-D graphs of staggering beauty and complexity.

When you first open Grapher, you're asked to choose what kind of virtual "graph paper" you want: two-dimensional (standard, polar, logarithmic) or three-dimensional (cubic, spherical, cylindrical). Click a name to see a preview; when you're happy with the selection, click Open.

Now the main Grapher window appears (Figure 10-31). Do yourself a favor. Spend a few wow-inducing minutes choosing canned equations from the Examples menu,

and watching how Grapher whips up gorgeous, colorful, sometimes animated graphs on the fly.

When you're ready to plug in an equation of your own, type it into the text box at the top of the window. If you're not such a math hotshot, or you're not sure of the equation format, work from the canned equations and mathematical building blocks that appear when you choose Equation→New Equation from Template or Window→Show Equation Palette (a floating window containing a huge selection of math symbols and constants).

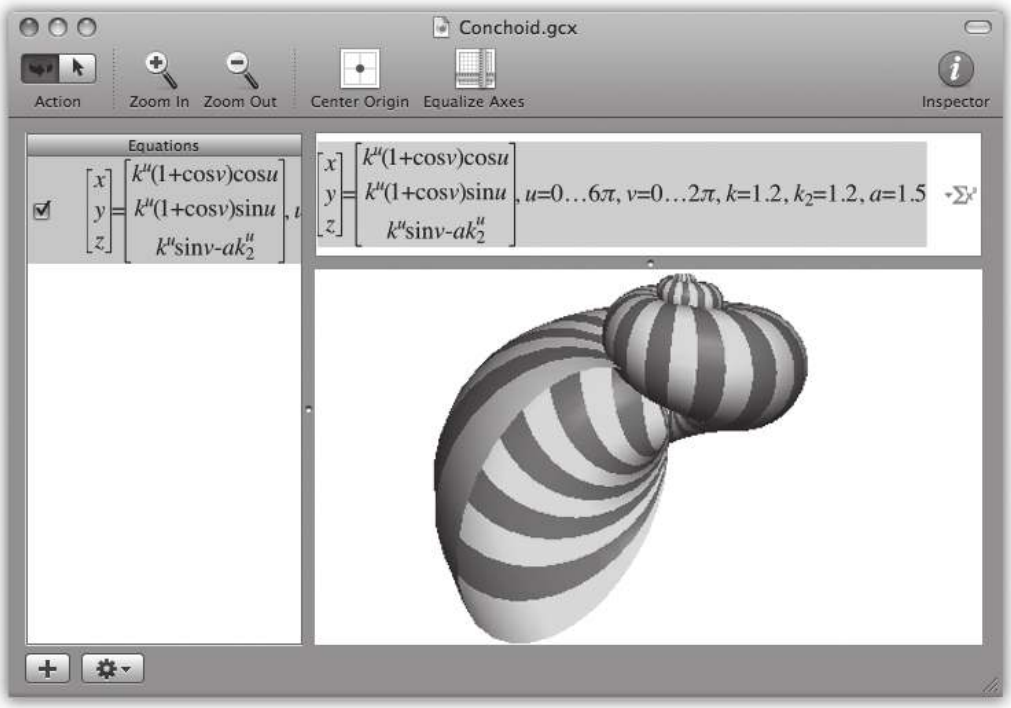


Figure 10-31: *In general, you type equations into Grapher just as you would on paper (like z=2xy). If in doubt, check the online help, which offers enough hints on functions, constants, differential equations, series, and periodic equations to keep the A Beautiful Mind guy busy for days.*

POWER USERS' CLINIC

For Mathematicians (and Physicists, Scientists, and Students) Only

If you're into math, science, or studying math or science, Grapher is a tremendous addition to Mac OS X. There's a whole lot to it—but if you're just getting started, here are a few features not to miss.

You can calculate values, intercepts, derivatives, and integrals (even indefinite integrals) by using the Equation→Evaluation and Equation→Integration commands.

Some useful ready-made equation components await in the pop-up button at the right side of the equation text box. Using the Sum and Product symbols, for example, you can quickly calculate summations and products.

That same pop-up menu can help you generate piecewise, parametric, and other specialized kinds of graphs (this means you, math students).

Tip: If you don't know the keystroke that produces a mathematical symbol like π or θ, you can just type *pi* or *theta.* Grapher replaces it with the correct symbol automatically.

Once the graph is up on the screen, you can tailor it like this:

- **To move a 2-D graph** in the window, choose View→Move Tool and then drag; to move a 3-D graph, ⌘-drag it.
- **To rotate a 3-D graph,** drag in any direction. If you add the Option key, you flip the graph around on one axis.
- **To change the colors, line thicknesses, 3-D "walls," and other graphic elements,** click the ⓘ button (or choose Window→Show Inspector) to open the formatting palette. The controls you find here vary by graph type, but rest assured that Grapher can accommodate your every visual whim.
- **To change the fonts and sizes,** choose Grapher→Preferences. On the Equations panel, the four sliders let you specify the relative sizes of the text elements. If you click the sample equation, the Font panel appears (page 583), so you can fiddle with the type.
- Add your own captions, arrows, ovals, or rectangles using the Object menu.

When it's all over, you can preserve your masterpiece using any of these techniques:

- **Export a graphic** by choosing File→Export.
- **Copy an equation to the Clipboard** by Control-clicking it and choosing Copy As→TIFF (or EPS, or whatever) from the shortcut menu. Now you can paste it into another program.
- **Export an animated graph** by choosing Equation→Create Animation. The resulting dialog box lets you specify how long you want the movie to last (and a lot of other parameters).

Tip: If you Shift-drag the starting or ending images at the bottom, you can change their size.

Finally, click Create Animation. After a moment, the finished movie appears. If you like it the way it is, choose File→Save As to preserve it on your hard drive for future generations.

Java Preferences

Programmers generally use the Java programming language to write apps that can run on any kind of computer (Mac, Windows, Linux). A lot of corporate applications use Java.

To run a Java program, you need a Java runtime (sort of a playback engine)—and Lion doesn't come with one. So the first time you open Java Preferences, or any Java program, the Mac offers to download and install one.

In any case, Java Preferences contains a bunch of advanced settings that geeks can use to modify how Java runs on their Macs.

Keychain Access

Keychain Access memorizes and stores all your secret information—passwords for network access, file servers, FTP sites, Web pages, and other secure items. For instructions on using Keychain Access, see Chapter 12.

Migration Assistant

This little cutie automates the transfer of all your stuff from another Mac, or, in Lion, even a Windows PC, to your current Mac: your Home folder, network settings, programs, and more. This comes in extremely handy when you buy a newer, better Mac—or when you need Time Machine to recover an entire dead Mac's worth of data. (It can also copy everything over from a secondary hard drive or partition.) The instructions on the screen guide you through the process (see Appendix A).

Network Utility

Network Utility (Figure 10-32) gathers information about Web sites and network citizens. It offers a suite of standard Internet tools like Netstat, Ping, Traceroute, DNS Lookup, and Whois—advanced tools, to be sure, but ones that even Mac novices may be asked to fire up when calling a technician for Internet help.

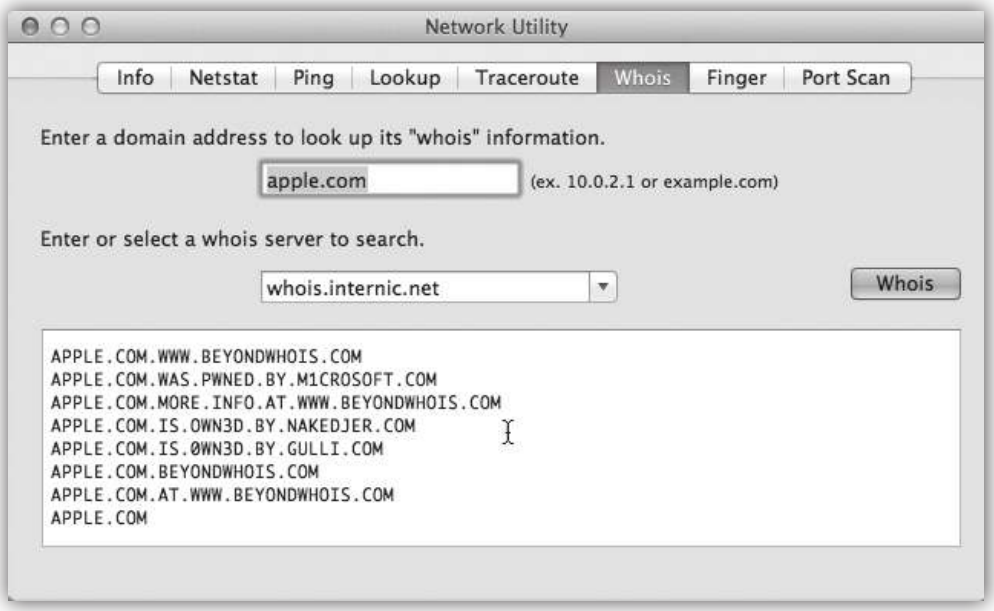


Figure 10-32: *The Whois tool is a powerful part of Network Utility. First enter a domain that you want information about, and then choose a Whois server (you might try whois.networksolutions.com). When you click the Whois button, you get a surprisingly revealing report about the owner of the domain, including phone numbers and contact names.*

Otherwise, you probably won't need to use Network Utility to get your work done. However, Network Utility can be useful when you're performing Internet detective work.

- **Whois** ("who is") can gather an amazing amount of information about the owners of any particular domain (such as apple.com)—including name and address info, telephone numbers, and administrative contacts. It uses the technique shown in Figure 10-32.
- Use **Ping** to enter an address (either a Web address like *www.google.com* or an IP address like 192.168.1.110), and then "ping" (send out a "sonar" signal to) the server to see how long it takes for it to respond to your request. Network Utility reports the response time in milliseconds—a useful test when you're trying to see if a remote server (a Web site, for example) is up and running. (The time it takes for the ping to report back to you also tells you how good your connection to it is.)
- **Traceroute** lets you track how many "hops" are required for your Mac to communicate with a certain server (an IP address or Web address). Just type in the network address or URL, and then click Trace. You'll see that your request actually jumps from one *trunk* of the Internet to another, from router to router, as it makes its way to its destination. You'll learn that a message sometimes crisscrosses the entire country before it arrives at its destination. You can also see how long each leg of the journey took, in milliseconds.

Podcast Capture

This program is a front end for Podcast Producer, a professional-league podcast recording and publishing program that's part of Apple's Mac OS X Server software suite. Unless you work in an office where a Mac OS X Server hums away in a back room, you can ignore this program.

RAID Utility

Another program you probably don't need. It's useful only if your Mac has an Apple RAID (multiple-disk system) card installed.

System Information

System Information (formerly called System Profiler) is a great tool for learning exactly what's installed on your Mac and what's not—in terms of both hardware and software. The people who answer the phones on Apple's tech-support line are particularly fond of System Profiler, since the detailed information it reports can be very useful for troubleshooting nasty problems.

There are three ways to open System Information. In Lion, two of them involve a preliminary visit to the new dialog box shown in Figure 10-33, which is a faster, better-designed, more consolidated view of the system information you might care most about.

Anyway, here are the three ways:

- **Slow.** Choose ←About This Mac. You get a bare-bones info screen that reveals your Mac OS X version, your Mac's memory amount, and what processor it has inside.

Tip: If you click your Mac OS X version number twice in the About box, you get to see your Mac's serial number!

If you then click More Info, you get Lion's new About This Mac details screen, shown in Figure 10-33. If that information isn't all you need, then click System Report to open the actual System Information program.

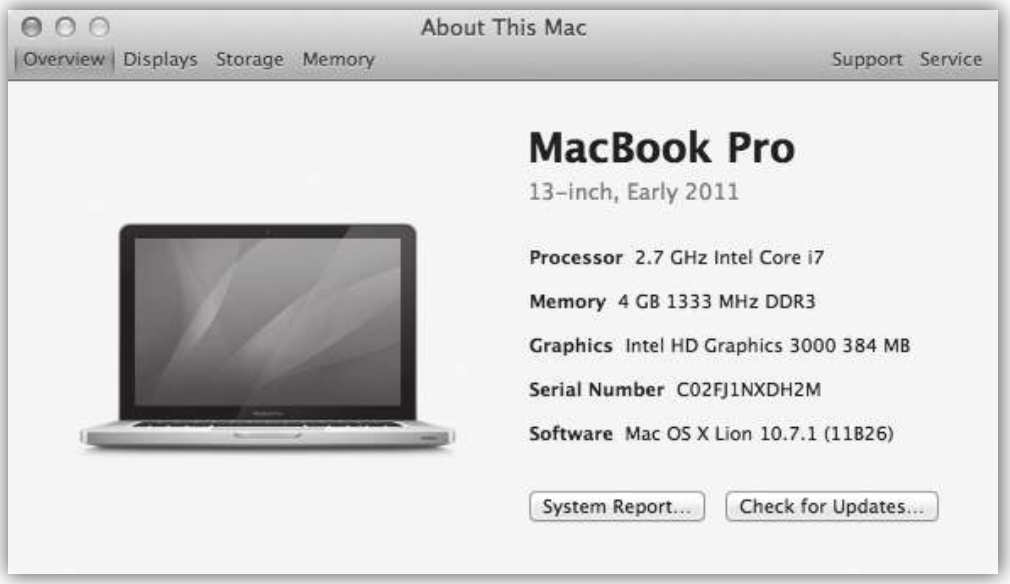


Figure 10-33: *This dialog box, new in Lion, gives you a plain-English display of the Mac details you probably care the most about: memory, screen, storage, serial number, Mac OS X version, and so on. (Click the tabs across the top for more details.) To proceed from here to the full System Information program, click System Report.*

- **Medium.** Burrow into your Applications→Utilities folder; double-click System Information.
- **Fast.** Hold down the Option key, which makes the ←About This Mac command *change* to say System Information. Choose it, then proceed as shown in Figure 10-33.

When System Information opens, it reports information about your Mac in a list down the left side (Figure 10-34). The details fall into these categories:

- **Hardware.** Click this word to see precisely which model Mac you have, what kind of chip is inside (and how many), how much memory it has, and its serial number.

  If you expand the flippy triangle, you get to see details about which **Memory** slots are filled and the size of the memory module in each slot; what kind of **Disc Burning** your Mac can do (DVD-R, DVD+R, and so on); what **PCI Cards** are installed in your expansion slots; what **Graphics/Displays** circuitry you have (graphics

card and monitor); what's attached to your SATA bus (internal drives, like your hard drive); what's connected to your **Thunderbolt, USB,** and **FireWire** chains, if anything; and much more.

- **Network.** This section reveals details what **WiFi** components you have, what Internet connection **Locations** you've established (page 687), and so on.
- **Software.** Click this heading to see exactly which version of Mac OS X you have and what your computer's name is, as far as the network is concerned ("Chris's Computer," for example).

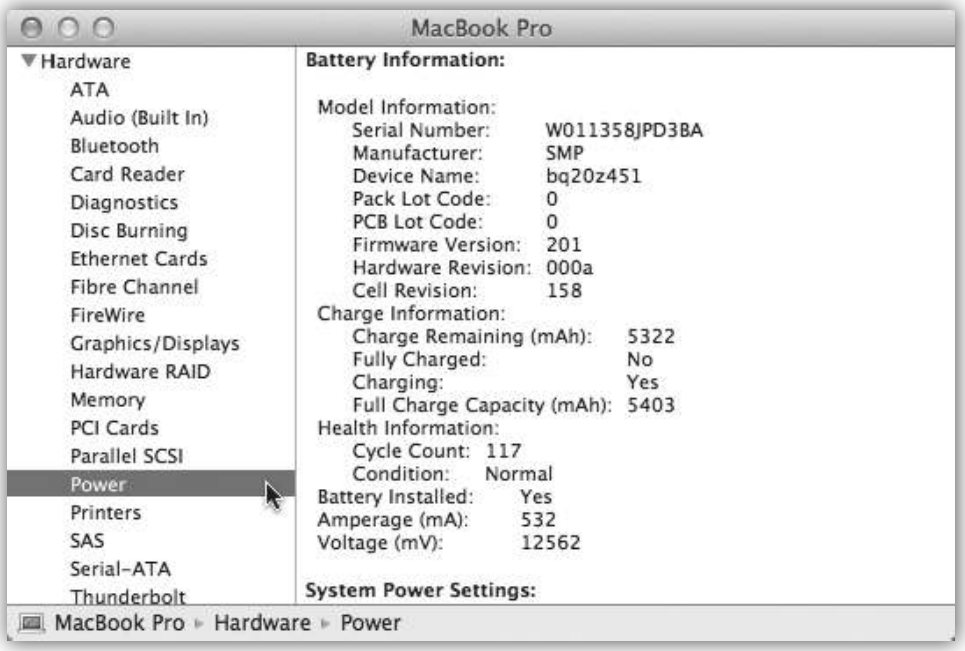


Figure 10-34: *Does your MacBook's chip run at 2 GHz or 2.6? What percentage of your external hard drive is filled up? What are the version numbers of every program installed on your Mac? Can your DVD burner burn dual-layer discs? And (shown here): Does your laptop have any open slots for extra RAM?*

The **Applications** list documents every program on your system, with version information—a quick inventory of what you've installed on your Mac. It's useful for spotting duplicate copies of programs.

Tip: The right-hand column of the Applications list identifies each program as being PowerPC, Intel, or Universal. An Intel app runs only on Macs with Intel processors (that is, all of them since about 2006). A PowerPC program runs at full speed on pre-Intel Macs, but not at all in Lion. A Universal program can run natively–at full speed–on either Intel-based Macs or earlier models. This list is a handy summary of which programs have been updated for the Intel generation.

Similar information shows up in the **Extensions** panel. Here, "extensions" refers to the drivers for the Mac's various components, which sit in the System→Library→Extensions folder. Whatever is in that folder is what you see listed in this panel.

Other categories include self-explanatory lists like **Fonts, Preference Panes,** and **Startup Items.**

Finally, the **Logs** panel reveals your Mac's secret diary: a record of the traumatic events that it experiences from day to day. (Many of these are the same as those revealed by the Console utility; see page 431.)

Tip: If any of these screens is showing you more technical information than you'd like, use the File→Show Less Information command to pare down the overload to just the human-recognizable items.

Saving a report

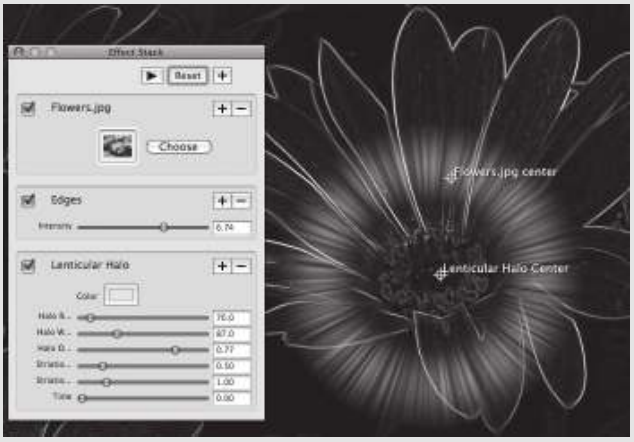
To create a handsomely formatted report that you can print or save, choose File→Export as Text, and then choose Rich Text Format from the File Format pop-up menu. Note, however, that the resulting report can be well over 500 pages long. In many

POWER USERS' CLINIC

The Developer Tools

The Mac App Store offers a free additional download for Lion: a special batch of programs known as the Developer Tools or Xcode. They're primarily for developers (programmers) who write Mac OS X and iPhone software; you'll need some of these programs if you want to get into some of the more esoteric (or, as some would say, fun) Mac OS X tricks and tips.

To install these tools, open the App Store program on your Mac and search the store for *Xcode*. After you download it, you wind up with a new folder called Developer on your hard drive. Its Applications→Utilities folder contains a few programs that are user-friendly enough even for nonprogrammers.



CrashReporterPrefs, for example, lets you tell Mac OS X when to display the Application Unexpectedly Quit dialog box. If you choose Server, you'll never see one of those annoying dialog boxes again—perfect if you have a program that just won't stop crashing.

Also, if you open Developer→Applications→Graphics Tools, you'll find Quartz Composer Visualizer. This program lets you build screen savers, animations, and tons of other graphical goodies without writing a single line of code.

Finally, don't miss Core Image Fun House (also in Developer→Applications→Graphics Tools). It's intended to be a showcase for Mac OS X's Core Image technologies, which constitute a ready-to-use photo-transformation toolkit that software companies can build into their programs. Fun House lets you apply dozens of mind-blowing visual effects to your images and movies—distortions, color corrections, solar flares, and so on—with nothing more than a few clicks. (If your Mac is fast enough, you can even adjust filters in real time, so you can see the result of your modifications as you make them.) One possibility is shown here.

When you're done psychedelicizing your image, you can export it to a standard JPEG or TIFF image by choosing File→Save As. From there, you can show it off on a Web site, email it to your friends, or make it your desktop background.

cases, you're better off simply making a screenshot of the relevant Profiler screen, as described on page 589, or saving the thing as a PDF file.

Terminal

Terminal opens a terminal window with a *command line interface,* taking you deep into the world of Unix, the operating system on which Mac OS X is based. Chapter 16 offers a crash course on this powerful window into the Mac's shadow operating system.

VoiceOver Utility

For details on this screen-reader software, see page 619.