

LEARNING MADE EASY



9th Edition

iMac[®]

for
dummies[®]
A Wiley Brand



Set up your iMac and find
your way around OS X[®]

Create Reminders and make
FaceTime video calls

Troubleshoot issues and
keep your iMac happy

Mark L. Chambers
Author of *MacBook All-in-One For Dummies*



iMac[®]

for
dummies[®]
A Wiley Brand

9th Edition

by **Mark L. Chambers**

for
dummies[®]
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iMac® For Dummies®, 9th Edition

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Introduction

Skeptical about your new anodized aluminum iMac, with that supercharged Intel quad-core processor? Perhaps you're thinking it's too doggone thin, or you're wondering where all the buttons are. Shouldn't there be places to plug in cables?

Ladies and gentlemen, I have great news for you: Not only did you make The Right Decision about which computer to buy, but you also shot a hole in one! The latest incarnation of the iMac has everything a computer power user could want: speed, the latest in hardware and standards, a top-of-the-line LED screen, and all the connectors you need to add just about any device meant for today's computers.

I wrote this book especially for the proud Intel iMac owner who wants to make the most of this stunning new aluminum computer, so this book is a guide to the iMac, *El Capitan* (the latest version of Apple's superb OS X operating system), and the digital lifestyle and productivity applications that Apple provides. I start by describing the basics that every iMac owner should know. Then I move on to chapters devoted to the software that comes with your iMac. Along the way, you come across a generous sprinkling of power-user tips and tricks that save you time, effort, and money.

Foolish Assumptions

So who is the target audience for this book? As in past editions, I make no assumptions about your previous knowledge of computers and software. I figure you've either just bought a brand-new iMac or you're considering buying one. Perhaps you've found a great bargain on a gently used older iMac model, and you'd like guidance as you learn the ropes. Those are the *only* assumptions I make . . . and unlike other books that require all sorts of technical experience and know-how, the only requirement between these covers is your desire to become an iMac *power user* (someone who produces the best work in the least amount of time and has the most fun doing it)!



TIP

By the way, if your friends and family told you that you're going to spend half your life savings on software — or that no “decent” software is available for Mac computers — just smile quietly to yourself! The iMac comes complete with about a ton more software than any Windows box, and those applications are better than anything available on a PC!



This book was written using the latest Intel quad-core iMac computer, so owners of older iMac computers might not be able to follow along with everything I cover. However, if you've upgraded an older Intel iMac with OS X El Capitan (and the latest Apple applications) then you should be able to use most of the book with no problem.

About This Book

In writing about the iMac, I've kept one precept firmly in mind: OS X El Capitan, the operating system you'll run, is just as important as the actual iMac computer itself. Therefore, you'll find that *iMac For Dummies* is just as much about familiarizing you with all the software you get as it is with introducing you to hardware features like your keyboard and mouse. After all, it's relatively easy to connect an entire forest of cables and turn on any new computer. What comes *next* is the challenging part!

As in my other *For Dummies* titles, I respect and use the same English language you do, avoiding jargon, ridiculous computer acronyms, and confusing techno-babble whenever possible.

If you're upgrading from a PC running the Windows operating system, I've got tips, tricks, and entire sections devoted to those hardy pioneers called *Switchers!* You'll discover both the similarities and differences between the iMac running El Capitan and the PC running Windows. I also show you how to make the switch as easy and quick as possible.

A word about the conventions I use: Even with an absolute minimum of techno-speak, this book needs to cover the special keys that you have to press or menu commands that you have to choose to make things work. Therefore, please keep this short list of conventions in mind as you read:

» **Stuff you type:** If I ask you to type (or enter) something, such as in a text box or field, that text appears in bold, like this:

Type me.

If I ask you to type a command within an application, that text appears like this (and note that you usually have to press the Return key before anything happens):

Type me .

- » **Menu commands:** I list menu paths and commands using another format. For example, this instruction indicates that you should click the Edit menu and then choose the Copy menu item:

Edit ⇨ Copy

- » **Web addresses:** No up-to-date book on a computer would be complete without a bag full of web addresses for you to check out. When you see these in the text, they look like this: www.m1cbooks.com.

Icons Used in This Book

Like other technology authors, I firmly believe that important nuggets of wisdom should *stand out on the page!* With that in mind, this *For Dummies* book includes margin icons for certain situations:



TIP

This is the most popular icon in the book, and you find it parked next to suggestions that I make to save you time and effort (and even cash!).



TECHNICAL
STUFF

You don't have to know this stuff, but the technologically curious love high-tech details. (Of course, we're great fun at parties, too.)



WARNING

Always read the information before you take action! I'm discussing something that could actually harm your hardware or throw a plumber's helper into your software.



REMEMBER

Consider these nuggets to be highlighter stuff — not quite as universally accepted (or as important to the author) as a Mark's Maxim (described next), but good reminders nonetheless. I use these icons to reinforce what you should remember.



AUTHOR
SAYS

Mark's Maxims: These are *MFRs* (short for My Favorite Recommendations). In fact, I'll bet just about any iMac power user would tell you the same. Follow my Maxims to avoid the quicksand and pitfalls that I've encountered with all sorts of Macs for nearly three decades!

Beyond the Book

Thanks to my good friends at Wiley, there's a ton of extra content to accompany this book that you won't find between the covers! Fire up your Safari browser and go online to find the following:

- » **Cheat Sheet:** I've created several Cheat Sheet pages that cover things like common keystrokes and maintenance procedures that every iMac owner should follow on a regular basis. To get this Cheat Sheet, simply go to www.dummies.com and enter **iMac For Dummies Cheat Sheet** in the Search box.
- » **Bonus Chapters:** If you're dying to find out how to share data among wireless devices via Bluetooth technology, check out the handy Bluetooth bonus chapter at the Wiley website (www.dummies.com) as well as at my website (www.m1cbooks.com). You'll also find a spiffy bonus chapter dedicated to running Windows on your iMac using Boot Camp!

Where to Go from Here

Each chapter in this book is written as a reference on a specific hardware or software topic. You can begin reading anywhere you like because each chapter is self-contained. However, I recommend that you read the book from front to back because the order of this book makes a great deal of sense.

1

Getting Started with Your iMac

IN THIS PART . . .

Introduce yourself to the important hardware features of your iMac.

Unpack and set up your iMac The Right Way.

Check your iMac for shipping damage and proper operation.

Familiarize yourself with OS X El Capitan and your Desktop.

IN THIS CHAPTER

Identifying the important parts of your iMac

Locating the right home for your computer

Plugging stuff in and getting hooked up

Playing with your bundled software

Buying additional stuff that you might need

Chapter 1

Okay, This Machine Looks Really, Really Weird

You bought a brand-new iMac, and there it sits, in the box. Waiting. Waiting for you.

If you're a little nervous about unpacking that shiny aluminum and glass rectangle, I completely understand. Face it: The latest iMac follows in the footsteps of many revolutionary iMac designs that have come before it. In other words, it doesn't *look* like a computer at all, and that can be a bit disconcerting. And if you're switching from a Windows PC to the Apple universe, you might find yourself floating weightlessly in your office or your living room without a familiar bulky black PC case to anchor yourself —hence, the reluctance you might be feeling.

However, dear reader, let me assure you that you've indeed made The Right Choice. I commend you! Today's Intel iMac is the fastest, leanest, and easiest-to-use self-contained all-in-one computer ever built. Practically everything's in one shining panel (except for your keyboard and mouse). You have one of the best backlit LED screens on the planet, a super-fast processor, plenty of RAM (memory), and a regular laundry list of the latest technology. Best of all, you don't have to be a techno-nerd to use all that power!

In this chapter, I introduce you to your new dream machine, giving you an overview of the most important locations within iMac City. I show you how to unpack your new computer, what wires go where, and where your iMac should set up housekeeping. I preview the awesome software that's waiting within that powerful panel. Finally, I list the accessories that help keep both you *and* your new iMac computing smoothly.

An Introduction to the Beast

The Intel iMac might look like a sculpture straight out of a museum of modern art, but it still sports everything that it needs to function as a computer. In this section, I identify the important stuff that you need to live your life — you know, write a term paper in Pages, hear the music you downloaded in iTunes, or manage the affairs of those lazy Sims.

Major parts of your major appliance

Every computer requires some of the same gizmos. Figure 1-1 helps you track them down. Of course, as you'd expect, a computer has a “body” of sorts in which all the innards and brains are stored (the screen, in this case), a display screen, a keyboard, a mouse or trackpad, and ports for powering and exchanging data with peripherals.

That magnificent screen

What a view you have! An aluminum iMac is graced with either a 21.5" or 27" LED display, complete with backlighting for outstanding color and brightness.



TECHNICAL
STUFF

LED screens use far less electricity than their antique CRT ancestors, and they emit practically no radiation (less, in fact, than even the LCD screens Apple once used).

Both sizes of iMac screens offer a *widescreen* aspect ratio (the screen is considerably wider than it is tall), which augurs well for those who enjoy watching movies. (A favorite editor of mine loves it when I use the antique word *augur*, meaning *to predict or foretell*.) For example, the 27" screen boasts a whopping 5120 × 2880 resolution.

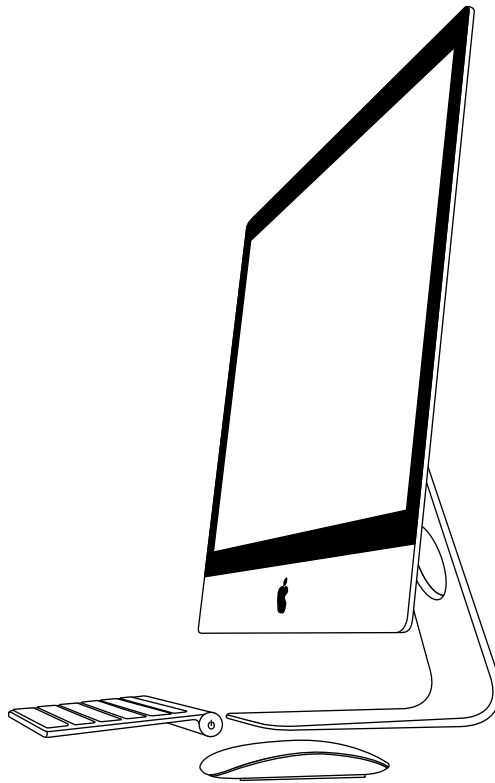


FIGURE 1-1:
The charismatic
form of your
aluminum Intel
iMac.



TIP

That reminds me: Throw away your printed dictionary! You won't need it because OS X El Capitan includes both a handy Dictionary widget and a fantastic Dictionary application! (Each one uses the Internet to retrieve definitions.) More on launching applications and widgets in Chapter 3 . . . and yes, both do contain the word *augur*.

The keyboard and mouse

Hey, here's something novel for the Intel iMac — something *external* (outside the computer's case). Gotta have a keyboard and mouse (or trackpad), right? And you gotta love the options with iMac: You'll go nomadic . . . um, that is, wireless and free.

The iMac comes standard with a truly 21st-century combo of an Apple wireless keyboard and a Magic Mouse 2! (The Magic Trackpad 2 is also available for \$50 more.) This dynamic duo lets you sit back and relax with your keyboard in your lap and without being tied down by a cord. (Say it with me: “Death to cords, death to cords.”) Just stay within about 30 feet of your iMac screen, and sweet

freedom is yours. You can also feel safe using these wireless peripherals because they offer secure 128-bit, over-the-air encryption, which helps keep sensitive information safe while you type and click away. One downside of the wireless keyboard, though: Unlike older wired keyboards, the wireless model doesn't include any USB ports, and you will need a supply of batteries. (Go rechargeable!)



TIP

If you prefer using a wired keyboard and mouse, they'll work fine with your iMac (and you can forget batteries altogether). Don't forget, however, that your keyboard needs to be Mac-compatible.

The keyboard layout is a particular favorite of mine because from here

- » You can either control the sound volume (using the volume control buttons F11 and F12) or mute all that noise (using the Mute button F10).
- » Mission Control, Launchpad, and Dashboard — three outstanding features of OS X El Capitan that you find out about later in the book — are each available with a single keystroke.
- » A handy-dandy Media Eject key lets you eject a CD or DVD (if you have an external optical drive).



REMEMBER

The latest iMac models don't have a built-in optical drive. If you have one of these machines, don't drive yourself batty looking for a disc slot!



TECHNICAL STUFF

Both the wireless Magic Mouse 2 and Magic Trackpad 2 need a flat surface to rest upon, but that's what TV trays are for, right?

Yes, your computer has a foot . . . just one

You and I — normal human beings — would say that the iMac is supported by a sturdy aluminum *stand*, but Apple calls it a *foot*. The foot lets you tilt the iMac panel up and down for the best viewing angle. Most important, though, the foot minimizes the computer's desk space requirements (or its *footprint*). (Engineers . . . sheesh.) And yes, that foot is perfectly balanced and quite stable, so there's no danger of your treasured iMac taking a dive.

If you decide to get really snazzy and mount your older 24" or 27" iMac to the wall, you can remove the foot and install the VESA mounting adapter (available separately for about \$40). You can use any VESA standard mounting bracket on your wall, too. You can be positioned within 30 feet or so of your wall-mounted iMac with a wireless Apple keyboard and mouse (or trackpad).

Hey, Hewlett-Packard or Dell, can you mount one of those monolithic desktop PCs to the wall? *I think not.*

Food for your ears

A machine this nice had better have great sound, and the iMac doesn't disappoint. You have a couple of options for iMac audio:

- » The iMac sports built-in stereo speakers (and dual microphones to boot).
- » Built-in ports connect your iMac audio to either
 - More powerful (and more expensive) external speaker systems
 - A set of headphones (including the Apple iPhone headset)
 - A home stereo system

You can also use wireless Bluetooth speakers with your iMac.

The power cable

Sorry, but you can't get a wireless power system . . . yet. (Apple's working hard on that one.) With the wireless keyboard and mouse/trackpad setup, though, the power cable is actually the only required cable that you need to run your computer! Now, that's *sassy*.

The power button

Yep, you have one of these, too. It's on the back of the case. (If you're looking at the screen, it's at the lower-left corner.)

Those holes are called ports

Our next stop on your tour of Planet iMac is Port Central — that row of holes on the back of your computer (see Figure 1-2). Each port connects a different type of cable or device, allowing you to easily add all sorts of extra functionality to your computer.

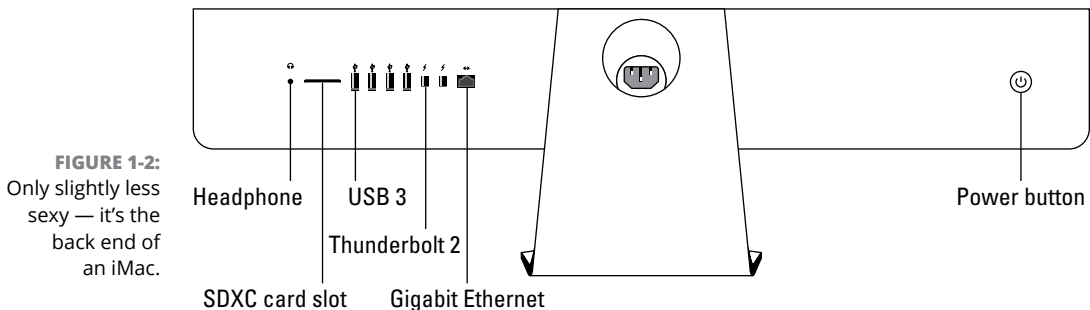


FIGURE 1-2: Only slightly less sexy — it's the back end of an iMac.

One of the holes is an exception to the Rule of Ports: The iMac's SDXC card slot accepts the same type of SD memory cards as most of today's digital cameras and video cameras. (In other words, that hole is not for connecting a cable; you insert the card instead.) The SDXC slot appears as a tiny vertical slot.

Each of these stellar holes is identified by an icon. Here's a list of what you'll find as well as a quick rundown on what these ports do:



» **USB:** Short for *Universal Serial Bus*, the familiar USB port is the jack-of-all-trades in today's world of computer add-ons. Most external devices (such as portable hard drives, scanners, and digital cameras) that you want to connect to your iMac use a USB port. The current iMac sports four USB 3.0 ports on its back. USB 3.0 connections are much faster than the old USB 2.0 standard, but you can still use your USB 2.0 devices with the faster ports (at the slower speed, of course).

For the specs on connecting your keyboard and mouse, see the upcoming section "Absolutely essential connections."



TIP



» **Ethernet:** The iMac includes a standard 10/100/1000 Ethernet port, so it's ready to join your existing wired Ethernet network. (Alternatively, you can go wireless for your network connection; find more on that in the next section and in Chapter 11.)



» **Thunderbolt 2:** Yes, I know, it's a dumb name, but it really *is* that fast. Thunderbolt 2 ports offer the absolute speediest connection between external devices and your iMac, including the fastest (and most expensive) external hard drives and storage systems. Thunderbolt 2's appeal doesn't end there, though: In case that splendid screen isn't quite big enough, you can add an adapter or cable to this port and send the video signal from your iMac to an Apple Thunderbolt monitor, a standard LCD/LED monitor, or a flat-screen TV. (Apple also offers different adapters that can connect your iMac to standard VGA monitors and projectors.) All current iMac models sport two Thunderbolt 2 ports.

Connections for external audio



Your iMac comes equipped with two pretty powerful stereo speakers on the bottom of the case, but you're certainly not limited to them. Apple provides a Headphone/Audio Line Out jack, allowing you to send the high-quality audio from your rectangular beast to a set of standard headphones or to an optical digital audio device, such as a high-end home theater system.



TIP

You can also connect El Capitan–compatible USB or Bluetooth speakers to your iMac.

Important hidden stuff

When you bought your new digital pride and joy, you probably noticed a number of subtle differences between the low-end iMac and the über-expensive top-end model. I call these differences the *Important Hidden Stuff* (or IHS, in case you're addicted to acronyms), and they're just as important as the parts and ports that you can see:



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- » **Hard drive:** The current iMac can be equipped with either a traditional serial ATA (SATA) hard drive or flash storage (also called a *solid-state drive*, or SSD). Apple also offers a *Fusion Drive*, which is essentially a combination of a SATA drive and flash storage (offering the larger capacity of a SATA drive and the improved performance of flash storage).

As I type these words, the iMac product line offers several different storage capacities, depending on the processor speed and screen size you choose: anywhere from a standard 1TB SATA drive to an immense 3TB Fusion Drive. (Yes, friends and neighbors, *TB* means *terabyte*, or 1,000GB.) The bigger, the better. Alternatively, you can opt for anywhere from 256GB to 1TB of flash storage instead. (Remember, though, that the iMac has room for only one internal drive.)

- » **Wireless Ethernet:** “Look, Ma, no wires!” As I mention earlier, your iMac can join an existing wireless Ethernet network with its built-in wireless hardware. With wireless connectivity, you can share documents with another computer in another room, share a single high-speed Internet connection among several computers, or enjoy wireless printing. Truly *sassy!*

Although Apple would want you to build your wireless wonderland with an Apple AirPort Extreme Base Station or a Time Capsule unit — go figure — you can actually use your iMac with any standard 802.11g, 802.11n, or 802.11ac wireless network. And yes, PCs and Macs can intermingle on the same wireless network without a hitch. (Scandalous, ain't it?)



TIP

- » **Bluetooth:** Let's get the old “digital pirate” joke out of the way: “Arrgh, matey, I needs me a wireless parrot.” (Engineers again . . . sheesh.) Although strangely named, Bluetooth is actually another form of wireless connectivity. This time, however, the standard was designed for accessories like your keyboard and mouse, and devices like your tablet and smartphone. Bluetooth is built into every Intel iMac.

- » **SDXC card slot:** As I mention earlier, this slot allows your iMac to read photos and video directly from standard SD memory cards. Photographers and video junkies, rejoice!

- » **FaceTime HD camera:** The iMac built-in video and still camera appears as a tiny lens and activity light at the top of your computer.
- » **Video card:** If your applications rely heavily on high-speed 3D graphics, you'll be pleased as punch to find that your iMac comes equipped with either Intel HD, Intel Iris Pro or (on the 27" model) super-fast AMD Radeon R9 graphics hardware. The AMD Radeon R9 cards are well suited for 3D modeling, video editing, and . . . well, honestly, blasting the enemy into small, smoking pieces with aplomb.

Choosing a Home for Your New Pet

If you pick the wrong spot to park your new iMac, I can *guarantee* that you'll regret it later. Some domiciles and office cubicles obviously don't offer a choice — you've got but one desk at work, for example, and nobody's going to hand over another one — but if you can select a home for your iMac, consider the important placement points in this section.

Picking the right location

You know the mantra: Location, location, location.



WARNING

- » **There's always the wall.** Your iMac can disguise itself as a particularly interesting digital picture frame. With the right mounting adapter, you can hang your computer right on the wall and snub your desk altogether.

This wall-mounted solution has three big problems:

- Your VESA mounting plate must be installed safely and correctly (for example, using the studs within your walls).

The iMac is slim and trim, but it's no lightweight, and it doesn't bounce well. You don't want it to take a high dive!

- You may have to remove your iMac from the wall mount to connect or disconnect cables from the ports on the back.
- External peripherals aren't happy campers with a wall-mounted iMac — that includes Thunderbolt and USB devices, which must either sit on the floor or on a nearby (and conspicuous) shelf. (Personally, I think the cables for external devices tend to spoil the appearance of a wall-mounted computer, so if you're using a wall mount, I recommend using an AirPort Time Capsule device for your backups!)



REMEMBER

Your iMac must be mounted at the proper height on the wall. It's not good ergonomic practice to sit more than two feet away from your iMac screen, and the screen should be placed at (or slightly below) eye level.

My solution? Don't plan on using any external devices. Instead, opt for a wireless network with a remote printer and remote backup storage space, like a Time Capsule unit on your network.

- » **Keep things cool.** Your new iMac is nearly silent, but that super-fast Intel quad-core processor generates quite a bit of heat. Fans inside the case draw the heat away. (Nothing like an overheated processor to spoil an evening of *Alien: Isolation*.)

Follow these three rules to keep your cool. Make sure that

- The location you choose is far from heating vents.
- The location you choose is shielded from direct sunlight.
- You allow plenty of room below the machine (where the air enters the case) and above the machine (where heated air escapes from the slot at the top of the case).
- Hot air from a wall-mounted iMac can discolor the wall.



WARNING

Considering the convenience factor

Technology is nothing if you can't make it convenient:

- » **Outlets, outlets, outlets!** Your computer needs a minimum of at least one nearby AC outlet and perhaps a nearby Ethernet jack (if you use the iMac's built-in Ethernet port for connecting to a wired Ethernet network). Oh, and don't forget a surge protector or uninterruptible power supply (UPS), which I discuss at the end of this chapter.

If you prefer to send your data over the airwaves, consider using wireless networking for your iMac. I discuss everything you need to know about wireless networking in Chapter 11.



TIP

- » **Don't forget the lighting.** Let me act as your mom. (I know that's a stretch, but bear with me.) She'd say, "You can't possibly expect to work without decent lighting! You'll go blind!" She's right, you know. At a minimum, you need a desk or floor lamp.
- » **Plan to expand.** If your iMac hangs out on a desk, allow an additional foot of space on each side. That way, you have space for external peripherals and more powerful speakers.

Unpacking and Connecting

You are going to love this section. It's short and sweet because the installation of an aluminum iMac on your desktop is a piece of cake. (Sorry about the cliché overload, but this really *is* easy.)

Unpacking your iMac For Dummies

Follow these guidelines when unpacking your system:



TIP

- » **Check for damage.** I've never had a box arrive from Apple with shipping damage, but I've heard horror stories from others (who claim that King Kong must have been working for That Shipping Company). Check all sides of your box before you open it.

Take a photograph of any significant damage (just in case).

- » **Search for all the parts.** When you're removing those chunks o' foam, make certain that you check all sides of each foam block for parts that are snuggled therein or taped for shipment.

- » **Keep all those packing materials.** Do *not* head for the trash can with that box and those packing materials. Keep your box intact, complete with all the packing materials, for at least a year until your standard Apple warranty runs out. If you have to ship it to an Apple Service Center, the box with the original packing is the only way for your iMac to fly.

And now, a dramatic Mark's Maxim about cardboard containers:

Smart computer owners keep their boxes for the life of their machine.

For example, if you sell your iMac or move across the country, you'll want that box. *Trust me on this one.*

- » **Store the invoice for safekeeping.** Your invoice is a valuable piece of paper indeed.

Save your original invoice in a plastic bag, along with your computer's manuals and original software, manuals, and other assorted hoo-hah. Keep the bag on your shelf or stored safely within that iMac box, and enjoy a little peace of mind.

- » **Read the iMac manual.** "Hey, wait a minute, Mark — why do I have to read the manual from Apple along with this tome?" Good question, and here's the answer: There might be new and updated instructions in the documentation from Apple that override what I tell you in this book. (For example, "Never cut the red wire. Cut the blue wire instead." Or something to that effect.)

Besides, Apple manuals are rarely thicker than a restaurant menu.



AUTHOR
SAYS



REMEMBER

Connecting cables like a true nerd

The iMac makes all its connections really simple, but your computer depends on you to place the outside wires and thingamabobs where they go.

Absolutely essential connections

After your new iMac is resting comfortably in its assigned spot (I assume that's a desktop or a wall), you need to make a minimum of one connection: the power cable. Plug the cable into the corresponding socket on the iMac first; then plug 'er into that handy AC outlet.



TIP

Apple has already installed your batteries in your wireless keyboard and mouse (or trackpad). How thoughtful! If you ordered your iMac with a wired Apple keyboard, of course, you have no batteries to worry about at all.

Adding the Internet to the mix

If you have Internet access or a local computer network, you need to make at least one of the following connections.



TIP

Your local cable and telephone companies can provide you more information on cable or DSL Internet service.

If you have high-speed Internet service, or if you're in an office or school with a local computer network, you'll probably connect through the iMac's built-in Ethernet port. You make two connections:

- 1. Plug one end of the Ethernet cable into the Ethernet port on the iMac.**
- 2. Plug the other end of the Ethernet cable into the Ethernet port from your network.**

It's probably one of the following:

- An Ethernet wall jack
- An Ethernet switch
- A cable or DSL Internet router (or sharing device)



TIP

Will you be joining a wireless network? If so, look to Chapter 11 to find all the details you need to configure El Capitan for wireless networking.

Discovering All the Cool Things You Can Do

This section answers the most common of all novice computer questions: “What the heck will I do with this thing?” You find additional details and exciting facts about the software that you get for free, software you’ll want to buy, and stuff you can do on the Internet.

What software do I get?

Currently, all iMac computers ship with these major software applications installed and ready to use:

» **Apple’s digital lifestyle applications:** You know you want these applications! They turn your iMac into a digital hub for practically every kind of high-tech device on the planet, including DV camcorders, digital cameras, portable music players, tablets, and even smartphones.

Chapters 13–16 of this book focus on the four major applications that accompany your iMac: iTunes, Photos, iMovie, and GarageBand.

» **Apple’s productivity applications:** Apple’s powerful office productivity applications can be downloaded for free from the App Store. You can create documents, spreadsheets, and presentations within Pages, Numbers, and Keynote. (It’s much like that Other Office Suite from those guys in Redmond, but you didn’t hear that from me.) Chapters 17–19 show you the basics of producing great documents with these three applications.

Figure 1-3 illustrates a flyer under construction in Pages.

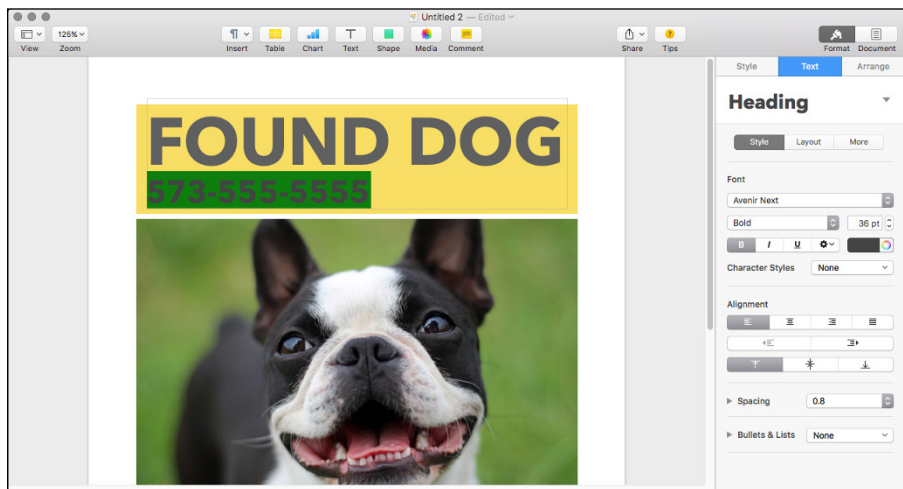


FIGURE 1-3: Pages is a great tool for home and office.



REMEMBER

The installed software on your iMac might change as new programs become available.

Looking forward to fun on the Internet

What is a modern computer without the Internet? Apple gives you great tools to take full advantage of every road sign and off ramp on the Information Superhighway, right out of the box:

- » **Web surfing:** I use the Safari web browser every single day. It's faster and better designed than other browsers (although I might be biased). Safari includes tabbed browsing and offers shared bookmarks through iCloud.

If *tabbed browsing* and *shared bookmarks* sound like ancient Aztec to you, don't worry. Chapter 8 is devoted entirely to Safari.

- » **Web searches:** Your Dashboard widgets can search the entire Internet for stocks, movie listings, business locations, and dictionaries.

- » **FaceTime:** You can videoconference with someone using another Mac, or even with those using iOS devices like the iPhone and the iPad. You'll find more on FaceTime in Chapter 12.

- » **Messages:** *Messages* lets you use your iMac to chat with others around the world for free via the Internet — by keyboard, voice, or (with your iMac's built-in FaceTime HD web camera) full-color video. This is awesome stuff straight out of Dick Tracy and Buck Rogers. If you've never seen a video chat, you'll be surprised by just how good your friends and family look!

Always wear a shirt when videoconferencing.

- » **Email:** Soldier, Apple's got you covered. The OS X Mail application is a full-featured email system, complete with defenses against the torrent of junk mail awaiting you. (Imagine a hungry digital saber-toothed tiger with an appetite for spam.) Send pictures and attached files to everyone else on the planet, and look doggone good doing it.



REMEMBER

Applications that rock

Dozens of useful applications are included with OS X. I mention the most important of them in later chapters, but here are three good examples to whet your appetite:

- » **Calendar:** Keep track of your schedule and upcoming events, and even share your calendar online with others in your company or your circle of friends. Figure 1-4 illustrates Calendar in action.

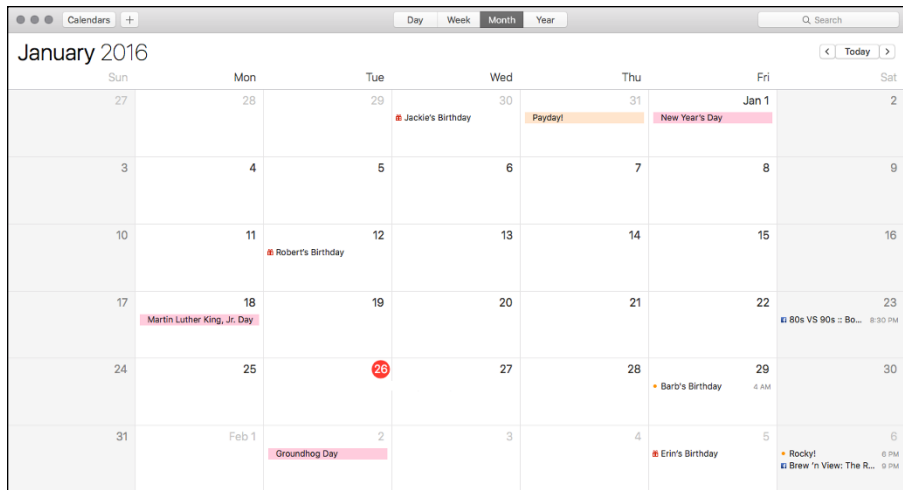


FIGURE 1-4:
Hey, isn't that
Calendar running
on your iMac?
You are
iTogether!

- » **DVD Player:** Got an external optical drive for your iMac? Put all that widescreen beauty to work and watch your favorite DVD movies with DVD Player! You have all the features of today's most expensive standalone DVD players, too, including a spiffy onscreen control that looks like a remote.
- » **Contacts:** Throw away that well-thumbed collection of fading addresses. The OS X Contacts application can store, search, and recall just about any piece of information on your friends, family, and acquaintances.



TIP

You can use the data you store in your Contacts in other Apple applications that are included with El Capitan, such as Apple Mail and Messages.

Would you like to play a game?

“All productivity and no play . . .” Hey, even a hard-working person like you enjoys a good challenging game, so you can look forward to playing Chess on your iMac right out of the box. Ah, but this isn't the chessboard your dad used! Play the game of kings against a tough (and configurable) opponent — your iMac — on a beautiful 3D board. Heck, your iMac even narrates the game by speaking the moves!

Stuff You Oughta Buy Right Now

Your new aluminum supercomputer may need an additional purchase or two — but fear not, we’re not talking any outrageous expense here. I always recommend the same set of stuff for new PC and Mac owners. These extras help keep your new computer clean and healthy (and some make sure you’re happy as well):



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WARNING

» **Surge suppressor or uninterruptible power supply (UPS):** Even an all-in-one computer like your iMac can fall prey to a power surge. I recommend one of these:

- A *basic surge suppressor* with a fuse can help protect your iMac from an overload.
- A *UPS* costs a little more, but it does a better job of filtering your AC line voltage to prevent brownouts or line interference from reaching your computer.

A UPS also provides a few minutes of battery power during a blackout so that you can save your documents and safely shut down your iMac.

» **Screen wipes:** Invest in a box of premoistened screen wipes. Your iMac’s screen can pick up dirt, fingerprints, and other unmentionables faster than you think.

Make sure your wipes are especially meant for flat-panel monitors or laptop computer screens.

» **Blank optical discs and USB flash drives:** Most folks still consider an optical drive important, so if you’ll miss watching DVD movies and importing/recording audio CDs, I’ll bet you’ve already bought an external drive — and you’ll need blank discs for recording music, video, and data. USB flash drives come in many different capacities, and your iMac treats a flash drive just like a traditional external hard drive. If you want the best performance from a flash drive, buy a USB 3.0 drive; they’re significantly faster than the older 2.0 drives. (All current iMac models sport USB 3.0 ports.)

» **Cables:** Depending on the external devices and wired network connectivity you’ll be using, these are

- A standard Ethernet cable (for wired networks or high-speed Internet)
- Thunderbolt or USB cables for devices you already have



Most hardware manufacturers are nice enough to include a cable with their products, but there are exceptions, especially USB printers. *Shame on those cheapskates!*

- » **A wrist rest for both your keyboard and mouse:** You might have many reasons to buy a new iMac, but I know that a bad case of carpal tunnel syndrome is *not* one of them. Take care of your wrists by adding a keyboard and mouse rest (even for a wireless keyboard/mouse combo hanging out on a TV tray).

IN THIS CHAPTER

Turning on your iMac

Checking your iMac for proper operation

Setting up OS X El Capitan

Registering your iMac

Using Migration Assistant

Copying information from a Windows PC

Chapter 2

Life! Give My iMac Life!

If you've already been through Chapter 1, you got as far as unpacking your iMac and connecting at least one cable to it. And unless you bought this computer solely as a work of modern art, it's time to actually turn on your iMac and begin living The Good iLife. (Plus you still get to admire that Apple design whilst using iTunes.) After you get your new beauty powered on, I help you here with an initial checkup on your iMac's health.

I also familiarize you with the initial chores that you need to complete — such as using OS X Setup as well as moving the data and settings from your existing computer to your iMac — before you settle in with your favorite applications.

In this chapter, I assume that OS X El Capitan (version 10.11) was preinstalled on your iMac or that you just completed an upgrade to El Capitan. (If you're upgrading, your iMac is already turned on — and you can skip the next section!)

Throwing the Big Leaf Switch

Your iMac's power switch is located on the back of the computer, at the lower-left corner of the case (as you look at the screen). Press it now to turn on your iMac, and you hear the pleasant startup tone that's been a hallmark of Apple computers for many years now. Don't be alarmed if you don't immediately see anything onscreen because it takes a few seconds for the initial Apple logo to appear.



REMEMBER

In my experience, a simple, quick press of the power button on some iMacs sometimes just doesn't do it. Instead, you actually have to hold down the button for a count of two or so before the computer turns on.

While the Apple logo appears, you see the familiar “moving bar” progress indicator appear. That's the sign that your iMac is loading El Capitan. Sometimes the bar can take a bit to disappear. As long as it's moving, though, something good is happening — after all, El Capitan has to load file sharing, networking, and printing components (and such).

At last, your patience of a whole 5 to 10 seconds is rewarded, and you see the El Capitan Setup Assistant appear.

Mark's Favorite Signs of a Healthy iMac

Before you jump into the fun stuff, don't forget an important step: a quick preliminary check to make sure that your iMac survived shipment intact and happy. Although the shipping box that Apple uses for the iMac series is one of the best I've ever encountered in 40 years of swapping computer hardware, your computer could still have met with foul play from its shipping travels.

If you can answer yes to each of these questions, your iMac likely made the trip without serious damage:

1. Does the computer's chassis appear undamaged?

It's pretty easy to spot damage to your iMac's svelte metal and glass design. Look for scratches, puncture damage, and misalignment of the screen.

2. Does the LED screen work, and is it undamaged?

I'm talking about obvious scratches or puncture damage to your screen. Additionally, you should check whether any individual dots (or *pixels*) on your LED monitor are obviously malfunctioning. Bad pixels either appear black or in a different color from everything surrounding them.



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Techs call these irritating anarchists *dead pixels*. Unfortunately, many new LED screens include one or two. After all, even the low-end 21.5" iMac screen sports more than 1 million pixels.

3. Can you feel a flow of air from the vent on top?

Your iMac's Intel processor, hard drive, and power supply generate quite a bit of heat, so the fan system never turns off completely. If you don't feel warm air from the fan system after your iMac has been on for a minute or two, you might have a problem.

4. Do the keyboard and mouse work?

Check your iMac's Bluetooth connection by moving the mouse (or running your finger across the trackpad); the cursor should move on your screen. To check the keyboard, press the Caps Lock key and observe whether the green Caps Lock light turns on and off. (Don't forget to check for good batteries in all your wireless input devices and make sure they're turned on.)



TIP

If your iMac reports that there's no Bluetooth keyboard, mouse, or trackpad present, remember that you can always connect a standard Mac USB keyboard and pointing device to help you troubleshoot the problem. You'll find information on connecting (or *pairing*) Bluetooth accessories in the Bluetooth Bonus Chapter, available at www.dummies.com and my website, www.m1cbooks.com.

If you do notice a problem with your iMac (and you can still use your Safari browser and reach the web), you can make the connection to an Apple support technician at www.apple.com. If your iMac is lying on its back with its foot in the air and you can't get to the Internet, you can check your phone book for a local Apple service center, or call the AppleCare toll-free number at (800) 275-2273. Chapter 20 also offers troubleshooting information.

Harriet, It's Already Asking Me Questions!

After your iMac is running and you've given it the once-over for obvious shipping damage, your next chore is to set up your iMac. Unlike most other tasks in this book, I don't cover the setup process step by step. Apple "tweaks" the questions that you see during setup on a regular basis, and the questions are really very easy to answer. Everything is explained onscreen, complete with onscreen Help if you need it.

However, I do want you to know what to expect as well as what information you need to have at hand. I also want you to know about support opportunities, such as the AppleCare Protection Plan and Apple's iCloud Internet services — hence,

this section. Consider it a study guide for whatever your iMac's setup procedure has to throw at you.

Setting up OS X El Capitan

After you start your iMac for the first time — or if you just upgraded from an earlier version of OS X — your iMac will likely automatically launch the El Capitan setup procedure. The setup process takes care of several tasks:



REMEMBER

» Setup provides El Capitan your personal information.

As I mention in Chapter 1, your iMac ships with a bathtub full of applications, and many of those use your personal data (like your address and telephone number) to automatically fill out your documents.

If that personal stored information starts you worrying about identity theft, I congratulate you. If you're using your common sense, it *should*. However, Apple doesn't disseminate this information anywhere else, and the applications that use your personal data won't send it anywhere, either. And the Safari web browser fills out forms on a web page automatically only if you give your permission — and security-conscious iMac owners like me prefer to enter things manually.

» Setup configures your language and keyboard choices.

OS X El Capitan is a truly international operating system, so Setup offers you a chance to configure your iMac to use a specific language and keyboard layout.

» Setup configures your email accounts within Apple Mail.

If you already have an email account set up with your Internet service provider (ISP), keep that email account information handy to answer these questions. (The list should include the incoming POP3/IMAP and outgoing SMTP mail servers you'll be using, your email address, and your login name and password. Don't worry about those crazy acronyms, though, because your ISP will know exactly what you mean when you ask for this information.) El Capitan can even automatically configure many email accounts for you — including web-based services such as Google Mail, Yahoo! Mail, and AOL Mail — if you supply your account ID and password. *Sweet*.

» Setup allows you to sign up for an iCloud ID and Apple's iCloud service.

iCloud makes it easy to share data automatically between your iMac and devices like an iPhone, iPad, or iPod touch, along with Apple email accounts (through both web mail and the Apple Mail application). I go into all these in more detail in Chapter 9. For now, just create your iCloud ID (also often called an Apple ID), sign up for iCloud, and take the opportunity to feel smug about owning an Apple computer.

» **Setup sends your registration information to Apple.**

As a proud owner of an iMac, take advantage of the year of hardware warranty support and the free 90 days of telephone support. You have to register to use 'em, but rest assured that all this info is confidential.

» **Setup launches Migration Assistant.**

This assistant guides you through the process of *migrating* (an engineer's term for *copying*) your existing user data from your old Mac or PC to your new iMac. Naturally, if your iMac is your first computer, you can skip this step with a song in your heart! (Read more on Migration Assistant in the section "Importing Documents and Data from Your Old Mac.")

Registering your iMac

I'll be honest here: I know that many of us (myself included) don't register every piece of computer hardware we buy. However, your iMac is a different kettle of fish altogether, and I *strongly* recommend that you register your purchase with Apple during the setup process. You spent a fair amount of moolah on your computer, and it's an investment with a significant number of moving parts.

Even the hardest of techno-wizards would agree with this important Mark's Maxim:



AUTHOR
SAYS

If you don't register your iMac, you can't receive support from Apple.

Rest assured that Apple is not one of those companies that constantly pesters you with email advertisements and near-spam. I've registered every Apple computer I've owned, and I've never felt pestered. (And I have an *extremely* low tolerance for pester.) However, just in case your tolerance is even lower than mine, Apple's registration process allows you to disable this email communication.

Importing Documents and Data from Your Old Mac

If you're upgrading from an older Mac computer running OS X to your new iMac, I have great news for you: Apple includes the Migration Assistant utility application that can help you copy (whoops, I mean, *migrate*) all sorts of data from your old Mac to your new machine. The list of stuff that gets copied over includes

- » **User accounts:** If you set up multiple user accounts (so that more than one person can share the computer), the utility ports them all to your new iMac.
- » **Network settings:** Boy howdy, this is a real treat for those with manual network settings provided by an ISP or network administrator! Migration Assistant can re-create the entire network environment of your old Mac on your new iMac.
- » **System Preferences settings:** If you're a fan of tweaking and customizing OS X to fit you like a glove, rejoice. Migration Assistant actually copies over all the changes that you've made within System Preferences on your old Mac! (Insert sound of angelic chorus of cherubim and seraphim: *Hallelujah!*)
- » **Documents:** The files in your Documents folder(s) are copied to your new iMac.
- » **Applications:** Migration Assistant tries its best to copy over the third-party applications that you've installed in your Applications folder on the older Mac. I say *tries its best* because you might have to reinstall some applications, anyway. Some developers create applications that spread out all sorts of files across your hard drive, and Migration Assistant just can't keep track of those nomadic files. Also, some other applications make the trek just fine, but you might have to re-enter their serial numbers.



TIP

Setup launches Migration Assistant automatically if you indicate that you need to transfer stuff during the setup process, but you can also launch Migration Assistant manually at any time. Click the Launchpad icon on the Dock (which bears a rocket-ship icon); then click the Search box at the top of the screen and type the word *Migration*. Click the Migration Assistant icon to launch the application.

To use Migration Assistant to copy your system from your older Mac, you need one of the following:

- » **Wired or wireless network connection between the computers:** If you've already hooked up your new iMac to your wired or wireless Ethernet network while using Setup Assistant, eschew cables completely and click Use Network instead! (Note, however, that a Wi-Fi migration will be much slower than migrating with either a direct cable connection or a wired network connection.)
- » **Thunderbolt cable** (compatible with most recent iMac, Mac mini, Mac Pro and MacBook laptops): A Thunderbolt connection will transfer your data between the two computers at lightning speed! (Bad pun intended.) Apple sells a Thunderbolt cable that's perfect for the job for \$49 at the Apple Store.

» **Time Machine external drive or an AirPort Time Capsule backup unit:** If you're using Time Machine on the older Mac with an external drive, you can migrate directly from your most recent backup — just plug your external Time Machine drive into your new iMac. The same option applies if you've invested in Apple's AirPort Time Capsule wireless backup device.

If you'll be using a Thunderbolt cable, make sure that the two machines are connected with the cable first. If you're using a network connection, both computers should be connected to the network. Typically, you'll also have to load Migration Assistant on the source Mac (or a free Windows program downloaded from www.apple.com, if the source computer is a PC.)

After the two computers are connected, simply follow the onscreen instructions displayed within the Migration Assistant window. The application will lead you through the process step by step. If you need to return to the previous step at any time, click the Back button that appears at the bottom of the screen.

Manually Importing Documents and Data from Windows

If you're a classic *Windows-to-Mac Switcher*, you made a wise choice, especially if you're interested in the creative applications supplied by Apple! Although you can choose to start your Apple computing life anew, you probably want to migrate some of your existing documents and files from that tired PC to your bright, shiny new iMac.

If you're switching from a PC to a Mac, you can run the Windows version of the Migration Assistant on your PC (available from Apple's website) to automatically handle most of your migration tasks for you, and you should witness the miracle of your PC's photos, video, music, and documents suddenly appearing on your iMac. Unfortunately, you'll have some exceptions. Some stuff won't make the move because the Windows Migration Assistant simply can't recognize and transfer files and folders from some nonstandard locations. For example, folders you created yourself at the root of your PC's hard drive likely won't be recognized, and naturally, your Windows programs won't run under OS X (without creating a Boot Camp partition, which I discuss in the nearby sidebar titled "Switching from a PC to . . . an Apple PC?").

Here's the good news, though: You can easily copy those files that weren't transferred! Moving items manually from a USB flash drive or over a network is easy.



TIP

The OS X Help system contains an entire subsection on specific tricks that you can use when switching from Windows to Mac, including how to connect to a Windows network and how to directly connect the two computers.

In general, you can move documents, movies, photos, and music without a problem. Table 2-1 illustrates what can be moved between Windows (versions 7, 8, 8.1, and 10) and OS X, as well as the application that you use in El Capitan to open those files and documents.

TABLE 2-1 Moving Media and Documents betwixt Computers

File Type	Windows Location	OS X Location	Mac Application
Music files	My Music folder	Music folder	iTunes
Video and movie files	My Videos folder	Movies folder	QuickTime/DVD Player/iTunes
Digital photos	My Pictures folder	Pictures folder	Photos
Office documents	My Documents folder	Documents folder	Mac Office/Open Office/Pages, Numbers and Keynote

SWITCHING FROM A PC TO . . . AN APPLE PC?

With the El Capitan Boot Camp feature, you can actually create a full Windows 7, Windows 8/8.1, or Windows 10 system on your Intel iMac. Yup, Windows and El Capitan coexist peacefully *on the same computer*. However, you have to reboot your computer to use your iMac as a Windows system, and you can't install Windows at all without retaining at least a basic OS X system. (All this is covered in detail in the Boot Camp Bonus Chapter, which you can download at www.dummies.com.)

This capability brings a whole new meaning to the term *Switcher* because some iMac owners are moving their stuff from Windows (running on their old PC) to . . . well, Windows (running on their new iMac) rather than El Capitan. If you do decide to create a Windows system on your iMac by using Boot Camp, the files and folders on your existing PC can be copied directly by using a good old-fashioned Windows wizard. You can use the Windows Easy Transfer utility (in Windows 7 and 8). Windows 8.1 and 10 users will need a third-party application to move files and folders, such as PCmover Express from Laplink (www.laplink.com).

IN THIS CHAPTER

Introducing OS X El Capitan Desktop

Coping with those missing trackpad buttons

Launching and quitting applications

Mastering Finder windows and shortcuts

Identifying and selecting items

Manipulating your Desktop with Mission Control and Dashboard

Storing everything in your Home folder

Customizing the Dock and Desktop

Taking care of the Trash (and rescuing precious stuff from it)

Printing your documents

Getting help while learning about El Capitan

Chapter 3

The Basics Behind OS X El Capitan

Ah, the Finder. Many admire its scenic beauty. But don't ignore its unsurpassed power or its many moods. And send a postcard while you're there.

Okay, so the El Capitan Finder might not be *quite* as majestic as the mighty Mississippi River, but it's the basic toolbox you use every day while piloting your iMac. (Bad Mark Twain pun sadly intended.) The Finder includes the most

common elements of OS X: window controls, common menu commands, icon fun (everything from launching applications to copying files), keyboard shortcuts, and even emptying the Trash. In fact, you could say that if you master the Finder and learn how to use it efficiently, you're on your way to becoming a power user!

This chapter is your Finder tour guide, and we're ready to roll. I satisfy your curiosity about your new playground and introduce you to the basic elements of the El Capitan Desktop, and I outline the resources available if you need help with OS X.

Oh, and I promise to use honest-to-goodness English in my explanations, with a minimum of engineer-speak and indecipherable acronyms. (In return, promise that you will boast about El Capitan to your family and friends. Aunt Harriet might not be as technologically savvy as we are.)

Your Own Personal Operating System

El Capitan is a special type of software called an *operating system* (or *OS*, as in *OS X*). This means that El Capitan essentially runs your iMac and also allows you to run all your other applications, such as iTunes and Adobe Photoshop. It's the most important computer application — or *software* — that you run.



TIP

Think of a pyramid, with El Capitan as the foundation and other applications running on top.

You're using the OS when you aren't running a specific application, such as these actions:

- » Copying files from a USB flash drive to your iMac's internal drive
- » Navigating through files and folders on your drive
- » Choosing a different screen saver

Sometimes, El Capitan even peeks through an application while it's running. For example, OS X controls application actions such as these:

- » The Open, Save, and Save As dialogs you see when working with files in Photoshop
- » The Print dialog that appears when you print a document in Pages (Apple's desktop publishing application)

In the following sections, I escort you around the most important hotspots in El Capitan, and you meet the most interesting onscreen thingamabobs you use to control your iMac. (I told you I wouldn't talk like an engineer!)

The El Capitan Desktop

The El Capitan Desktop isn't made of wood, and you can't stick your gum underneath. However, this particular desktop does work much like the surface of a traditional desk. You can store things there, organize things into folders, and take care of important tasks such as writing and drawing (using tools called *applications*). Heck, you even have a clock and a trash can.

Gaze upon Figure 3-1 and follow along as you venture to your Desktop and beyond. I discuss each of these Desktop elements in more detail later in this chapter.

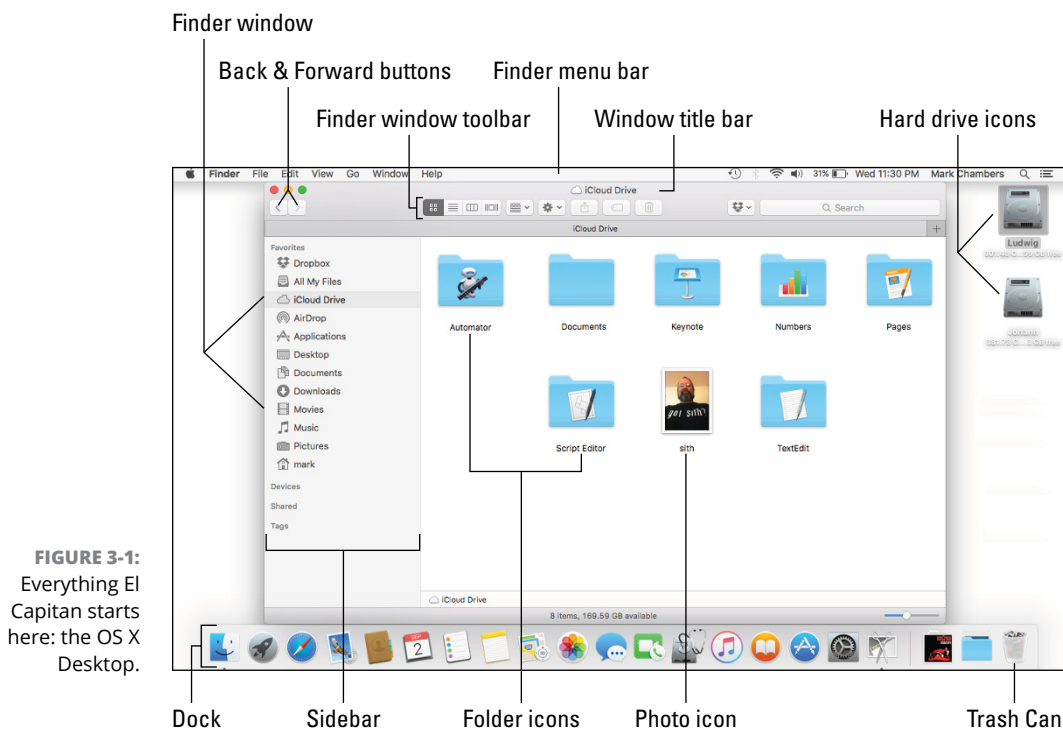


FIGURE 3-1: Everything El Capitan starts here: the OS X Desktop.

Meet me at the Dock

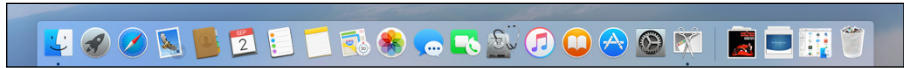
The Dock is a versatile combination: one part organizer, one part application launcher, and one part system monitor. From the Dock, you can launch applications. The postage-stamp icon represents the Apple Mail application, for example,

and clicking the spiffy compass icon launches your Safari web browser. Icons on the Dock also allow you to see what's running and to display or hide the windows shown by your applications.

Each icon on the Dock represents one of the following (many of which are proudly displayed in Figure 3-2):

- » An application you can run (or that is running)
- » An application window that's *minimized* (shrunk)
- » A web page URL link
- » A document or folder on your system
- » A network server, shared document, or shared folder
- » Your Trash

FIGURE 3-2:
The Dock can contain all sorts of exotic icons.



TIP

The Dock is highly configurable:

- » It can appear at different edges of the screen.
- » It can disappear until you move the pointer to the edge to call it forth.
- » You can resize it.

Dig those crazy icons

By default, El Capitan always displays at least one icon on your Desktop: your iMac's internal drive. To open a drive and view or use the contents, you double-click the icon. Each icon is a shortcut of sorts that represents something, including

- » CDs and DVDs (if you have an optical drive)
- » External hard drives, solid-state drives, and USB flash drives
- » Applications and documents
- » Files and folders
- » Network servers you access

Note that an icon can represent applications you run and documents you create. Sometimes you *single*-click an icon to watch it do its thing (as on the Dock), but usually you *double*-click an icon to make something happen.

There's no food on this menu

The menu bar isn't in a restaurant. You find it at the top of the Desktop, where you can use it to control your applications. Virtually every application you run on your iMac has a menu bar.

To use a menu command, follow these steps:

1. Click the menu title (such as File or Edit).
2. Choose the desired command from the list that appears, as shown in Figure 3-3.

Apple menu icon

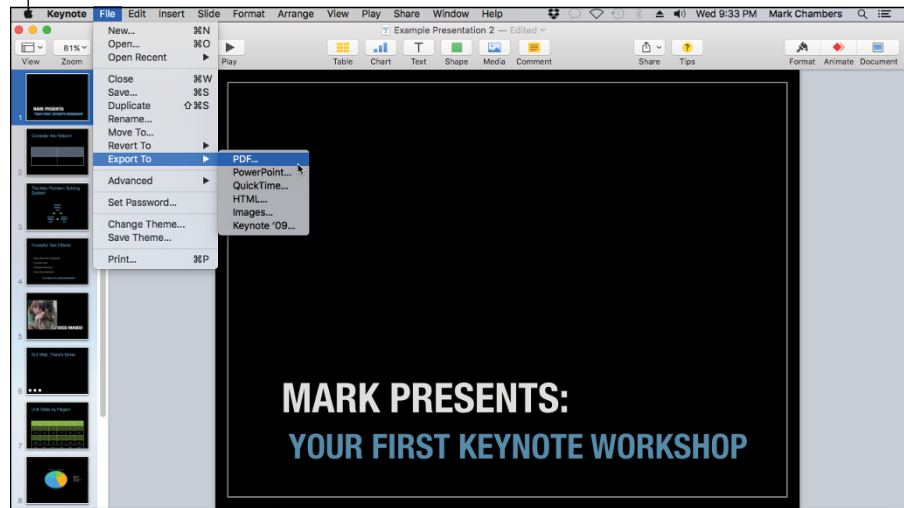



FIGURE 3-3: Clicking a menu displays a list of menu commands.

When you click a menu, it extends down so that you can see the commands it includes. While the menu is extended, you can choose any enabled menu item (just click it) to perform that action. You can tell that an item is enabled if its name appears in black. Conversely, a menu command is disabled if it appears grayed out. Clicking it does nothing.



When you see a menu path printed in this book (such as File⇧Save), it's just a visual shortcut that tells you to click the File menu and then choose Save from the drop-down menu that appears.

Virtually every Mac application has some menus, such as File, Edit, and Window. You're likely to find similar commands within these menus. However, only two menus are in every OS X application:

- » The *Apple menu*, which is identified with that jaunty Apple Corporation icon, . This is a special menu because it appears in both the Finder menu bar and the menu bar in every application you run. It doesn't matter whether you're in iTunes or Photoshop or Word. If you can see a menu bar, the Apple menu is there. The Apple menu contains common commands to use no matter where you are in El Capitan, such as Restart, Shut Down, and System Preferences. Figure 3-3 proudly displays the Apple icon at the upper left.
- » The *Application menu*, which always bears the name of the active application. The DVD Player menu group appears when you run the El Capitan DVD Player, for example, and the Word menu group appears when you launch Microsoft Word.



TIP

You can also display a context or shortcut menu — which regular human beings call a *right-click menu* — by right-clicking the El Capitan Desktop, an application, a folder, or a file icon. (If your iMac is equipped with a trackpad, you can right-click by tapping the trackpad with two fingertips. I explain tapping later in this chapter.)

The Finder menu bar is your friend

Whenever the Finder itself is ready to be used (or, in Mac-speak, whenever the Finder is the *active* application), the Finder menu bar appears at the top of the screen. You know the Finder is active and ready when the word *Finder* appears at the left of the menu bar.

There's always room for one more window

You're probably already familiar with the ubiquitous window itself. Both El Capitan and the applications you run use windows to display things such as

- » The documents you create
- » The contents of your drive

For example, the window shown in Figure 3-1 is a Finder window, where El Capitan gives you access to the applications, documents, and folders on your system. You use Finder windows to launch applications, to perform disk chores such as copying and moving files, and to navigate your hard drive.



TECHNICAL
STUFF

IT'S APPLE TO THE RESCUE!

Unix is the established, super-reliable OS that powers most of the high-performance servers that make up the Internet. Unix has built-in support for virtually every hardware device ever wrought by the Hand of Man (including all the cool stuff that comes with your iMac). It's also well designed and highly efficient.

Unfortunately, standard Unix looks as hideous as old-fashioned character-based DOS, complete with a confusing command line. So ease of use for normal human beings like you and me goes out the window. Enter the genius types at Apple, who understood several years ago that all Unix needed was a state-of-the-art, novice-friendly interface. To wit: OS X was developed with a Unix foundation (or *core*), so it shares the reliability and performance of Unix. However, the software engineers at Apple (who know a thing or two about ease of use) made it good-looking and easy to use.

Wait a Second: Where the Heck Are the Mouse Buttons?

El Capitan takes a visual approach to everything, and what you see in Figure 3-1 is designed for point-and-click convenience. That's because the mouse (or trackpad) are your primary navigational tools while you're using your iMac. Of course, you move the body of the mouse and the pointer follows like an obedient pup. Likewise, you move your finger over the surface of the trackpad to move the pointer. (The faster you move your finger, the farther the pointer goes.) When your pointer is over the desired item, you tap it (or *click* it, if you prefer the more familiar term), it opens, you do your thing, and life is good.

But wait! If you've grazed on the other side of the fence — one of Those Who Were Once Windows Users — you're probably accustomed to using a mouse with at least two buttons. This brings up the nagging question: "Hey, Mark! Where the heck are my mouse buttons?" Or perhaps you're thinking even farther out of the box, and you ordered a Magic Trackpad 2 as your pointing device of choice. Again, no buttons!

In a nutshell, the "buttons" on your iMac's Magic Mouse 2 (or Magic Trackpad 2) are the entire top surface! Although you won't see any separate buttons for clicking, your Magic pointing device can tell when you tap with one finger (to single-click). iMac owners should think "tap" whenever they read "click" in the Apple world. If you've used an iPhone, iPad, or iPod touch, the idea of *tapping* something onscreen makes perfect sense. (In this book I refer to the *pointer* whether you're using the trackpad or a mouse.)



TIP

To configure everything Magic Mouse 2 — including all your buttons and your double-click/tracking/scrolling speeds — visit the Mouse pane within System Preferences. You can also configure your wireless mouse from here as well. Similarly, you can configure your wireless Magic Trackpad 2 using the Trackpad pane.

Speaking of right-clicking, you can easily configure your Apple pointing device to recognize a right-click (also called a *secondary click*) within System Preferences. Tapping the top-right corner (of a Magic Mouse 2) or tapping with two fingers (on the Magic Trackpad 2) performs the same default function in El Capitan that clicking the right mouse button does in Windows. Namely, when you right-click most items — icons, documents, even your Desktop — you get a *shortcut menu* of things. That is, you get more commands specific to that item. (To keep familiar things familiar, I call it the “right-click menu,” and I promise to refer to it as such for the rest of the book.)

Figure 3-4 shows a typical convenient right-click menu in a Finder window. I have all sorts of cool items at my disposal on this menu because of the applications I’ve installed that make use of a right-click menu.

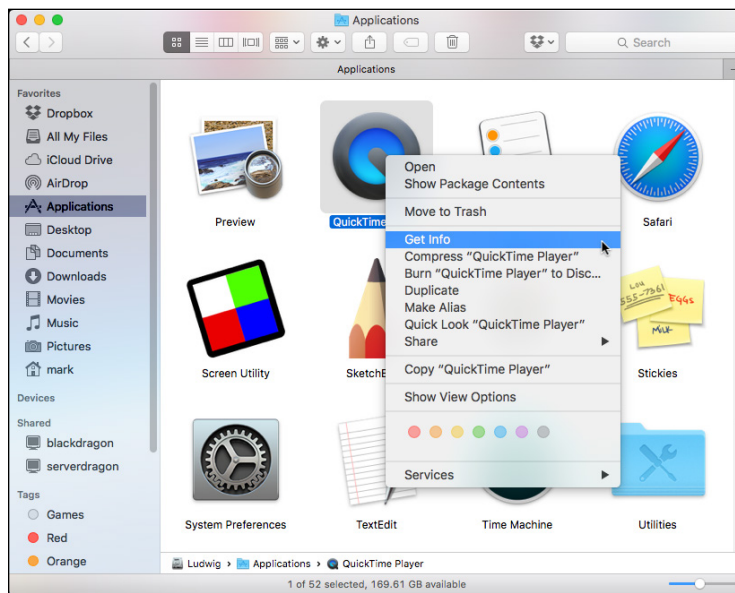


FIGURE 3-4:

Welcome to your shortcut menu!



WARNING

If you’re using a Magic Trackpad 2 with your iMac, never use any object other than your finger (or a trackpad stylus) on the trackpad surface! That means no pencils (no, not even the eraser end), pens, or chopsticks; they can damage your trackpad in no time at all. And no, that doesn’t bode well for ladies with long fingernails.

But that's not all. Apple's series of Multi-Touch gestures for your Magic Mouse 2 and Magic Trackpad 2 include all sorts of handy time-saving commands! Depending on the changes you make within the Mouse and Trackpad panes in System Preferences, these gestures can include

- » **Double-clicking:** Tap twice with one finger to double-click.
- » **Scrolling:** To move in any direction within a document window, swipe two fingers across the surface in that direction.
- » **Two-finger paging:** Swipe your thumb and first fingertip to the left or right across the surface to page through a document or move to the next or previous image in a set (like web pages in Safari or photos in your iPhoto library).
- » **Two-finger zooming:** Pinching your thumb and first fingertip toward each other on the surface zooms in on a document or image. The reverse (moving your fingertips away from each other) zooms out. You can also enable zooming with a modifier key.
- » **Three-finger full-screen switching:** Swipe your thumb and first two fingertips to the left or right across the surface to move between open applications in full-screen mode.
- » **Rotate:** Place your thumb and index finger on the surface and turn clockwise (or counterclockwise) to rotate a photo.
- » **Select the Look Up & Data Detectors check box:** If your iMac is equipped with a Force Touch Magic Trackpad 2, you can choose how Force Click operates. Note that this advanced option will not appear if your iMac has an older trackpad.
- » **Enable the Look Up check box:** Tap the trackpad with three fingers to look up a selected word in the Dictionary.
- » **Enable the Three Finger Drag check box:** (Sounds like a dance from the '60s, doesn't it?) By using three fingers, you can drag around windows on your Desktop to reposition them.
- » **Adjust your tracking speed and Force Click pressure:** Click and drag the Tracking speed slider to speed up or slow down the rate at which the pointer moves. The Click pressure slider controls how hard you must press to activate Force Click.
- » **Perform actions within OS X itself:** Using the combination of thumb and fingers you specify, you can configure the display and operation of many features within El Capitan.

I know all these gestures sound like a kids' gymnastics meet, but they'll soon become second nature to you. I recommend that you visit the Mouse and Trackpad panes in System Preferences and simply experiment with the possibilities of Multi-Touch. Each gesture is demonstrated with a video clip, making the gestures very easy to learn!

DOING THE FORCE CLICK THING

Today's crop of iMacs has the smartest trackpads on the planet! That's because Apple's latest trackpads include *Force Click*, which activates specific features if your fingers press down harder on the trackpad surface. (Your iMac must be equipped with a Force Touch Magic Trackpad 2 to use a Force Click.)

At the time of this writing, you can Force Click a text or links in documents, web pages, and email messages to display related data, or Force Click a document icon to display its contents without opening it. Other Force Click functions vary by application, but you can check the Help system within any application to see whether it offers Force Click commands.



REMEMBER

If you prefer a more familiar feel to your pointing device, there's no shame in connecting an old-fashioned USB mouse with buttons to your iMac! Today's third-party mice typically have at least two buttons and a scroll wheel, and may offer even finer control in your applications.

Launching and Quitting Applications with Aplomb

Now it's time to pair your newly found Magic Mouse 2 and Magic Trackpad 2 acumen with the El Capitan Finder window. Follow along with this simple exercise. Move the pointer over the iTunes icon on the Dock. (This icon looks like a circle with a musical note on it.) Then tap the surface of your mouse or trackpad once. (See the preceding section for how to set this preference.) Whoosh! El Capitan *launches* (or starts, or runs) the iTunes application, and you see a window much like the one shown in Figure 3-5.



TIP

If an application icon is already selected (which I discuss later in the chapter), you can simply press $\text{⌘}+\text{O}$ to launch it. The same key shortcut works with documents, too.

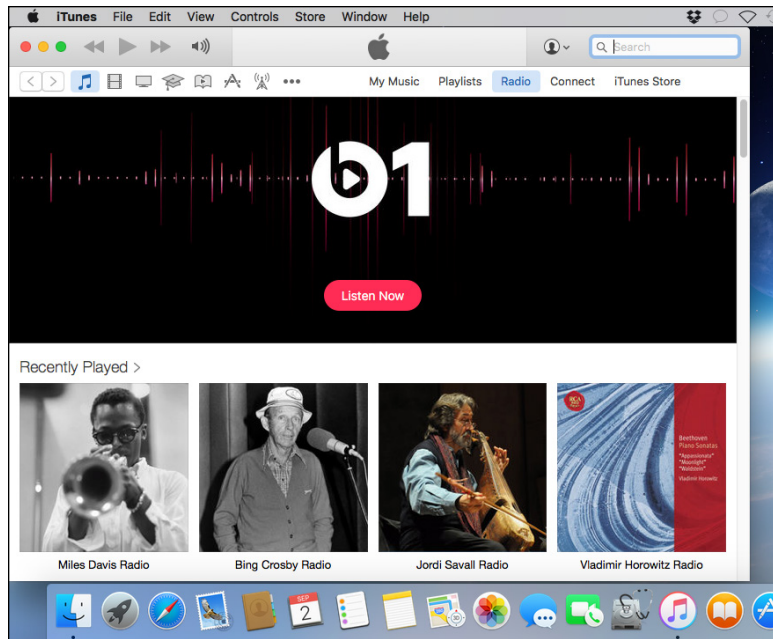


FIGURE 3-5: Click a Dock icon to launch that application.

Besides the Dock, you have a plethora of ways to launch an application or open a document in El Capitan:

- » **From the Apple menu (🍏):** You can launch many applications from anywhere in El Capitan using the Apple menu. Click *System Preferences* to change all sorts of settings, such as your display background and how icons appear. Click *App Store* to launch the OS X App Store and display software that you can download for your iMac. (Most are commercial applications that you have to pay for, but many great free applications are available as well.) You can also use the App Store to see whether update patches are available for your Apple software
- » **From the Launchpad:** Arrange all your application icons in a full-screen display. (The Launchpad icon on the Dock bears a spiffy rocket.) If you have more than one screen (or *page*) worth of applications, press the arrow keys to move between Launchpad pages. Using the trackpad, swipe two fingers to the left or right. To launch an application, just click the icon. (If you're the proud owner of an iPhone, iPad, or iPod touch, the Launchpad is familiar, because it corresponds directly to the iOS Home screen on those devices.)

DIG THAT CRAZY LAUNCHPAD!

You can customize your Launchpad display by dragging icons to arrange them in the order you prefer. (For example, I have all the applications I use the most on the first Launchpad page.) Drag an application icon to the right or left side of the screen to move it to another page.

Launchpad, like a Finder window, allows you to create folders to help organize your applications. To create a folder in Launchpad, drag one application icon on top of another, and then add other icons by dragging them to the folder (or remove them by dragging them out of the folder). To run an application within a folder, click the folder icon to display the icons within it and then click the desired application. To change a folder name, click the folder to open it, click the folder name to display a text-editing box, type the new moniker for the folder, and press Return.

If you want to remove an application from Launchpad — *which also deletes the application from your iMac entirely* — click the icon and continue pressing the surface until the icons start to wiggle. (Yes, you read that correctly; I wrote *wiggle*. iPhone and iPad owners know what I mean.) Click the tiny delete (X) button that appears next to the icon whose application you want to delete, and the icon — and its application — disappear. Press Esc to stop all that wiggling. (Note that applications supplied with El Capitan can't be deleted this way.)



TIP

» **From the Desktop:** If you have a document you created or an application icon on your Desktop, you can launch or open it from the Desktop by *double-clicking* that icon (tapping the mouse or trackpad surface twice with one finger in rapid succession when the pointer is on top of the icon).

Double-clicking a device or network connection on your Desktop opens the contents in a Finder window. This method works for CDs and DVDs you've loaded, as well as external drives and USB flash drives. Just double-click 'em to open them and display their contents in a Finder window. Applications and documents typically launch from a CD, a DVD, or an external drive just like they launch from your internal drive (the one that's typically named *Macintosh HD*). So you don't have to copy stuff from the external drive just to use it. Note, however, that running an application directly from your optical or external drive usually causes the application to run significantly slower. (Oh, and don't forget that you can't change the contents of most CDs and DVDs; they're read-only, so you can't write to them.)

» **From the Recent Items selection:** When you click the Apple menu and hover the pointer over the Recent Items menu item, the Finder displays all the applications and documents you used over the past few computing sessions. Click an item in this list to launch or open it.

- » **From the login items list:** Login items are applications that El Capitan launches automatically each time you log in to your user account. I cover login items in detail in Chapter 10.
- » **From the Finder window:** You can also double-click an icon within the confines of a Finder window to open it (for documents), launch it (for applications), or display the contents (for a folder).



TIP

The OS X Quick Look feature can display the contents of just about any document or file — but without actually opening the corresponding application! *Sweet.* To use Quick Look from a Finder window, click a file to select it and then press the spacebar.

After you finish using an application, you can quit that application to close its window and return to the Desktop. Here are different ways to quit an application:

- » **Press ⌘+Q.** This keyboard shortcut quits virtually every Macintosh application. Just make sure that the application you want to quit is currently active first (the application name should appear immediately to the right of the Apple [] menu).
- » **Choose the Quit command from the application's menu.** To display the Quit command, click the application's named menu from the menu bar. As I just mentioned, this menu is always to the immediate right of the Apple () menu. For example, Safari displays a Safari menu, and that same spot in the menu bar is taken up by Calendar when Calendar is the active application. Refer to Figure 3-5, and look for the iTunes menu, right next to  at the very top of the figure.
- » **Choose Quit from the Dock.** You can right-click an application's icon on the Dock and then choose Quit from the menu that appears.



TIP

A running application displays a small dot under its icon on the Dock.

- » **Click the Close button in the application window.** Some applications quit when you close their window, such as the System Preferences window or the Apple DVD Player. Other applications continue running without any window, such as Safari or iTunes; to close these applications, you have to use another method in this list. (More on window controls like Close in the next section.)



WARNING

- » **Choose Force Quit from the Apple menu.** *This is a last-resort measure!* Use this method only if an application has frozen and you can't use another method in this list to quit. Force-quitting an application doesn't save any changes to any open documents in that application!

Performing Tricks with Finder Windows

In the following sections of your introduction to OS X, I describe basic windows management in El Capitan: how to move things around, how to close windows, and how to make windows disappear and reappear like magic.

Scrolling in and resizing windows

Can you imagine what life would be like if you couldn't see more than a single window's worth of stuff? Shopping would be curtailed quite a bit — and so would the contents of the folders on your iMac's drives!

That's why El Capitan adds *scroll bars* that you can click and drag to move through the window's contents. (By default, scroll bars don't appear in El Capitan until you move the pointer close to them.) You can

- » Click the scroll box and drag it. For the uninitiated, that means clicking the darker portion of the bar and holding down your finger on the surface while you move your finger in the desired direction.
- » Click anywhere in the empty area above or below the scroll box to scroll pages one at a time.
- » Hold down the Option key and click anywhere in the empty area above or below the bar to scroll to that spot in the document.



TIP

Of course, you can also drag two fingertips across the surface to scroll a window's contents (both vertically and horizontally). To control this behavior, open System Preferences and click either the Mouse or Trackpad pane, depending on which type of pointing device you're using. You can read all about configuring settings in the earlier section “Wait a Second: Where the Heck Are the Mouse Buttons?”

Figure 3-6 shows two horizontal scroll bars in a typical Finder window, as well as the Sidebar and three Finder Tabs.



TIP

Often, pressing the Page Up and Page Down keys moves you through a document one page at a time. Also, pressing the arrow keys moves the insertion pointer one line or one character in the four compass directions.

You can also resize most Finder and application windows by enlarging or reducing the window frame itself. Move the pointer over any corner or edge of a window and then drag the edge in any direction until the window is the precise size you need. (More information on dragging pops up later in this chapter.)

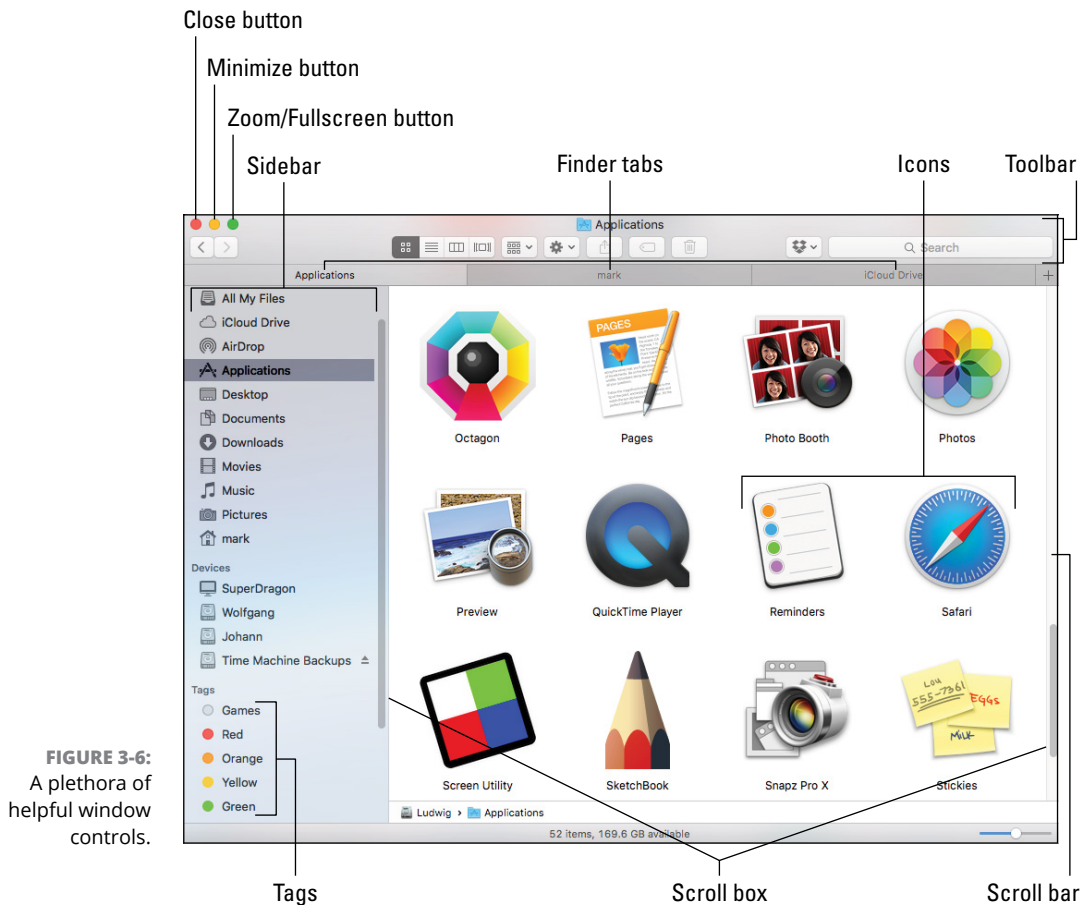


FIGURE 3-6:
A plethora of helpful window controls.

Minimizing and restoring windows

Resizing a window is indeed helpful, but maybe you simply want to banish the doggone thing until you need it again. That's a situation for the Minimize button, which also appears earlier, in Figure 3-6. A *minimized* window disappears from the Desktop but isn't closed; it simply reappears in the Dock as a miniature icon. Minimizing a window is easy: Move the pointer over the Minimize button (the second of the three buttons at the upper-left corner of the window) — a minus sign appears in the button to tell you you're on target — and then click. Here's a good shortcut: Double-clicking the window's *title bar* (the top frame of the window, which usually includes a document or application name) minimizes the window.



TIP

Hold down the Shift key while you minimize, and prepare to be amazed when the window shrinks in slow motion like Alice in Wonderland!

To restore the window to its full size (and its original position on the Desktop), just click its window icon on the Dock.

Moving and zooming windows

Perhaps you want to move a window to another location on the Desktop so that you can see the contents of multiple windows at the same time. Click the window's title bar and drag the window anywhere you like. Then release the button. (Don't click the icon on the center of the title bar, though. You'll move just the icon itself, not the window.)



TIP

Many applications can automatically arrange multiple windows for you (examples include Microsoft Word and PowerPoint). Choose Window⇧Arrange All (if this option appears).

To see everything a window can show you, use the Zoom feature to expand any Finder or application window to its maximum practical size. (Zooming a Finder window is different from zooming with the Multi-Touch feature, because you're expanding only the Finder window, not an image or document.) Note that a zoomed window can fill the entire screen, or (if that extra space isn't applicable for the application) the window might expand to only a larger part of the Desktop.

To zoom a window, move your pointer over the third button at the top-left corner of the window. Again, refer to Figure 3-6, which struts its stuff and illustrates the position. (Man, that is one versatile figure.) A double-arrow icon appears on the Zoom/Full-Screen button. Click to expand your horizons to full-screen, or hold down the Option key while clicking to zoom the window to maximum size.

Speaking of *full-screen* operation, it comes in very handy on a smaller iMac display. That's where a single application fills the entire screen, without displaying a window frame or traditional Finder menu bar. The method you use to switch to full-screen mode varies depending on the application, so there's no One Menu Command or One Keyboard Shortcut that will always do the deed. Most of the applications included with OS X El Capitan use View⇧Enter Full Screen, and many applications have a button you can click in the window to switch back and forth. A click of the Zoom/Full-Screen button switches most Apple applications into full-screen. Finder windows can also be switched to full-screen mode in El Capitan! To exit full-screen mode, just press Esc.

So how do you switch between applications if they're all in full-screen mode?

- » Move your pointer to the bottom of the screen to display the Dock, where you can click another application to switch to it.

- » Invoke Mission Control and choose another application from there. (More about Mission Control later in this chapter.)
- » Using a Magic Trackpad 2? Swipe three fingers to the left or right across the trackpad surface.
- » From the keyboard, use the ⌘+Tab shortcut to cycle through the applications you have running.

Closing windows

When you're finished with an application or you no longer need to have a window open, move the pointer over the Close button at the upper-left corner of the window (the first of the three circular buttons). When the X appears in the button, click it. (And yes, I can make *one more* reference to Figure 3-6, which I'm thinking of nominating as Figure of the Year.)



TIP

Perhaps you have more than one window open in the same application, and you want to close 'em all in one fell swoop. Hold down the Option key while you click the Close button in any of the windows.

TOGGLING TOOLBARS THE EL CAPITAN WAY

It's time to define a window control that's actually *inside* the window for a change. A *toolbar* is a strip of icons that generally appears under the window's title bar (although toolbars can appear in other locations as well). These icons typically perform the most common actions in an application; the effect is the same as if you used a menu command or pressed a keyboard shortcut. Toolbars are popular these days. You see 'em in everything from the Finder window to most application windows.

You can usually banish a window's toolbar to make extra room for icons, documents, or whatever the window happens to be holding. Just choose View ⇨ Hide Toolbar. To restore the toolbar to its original position, choose View ⇨ Show Toolbar. **Note:** If you toggle the Finder window toolbar off, you also lose the Finder window sidebar.



AUTHOR
SAYS

ONLY ONE WINDOW CAN BE ACTIVE AT ONCE

Here's a very special Mark's Maxim in the OS X universe:

Only one application window can be active in El Capitan at any time.

You can always tell which window is active:

- The active window is on top of other windows. (You can still use a window's Close, Minimize, and Zoom buttons when the window is inactive.)
- Any input you make by typing appears in the active window.
- OS X *dims* the title bars of inactive windows you haven't minimized.



REMEMBER

If you haven't saved a document, and you try to close that application's window, the application gets downright surly and prompts you for confirmation. "Hey, human, you don't really want to do this, do you?" If you answer in the affirmative — "Why, yes, machine. Yes, indeed, I do want to throw this away and not save it." — the application discards the document you were working on. If you decide to keep your document (thereby saving your posterior from harm), you can cancel the action and then save the document within the application.

Juggling Folders and Icons

Finder windows aren't just for launching applications and opening the files and documents you create. You can also use the icons in a Finder window to select one or more specific items or to copy and move items from place to place within your system.

A field observer's guide to icons

Not all icons are created equal. Earlier in this chapter, I introduce you to your iMac's drive icon on the Desktop. Here's a little background on the other types of icons you might encounter during your mobile Mac travels:

- » **Hardware:** These icons are your internal storage devices (such as your hard drive and optical drive, if you have one) as well as external peripherals like an external hard drive or a USB flash drive.

- » **Applications:** These icons represent the applications (or programs) you can launch. Most applications have a custom icon that incorporates the company's logo or the specific application logo. Double-clicking an application usually doesn't load a document automatically; you typically get a new blank document or an Open dialog box from which you can choose the existing file you want to open.
- » **Documents:** Many of the files on your hard drive are documents that can be opened in the corresponding application; the icon usually looks similar to the application's icon so they're easy to recognize, as you can see in Figure 3-7. Double-clicking a document automatically launches the associated application (that is, as long as OS X recognizes the file type).



FIGURE 3-7:
A collection of
some of
my favorite
document icons.

- » **Files:** Most of the file icons on your system are mundane things such as preferences and settings files, text files, log files, and miscellaneous data files. Yet most are identified with at least some type of recognizable icon that lets you guess what purpose the file serves. You'll also come across generic file icons that look like a blank sheet of paper (used when El Capitan has no earthly idea what the file type is).
- » **Aliases:** An *alias* acts as a link to another item elsewhere on your system. For example, to launch Adobe Acrobat, you can click an Adobe Acrobat alias icon that you can create on your Desktop instead of clicking the actual Acrobat application icon. The alias essentially acts the same way as the original icon, but it doesn't take up the same amount of space — only a few bytes for the icon itself, compared with the size of the actual application. Also, you don't have to go digging through folders galore to find the original application icon. (Windows switchers know an alias as a *shortcut*. The idea is the same, although Macs had it first. Harrumph.) You can always identify an alias by the

small curved arrow at the base of the icon, and the icon might also sport the tag `alias` at the end of its name.

You have two ways to create an alias. Here's one:

1. *Select the item.*

The following section has details about selecting icons.

2. *Choose File ⇧ Make Alias, or press ⇧ +L.*

Figure 3-8 shows aliases for OS X applications, each complete with that fashionable alias arrow.

FIGURE 3-8:
These are alias
icons in El
Capitan.
Stunning, no?



Here's another way to create an alias:

1. *Hold down ⇧ +Option.*

2. *Drag the original icon to the location where you want the alias.*

Note that this funky method doesn't add the `alias` tag to the end of the alias icon name unless you drag the icon to another spot in the same folder.



TIP

So why bother to use an alias? Two good reasons:

» **You can launch an application or open a document from anywhere on your drive.** For example, if you occasionally need to use another application while working on a Pages project, you can add an alias and launch the other application directly from the folder where you store those Pages documents. Speed, organization, and convenience. Life is good.

» **You can send an alias to the Trash without affecting the original item.** When that school project is finished, you can safely delete the entire folder without worrying about whether Pages will run the next time you double-click the application icon! Make sure, however, that you're deleting an alias and not the actual item (look for the curved alias arrow at the bottom of the icon).

Selecting items

Often, the menu or keyboard commands you perform in the Finder need to be performed on something. Perhaps you're moving an item to the Trash, getting more information on the item, or creating an alias for that item. To identify the target of your action to the Finder, you need to select one or more items on your Desktop or in a Finder window. In the following sections, I show you just how to do that.

Selecting one thing

El Capitan gives you a couple of options when selecting just one item for an upcoming action:

- » **Move the pointer over the item and click.** A dark border (or *highlight*) appears around the icon, indicating that it's selected.
- » **If an icon is already highlighted on your Desktop or in a window, move the selection highlight to another icon in the same location by using the arrow keys.** To shift the selection highlight alphabetically, press Tab (to move in order) or press Shift+Tab (to move in reverse order).



REMEMBER

Selecting items in the Finder doesn't actually *do* anything to them by itself. You have to perform an action on the selected items to make something happen.

Selecting a whole bunch of things

You can also select multiple items with aplomb by using one of these methods:

- » **Adjacent items:**
 - *Drag a box around them.* If that sounds like ancient Sumerian, here's the explanation: Click a spot above and to the left of the first item. Keep holding down your finger on the trackpad surface, and drag down and to the right. (This is *dragging* in Mac-speak.) A box outline like the one shown in Figure 3-9 appears, indicating what you're selecting. Any icons that touch or appear within the box outline are selected when you release the button.
 - *Click the first item to select it and then hold down the Shift key while you click the last item.* El Capitan selects both items and everything between them.
- » **Nonadjacent items:** Select these by holding down the ⌘ key while you click each item.

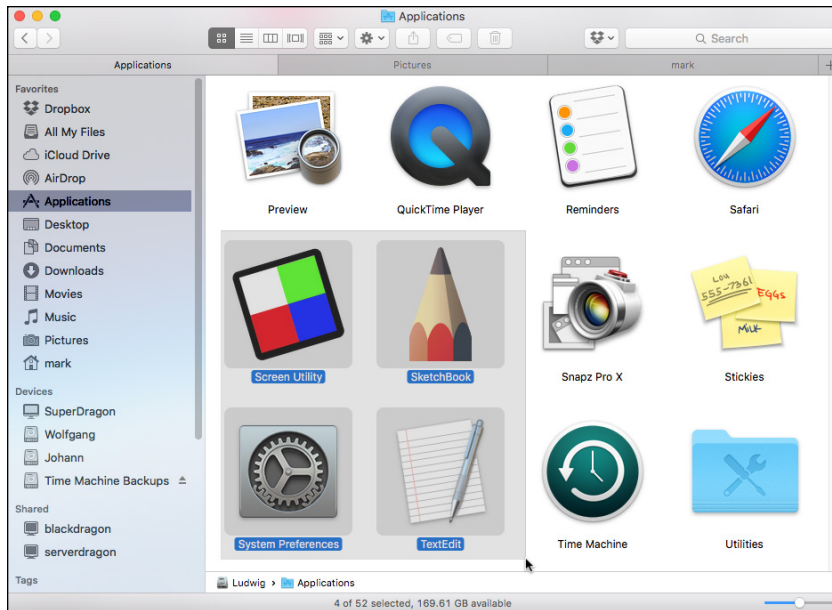


FIGURE 3-9:
Drag a box
around icons to
select them.



TIP

Check out the status bar (which can appear at the top or bottom of a Finder window, depending on whether the toolbar is hidden). It tells you how much space is available on the drive you're working in, as well as how many items are displayed in the current Finder window. When you select items, it shows you how many you highlighted. (If you don't see a status bar, choose View ⇨ Show Status Bar.)

Copying items

Want to copy items from one Finder window to another, or from one location (like a flash drive) to another (like your Desktop)? *Très* easy. Just use one of these methods:

» On the same drive

- *To copy one item to another location:* Hold down the Option key (you don't have to select the icon first) and then click and drag the item from its current home to the new location.



TIP

To put a copy of an item in a folder, just drop the item on top of the receiving folder. If you hold the item you're dragging over the destination folder for a second or two, El Capitan opens a new window so that you can see the target's contents. (This is called a *spring-loaded* folder. Really.) You can turn off this spring-loaded behavior by choosing Finder ⇨ Preferences and clicking the Spring-loaded Folders and Windows check box to disable it.

- *To copy multiple items to another location:* Select them all (see the preceding section), hold down the Option key, and then drag-and-drop one of the selected items where you want it. All the items you selected follow the item you drag. (Rather like lemmings. Nice touch, don't you think?)

To help indicate your target when you're copying files, El Capitan highlights the location to show you where the items will end up. (This works whether the target location is a folder or a drive icon.) If the target location is a window, El Capitan adds a highlight to the window border.

» On a different drive

- *To copy one or multiple items:* Click and drag the icon (or the selected items if you have more than one) from the original window to a window you open on the target drive. (No need to hold down the Option key while copying to a different drive.) You can also drag one item (or a selected group of items) and simply drop the items on top of the drive icon on your Desktop.

The items are copied to the top level, or *root*, of the target drive.



REMEMBER

If you try to move or copy something to a location that already has an item with the same name, you see a dialog that prompts you to decide whether to replace the file or to stop the copy/move procedure and leave the existing file alone. (Heck, you can even keep *both* — OS X performs the copy or move, but also appends the word *copy* to the item being copied.) Good insurance, indeed.

Moving things from place to place

Moving things from one location to another location on the same drive is the easiest action you can take. Just drag the selected item or items to the new location. The item disappears from the original spot and reappears in the new spot.

MY, WHAT AN ATTRACTIVE SIDEBAR . . . AND SO USEFUL!

Have you noticed the sidebar that typically occupies the left side of a Finder window? It's a pane of links to common locations and devices that you can use to jump like a flash to a specific spot on your hard drive. For example, you can click the Applications link under the Favorites heading, and you're transported to your Applications folder in an instant.

(continued)

(continued)

Here's a great example of sidebar magic: I like as few icons on my Desktop as possible, so each book I'm working on gets its own folder. All the items for that project that might otherwise end up on my Desktop are saved to that folder instead. In fact, I make a point of adding my current book project folder to my Finder-window sidebar so that it's available immediately from any Finder window. To do this, just drag the folder into the column at the left side of the Finder window and drop it on top of the Favorites heading in the sidebar's list.

You can configure the items that will appear in your sidebar: Choose Finder ⇨ Preferences and then click the Sidebar tab to display the list. From there, you can select and deselect check boxes to configure your sidebar to your liking.

Duplicating in a jiffy

If you need more than one copy of the same item in a folder, use the El Capitan Duplicate command. I use Duplicate often when I want to edit a document but want to ensure that the original document stays pristine, no matter what. I just create a duplicate and edit that file instead.

To use Duplicate, you can

- » Click an item to select it and then choose File ⇨ Duplicate.
- » Right-click the item and choose Duplicate from the menu.
- » Hold down the Option key and drag the original item to another spot in the same window. When you release the trackpad button, the duplicate file appears like magic!

The duplicate item has the word `copy` appended to its name. A second copy is named `copy2`, a third is `copy3`, and so on.



REMEMBER

Duplicating a folder also duplicates all the contents of that folder. Therefore, creating a duplicate folder can take some time if the original folder was stuffed full (or contained files several hundred megabytes or larger). The duplicate folder has `copy` appended to its name, but the contents of the duplicate folder keep their original names.

Using Finder tabs

El Capitan includes a powerful feature you can use to display multiple locations in the same window. *Finder Tabs* work just like the tabs in Safari (as well as other

popular browsers for both Macs and PCs), allowing you switch between multiple locations on your Mac *instantly* by clicking a tab to switch to that location. You can even drag files and folders from tab to tab!

To open a new tab in a Finder window, you have a wealth of choices:

- » Click the desired location and press ⌘+T.
- » Right-click the location and choose Open in New Tab.
- » Select the location and click the New Tab button (which bears a plus sign) at the right side of the window.
- » Click the Action icon (which bears a gear icon) in any Finder window toolbar, and choose New Tab.

Suppose that you're working on an iMovie project. You might create tabs using the Applications item in the Finder window sidebar and a folder (or even a USB flash drive or shared network drive) named Work that contains your video clips. The location appears as a new tab immediately under the toolbar. You can open as many tabs as you like, and you can also drag the Finder Tabs themselves to reorder them. To close a tab, hover the pointer over it and click the X button that appears. That hard-working Figure 3-6 (shown earlier in the chapter) shows three Finder Tabs at work.



TIP

You can also set new folders to open in tabs instead of windows, which can really conserve your desktop real estate! Just click the Finder menu at the top of the Desktop, choose Preferences, and then select the Open Folders in Tabs Instead of New Windows check box to enable it. Now you'll avoid peering at an office building's worth of Finder windows trying to locate the right folder.







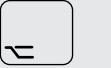
Keys and Keyboard Shortcuts to Fame and Fortune

Your iMac's keyboard might not be as glamorous as the trackpad, but any Macintosh power user will tell you that using keyboard shortcuts is usually the fastest method of performing certain tasks in the Finder, such as saving or closing a file. I recommend committing these shortcuts to memory and putting them to work as soon as you begin using your iMac so that they become second nature to you as quickly as possible.

Special keys on the keyboard

The Apple standard keyboard has a number of special keys that you might not recognize — especially if you’ve made the smart move and decided to migrate from the chaos that is Windows to OS X! Table 3-1 lists the keys that bear strange hieroglyphics on the Apple keyboard and describes what they do. (Note that there is a veritable plethora of different Apple keyboards, so your keyboard may not have all the keys listed in the table. Heck, depending on the size of the keyboard, you may not even have a numeric keypad.)

TABLE 3-1 Too-Cool Function Keys

Action/Key Name	Symbol	Purpose
Media Eject		Ejects a CD or DVD from your optical drive (if you have one)
Audio Mute		Mutes (and restores) all sound produced by your iMac
Volume Up		Increases the sound volume
Volume Down		Decreases the sound volume
Ctrl		Displays the right-click/Control+click menu with the trackpad
Command		Primary modifier for menus and keyboard shortcuts
Delete		Deletes selected text
Option		Modifier for shortcuts

Using the Finder and application keyboard shortcuts

The Finder is chock-full of keyboard shortcuts that you can use to take care of common tasks. Some of the handiest shortcuts are listed in Table 3-2.

TABLE 3-2

El Capitan Keyboard Shortcuts of Distinction

Key Combination	Location	Action
⌘+A	Edit menu	Selects all items (works in the Finder, too)
⌘+C	Edit menu	Copies the selected items to the Clipboard
⌘+H	Application menu	Hides the current application window
⌘+M	Window menu	Minimizes the active window to the Dock (also works in the Finder)
⌘+O	File menu	Opens or launches an existing document, file, or folder (also works in the Finder)
⌘+P	File menu	Prints the current document
⌘+Q	Application menu	Exits (quits) the application and prompts you to save any changes
⌘+T	File menu	Opens a new Finder Tab with the currently selected location
⌘+V	Edit menu	Pastes the contents of the Clipboard at the current pointer position
⌘+X	Edit menu	Cuts the highlighted item to the Clipboard
⌘+Z	Edit menu	Reverses (undoes) the effect of the last action you took
⌘+?	Help menu	Displays the Help system (works in the Finder, too)
⌘+Tab	Finder	Switches between open applications
⌘+Option+M	Finder	Minimizes all Finder windows to the Dock
⌘+Option+W	Finder	Closes all Finder windows



TIP

But wait; there's more! Most of your applications also provide their own set of keyboard shortcuts. While you're working with a new application, display the application's Help file and print a copy of the keyboard shortcuts as a handy cheat sheet.

If you've used a PC before, you're certainly familiar with three-key shortcuts. The most infamous is Ctrl+Alt+Del, the beloved reboot/Task Manager shortcut nicknamed the *Windows three-finger salute*. Three-key shortcuts work the same way in El Capitan (but you'll be thrilled to know you don't need to reboot by using that notorious Windows shortcut). If you're new to computing, to use a three-key shortcut, hold down the first two keys and then press the third key.



TIP

You're not limited to the keyboard shortcuts I've listed. In System Preferences, visit the Keyboard pane and then click the Shortcuts tab to change an existing shortcut or add a shortcut.

Home, Sweet Home Folder

Each user account you create in El Capitan is actually a self-contained universe. For example, each user has a number of unique characteristics and folders devoted to just that person, and El Capitan keeps track of everything that user changes or creates. (In Chapter 10, I describe the innate loveliness of multiple users living in peace and harmony on your iMac.)

This unique universe includes a different system of folders for each user account on your system. The top-level folder uses the short username El Capitan assigns when that user account is created. Naturally, the actual folder name is different for each person. Mac techno types typically call this folder your *Home folder*. (On the sidebar, look for the teeny house icon under the Favorites heading, marked with your account name.)



REMEMBER

When you're on the hunt for your Home folder, don't look for a folder that's actually named *Home*. Instead, look for the short username that was assigned when you created the user account.

Each account's Home folder contains a set of subfolders, including

- »» Movies
- »» Music
- »» Pictures
- »» Downloads (for files you download by using Safari or through Apple Mail attachments)
- »» Public (for files you want to share with others on your network)
- »» Sites (for web pages created by the user)
- »» Documents (for files created by the user)

Although you can store your stuff at the *root* (top level) of your drive — or even on your Desktop — that gaggle of files, folders, and aliases can get crowded and confusing quickly. Here's a Mark's Maxim to live by:



AUTHOR
SAYS

Your Home folder is where you hang out and where you store your stuff. Use it to make your computing life *much easier!*



TIP

Create subfolders within your Documents folder to organize your files and folders even further. For example, I create a subfolder in my Documents folder for every book I write so that I can quickly and easily locate all the documents and files associated with that book project.

I discuss security in your Home folder and what gets stored where in Chapter 10. For now, remember you can reach your Home folder easily, because it appears in the Finder window sidebar. One click of your Home folder, and all your stuff is within easy reach. (If your Home folder doesn't appear in the sidebar, that's easy to fix: Choose Finder ⇨ Preferences, click the Sidebar tab, and then select the check box to display your Home folder.)

In addition to using the Finder window sidebar, you can reach your Home folder in other convenient ways:

- » **From the Go menu:** Choose Go ⇨ Home to display your Home folder immediately from the Finder window. Alternatively, you can press ⌘+Shift+H to accomplish the same thing.
- » **From the Open dialog:** The El Capitan standard File Open dialog also includes the same Home folder (and subfolder) icons as the Finder window sidebar.
- » **In any new Finder window you open:** If you like, you can set every Finder window you open to automatically display your Home folder:
 - a. Choose Finder ⇨ Preferences and click the General tab.
 - b. Click the arrow button at the right side of the New Finder Windows Show pop-up menu.
A menu pops up (hence the name).
 - c. Click the Home entry (with the house icon and your short username) in the menu.
 - d. Click the Close button at the upper-left corner of the dialog.
You're set to go. From now on, every Finder window you open displays your Home folder as the starting location!



TIP

Here's another reason to use your Home folder to store your stuff: *default locations!* El Capitan expects your stuff to be there when you migrate your files from an older Mac to a new iMac, and all Apple applications can use your Home folder when loading and saving projects.

Working with Mission Control, Spaces, and Dashboard

For those power users that often work with a passel of applications, allow me to turn your attention to one of the sassiest features in El Capitan: Mission Control. Figure 3-10 shows off the Mission Control screen.



FIGURE 3-10: Mission Control is the desktop manager in El Capitan.

- » Press **F3** (or **Control+↑**, depending on your keyboard) to show **all open windows using Mission Control, grouped by application**; then click the **one you want**. Figure 3-10 illustrates the tiled All Windows display on my iMac after I press F3. Move the pointer on top of the window you want to activate — the window turns blue when it's selected — and click to switch to that window. You can specify which keys you want to use in the Mission Control pane in System Preferences.
- » Press **Ctrl+F3** (or **Control+↓**, depending on your keyboard) to show **all open windows from the application that you're currently using**; click the **one you want to activate**. This Mission Control function is great for choosing from all the images you've opened in Photoshop or all the Safari web pages populating your Desktop!

Astute observers will notice that the application menu bar also changes to match the now-active application.



TIP

Besides the F3 and Control+F3 hot keys that I just discussed, Mission Control provides one more nifty function: Press ⌘+F3, and all your open windows scurry to the side of the screen. Now you can work with drives, files, and aliases on your Desktop — and when you're ready to confront those dozen application windows again, just press the keyboard shortcut a second time.



TIP

Although the Mission Control screen appears automatically when necessary, you can launch it at any time from your iMac's Launchpad display or by pressing the Mission Control key on your keyboard. From the trackpad, display the Mission Control screen by swiping up with three fingers.

Switching Desktops with Spaces

Ah, but what if you want to switch to a different set of applications? For example, suppose that you're slaving away at your pixel-pushing job — say, designing a magazine cover with Pages. Your page design desktop also includes Adobe's Photoshop and InDesign, which you switch between often using one of the techniques I just described. Suddenly, however, you realize you need to schedule a meeting with others in your office, using Calendar, and you want to check your email in Apple Mail. What to do?

Well, you could certainly open Launchpad and launch those two applications on top of your graphics applications and then minimize or close them. But with Mission Control's *Spaces* feature, you can press the Control+← or Control+→ sequences to switch to a different “communications” Desktop, with Calendar and Apple Mail windows already open and in your favorite positions! (I've also created a custom “music” Desktop for GarageBand and iTunes.) Figure 3-10 illustrates multiple Spaces Desktops at the top of the Mission Control screen.

When you've finished setting up your meeting and answering any important email, simply press Control+← or Control+→ again to switch back to your “graphics” Desktop, where all your work is exactly as you left it! (And yes, Virginia, Spaces does indeed work with full-screen applications.)

To create a new Desktop for use in Spaces, click the Launchpad icon on the Dock and then click the Mission Control icon. Now you can set up new Spaces Desktops. Move your pointer to the top right of the Mission Control screen, and click the Add button (with the plus sign) that appears. (If you've relocated your Dock to the right side of the screen, the Add button shows up in the upper-left corner instead.) Spaces creates a new empty Desktop thumbnail. Switch to the new Desktop by clicking the label at the top of the Mission Control screen, and then open those applications you want to include. (Alternatively, you can drag the applications from Mission Control onto the desired Spaces label.) That's all there is to it!

To switch an application window between Spaces Desktops, drag the window to the edge of the Desktop and hold it there. Spaces automatically moves the window to the next Desktop. (Applications can also be dragged between Desktops within the Mission Control screen.) You can also delete a Desktop from the Mission Control screen. Just hover your pointer over the offending Spaces label to display the thumbnail, and click the Delete button (with the X) that appears.



REMEMBER

You can jump directly to a specific Spaces Desktop by clicking its thumbnail in your Mission Control screen or by holding down the Control key and pressing the number corresponding to that desktop. Finally, you can always use the Control+← or Control+→ shortcuts to move between Desktops and full-screen applications.

Stick it on the Dashboard

Dashboard is a favorite feature of mine within El Capitan; I use it to hold widgets and display them with the press of a button. (Okay, I know that sounds a little wacky, but bear with me.) *Widgets* are small applications — dubbed by some *applets* — that typically provide only one function. For example, Dashboard comes complete with a calculator, dictionary, clock, weather display, and quick-and-simple calendar.

By default, Dashboard is turned off in El Capitan. To enable Dashboard, open the Mission Control pane in System Preferences, click the Dashboard pop-up menu and select *As Space* (which displays your widgets as a separate Space in Mission Control). You can also choose *overlay mode* if you prefer your widgets to “float” over your Desktop instead.

You can display and use these widgets at any time by pressing the Dashboard shortcut; by default, that’s Function-F12 on current Apple iMac keyboard models (hold down the FN key and press F12), but you can modify the key on the Mission Control pane in System Preferences. Dashboard also appears as a Desktop in the Spaces strip on the Mission Control screen and as an icon in Launchpad. (If you’ve updated to El Capitan from an older version of OS X, you might also still have the Dashboard icon in your Dock.)



TIP

You can add widgets to your Dashboard by clicking the Add button (which bears a plus sign, naturally) at the lower-left corner of the Dashboard screen. Then Dashboard displays your entire collection of widgets, and you can click a widget to add it directly onto your Dashboard.



TIP

While you’re adding widgets, you can click the More Widgets button, which jumps directly to the widget download area on the Apple website.

Rearranging the widgets that are already populating Dashboard is easy: Drag them to the desired spot. After you finish customizing your Dashboard display, click the Dashboard background to return to your Dashboard. When it's time to go back to work (or play), you can return to your El Capitan Desktop by pressing the Dashboard key again.

Most widgets have an option button that allows you to change things, such as borders, zip codes, display columns, and the like; look for a tiny circle with a lowercase letter *i*. Click this information icon, and you can tweak whatever options are available for that widget.

To remove a widget from the Dashboard display, just click the Delete button (which bears a minus sign), and you'll notice that a tiny X button appears next to each widget on your Dashboard. Click the X button next to the widget you want to remove, and it vanishes from the display. Note, however, that deleting a widget doesn't remove it from your Mac entirely! You can add that deleted widget back again at any time by clicking the Add button. To return to your Dashboard, click the Delete button again.

Personalizing Your Desktop

Many folks put all their documents, pictures, and videos on their El Capitan Desktop because the file icons are easy to locate! Your computing stuff is right in front of you . . . or is it?

Call me a finicky, stubborn techno-oldster — go ahead, I don't mind — but I prefer a clean OS X Desktop without all the iconic clutter. In fact, my Desktop usually has just three or four icons even though I use my iMac several hours every day, often on multiple book projects. It's an organizational thing; I work with hundreds of applications, documents, and assorted knickknacks daily. Sooner or later, you'll find that you're using that many, too. When you keep your stuff crammed on your Desktop, you end up having to scan your screen for a particular file, alias, or type of icon. You end up taking more time to locate it on your Desktop than in your Documents folder! And don't forget that open windows hang out on your Desktop too. To find anything, you have to close or move those windows!

Also, you'll likely find yourself looking at old icons that no longer mean anything to you or stuff that's covered in cobwebs that you haven't used in years. Stale icons — *yuck*.



I recommend that you arrange your Desktop so that you see only a few icons for the files or documents you use the most. Leave the rest of the Desktop for that cool image of your favorite actor or actress.

Besides keeping things clean, I can recommend a number of other favorite tweaks that you can make to your Desktop:

» **Keep Desktop icons arranged as you like.**

1. Choose *Finder* ⇨ *View* ⇨ *Show View Options*.
2. From the *Sort By* pop-up menu, choose the criteria that *El Capitan* uses to automatically arrange your Desktop icons, including the item name, the last modification date, or the size of the items.

I personally like things organized by name, but many iMac owners prefer to see things organized by date (putting the most recently modified item at the top, for example).

» **Choose a favorite background.**

1. Right-click any open spot on your Desktop and choose *Change Desktop Background*.

The Desktop & Screen Saver pane appears, as shown in Figure 3-11.

2. Browse through the various folders of background images that Apple provides, open a folder of your own images, or use an image from your Photos library.

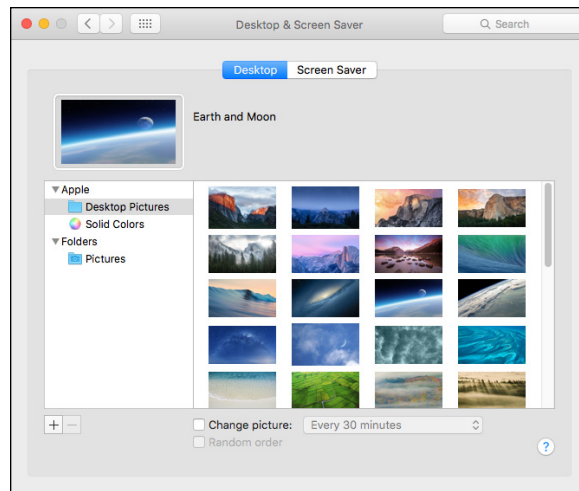


FIGURE 3-11: Choose a Desktop background of more interest.

» **Display all the peripherals and network connections on your system.**

1. Choose *Finder* ⇨ *Preferences*.

2. *Make sure that all four of the top check boxes are selected: Hard Disks; External Disks; CDs, DVDs, and iPods; and Connected Servers.*

If you're connected to an external network, or if you've loaded an external hard drive or device, these external storage locations show up on your Desktop. You can double-click that Desktop icon to view your external stuff.

Customizing the Dock

In terms of importance, the *Dock* — the quick-access strip for applications and documents that appears on your Desktop — ranks right up there with the command center of a modern nuclear submarine. As such, it had better be easy to customize, and naturally, OS X doesn't let you down.

Adding applications and extras to the Dock

Why be satisfied with just the icons that Apple places on the Dock? You can add your own applications, files, and folders to the Dock as well.



WARNING

- » **Adding applications:** You can add any application to your Dock by dragging its icon into the area to the *left* side of the Dock. (That's to the left side of the vertical line on the Dock.) You'll know when you're in the proper territory because the existing Dock icons obligingly move aside to make a space for it.

Attempting to place an application directly on the right side of the Dock sends it to the Trash (if the Trash icon is highlighted when you release the button), so beware. Note, however, that you can drop an application icon inside a Stack (more on that in a bit) or a folder that already exists at the right side of the Dock. (If you've repositioned the Dock to the left or right side of the screen, consider the top of the Dock to be the "left side" and the bottom of the Dock to be the "right side.")

- » **Adding individual files and volumes:** You can add individual files and volume icons to the Dock by dragging the icon into the area to the *right* side of the Dock. (Attempting to place these to the left side of the Dock opens the application associated with the contents, which typically isn't what you intended.) Again, the existing Dock icons move aside to create a space when you're in the right area.

To open the Dock item you've added in a Finder window, right-click the icon to display a Dock menu, where you can open documents, run applications, and have other assorted fun, depending on the item you choose.

- » **Adding several files or a folder:** El Capitan uses a feature called *Stacks*, which I discuss in “Keeping track with Stacks,” to handle multiple files or add an entire folder to the Dock.
- » **Adding websites:** You can drag any URL from Safari directly into the area at the right of the Dock. Clicking that icon automatically opens your browser and displays that page.

To remove an icon from the Dock, just click and drag it off the Dock. Note, however, that the original application, folder, or volume is not deleted — just the Dock icon itself is permanently excused. If you like, you can delete almost any of the default icons that OS X installs on the Dock; only the Finder and Trash icons must remain on the Dock.

Keeping track with Stacks

El Capitan offers *Stacks*, which are groups of items (documents, applications, and folders) that you want to place on the Dock for convenience — perhaps the files needed for a project you’re working on, or your favorite game applications. For example, I have a Stack named Wiley on my Dock that holds all the project files I need for the book I’m currently writing.

To create a Stack, just select a folder containing the items and drag the folder to the right side of the Dock. As always, the Dock opens a spot on the right side of the Dock to indicate you’re in the zone.

To display the items in a Stack, just click it:

- » **If the Stack holds relatively few items**, they’re displayed in a really cool-looking arc that Apple calls a *fan*, and you can click the item you want to open or launch. Figure 3-12 illustrates a typical Stack unfurled as a fan.
- » **If the Stack is stuffed full of many items**, the Stack opens in a grid display, allowing you to scroll through the contents to find what you need.



TIP

El Capitan provides display and sorting options for a Stack. Right-click the Stack icon, and you can choose to sort the contents by name, date created or added, date modified, or file type. If you prefer a grid display (no matter how many items the Stack contains) you can choose Grid mode. Choose List to display the Stack’s contents in much the same way as List view mode in a Finder window. List view mode also allows you to view folders in a Stack as nested menu items. Choose Automatic to return to the default view mode.

FIGURE 3-12: Stacks make it easy to access your stuff from the Dock.



When set to Display as Stacks, the Stack icon is displayed using icon images from the contents of the folder; if security is an issue, however, choose Display as Folder from the right-click menu to display the Stack as a plain folder icon instead.

You can remove a Stack from the Dock by right-clicking the Stack icon and choosing Options from the menu that appears. Choose Remove from Dock from the submenu that appears. Alternatively, just drag that sucker right off the Dock.

You can also display the contents of a Stack in a Finder window. Right-click the Stack icon, and choose the Open item at the bottom of the pop-up menu.



TIP

If you add a folder full of items, the Stack is named after the folder; otherwise, El Capitan does the best job it can in figuring out what to name the Stack.

Apple provides a Stack already set up for you: The Downloads folder, situated next to the Trash, is the default location for any new files that you download using Safari or receive in your email. El Capitan bounces the Download Stack icon to indicate that you've received a new item.

Resizing the Dock

You can change the size of the Dock from the Dock settings in System Preferences — but here's a simpler way to resize the Dock, right from the Desktop.

Move your pointer over the vertical solid line that separates the left side of the Dock from the right side; the pointer turns into a funky vertical line with arrows pointing up and down. This is your cue to click and drag while moving up and down, which expands and shrinks the Dock, respectively.

You can also right-click when the funky line pointer is visible to display a menu of Dock preferences. This allows you to change your Dock preferences without the hassle of opening System Preferences and displaying the Dock settings.

What's with the Trash?

Another sign of an iMac power user is a well-maintained Trash can. It's a breeze to empty the discarded items you no longer need, and you can even rescue something you suddenly discover you still need!

The translucent El Capitan Trash icon resides in the Dock, and it works just like the Trash has always worked in OS X: Simply drag selected items to the Trash to delete them.



REMEMBER

Note one *very* important exception: If you drag a Desktop icon for an external device or a removable media drive to the Trash (such as an iPod, DVD, or external hard drive), the Trash icon turns into a giant Eject icon, and the removable device or medium is ejected or shut down — not erased. Repeat, *not erased*. (That's why the Trash icon changes to the Eject icon — to remind you that you're not doing anything destructive.)

Here are other ways to chuck items you select to go to the wastebasket:

- » Choose File ⇨ Move to Trash.
- » Click the Action button on the Finder toolbar, and choose Move to Trash from the list that appears.
- » Press ⌘+Delete.
- » Right-click the item and choose Move to Trash from the menu that appears.

You can always tell when the Trash contains at least one item, because the basket icon is full of crumpled paper. However, you don't have to unfold a wad of paper to see what the Trash holds. Just click the Trash icon in the Dock to display the contents of the Trash. To rescue something from the Trash, drag the item(s) from the Trash folder to the Desktop or any other folder in a Finder window. (If you're doing this for someone who's unfamiliar with El Capitan, remember to act like it was a lot of work, and you'll earn big-time DRP, or *Data Rescue Points*.)

When you're sure that you want to permanently delete the contents of the Trash, use one of these methods to empty the Trash:

- » Choose Finder ⇨ Empty Trash.
- » Choose Finder ⇨ Secure Empty Trash.

If security is an issue around your iMac, and you want to make sure that no one can recover the files you've sent to the Trash, use the Secure Empty Trash command. It takes a little time but helps ensure that no third-party hard drive repair or recovery program can resuscitate the items you discard.

- » Press ⌘+Shift+Delete.
- » Right-click the Trash icon on the Dock and choose Empty Trash from the menu that appears.

All You Really Need to Know about Printing

Because I'm near the end of this chapter, I turn now to a task that most iMac owners need to tackle soon after buying their computer or installing El Capitan: printing documents. Because basic printing is so important (and in most cases, so simple), allow me to demonstrate how to print a document.

Most of us have a Universal Serial Bus (USB) printer — the USB being the favored hardware connection in OS X — so as long as your printer is supported by OS X, setting it up is as easy as plugging it into one of your iMac's USB ports.



TIP

Before you print, *preview!* Would you jump from an airplane without a parachute? Then why would you print a document without double-checking it first? Most applications now have their own built-in Preview thumbnails in the Print sheet, as shown in Figure 3-13. This is definitely A Good Thing, since you see what the printed document will look like, possibly saving you both paper and some of that hideously expensive ink or toner.

To print from any application using the default page characteristics (standard 8½ × 11" paper, portrait mode, no scaling), follow these steps:

1. In your application, choose File ⇨ Print or press the ⌘+P keyboard shortcut.

In most applications, OS X displays the simple version of the Print sheet. (To display all the fields you see in Figure 3-13, click the Show Details button at the

bottom of the sheet.) Some applications use their own custom Print dialogs, but you should see the same general settings.

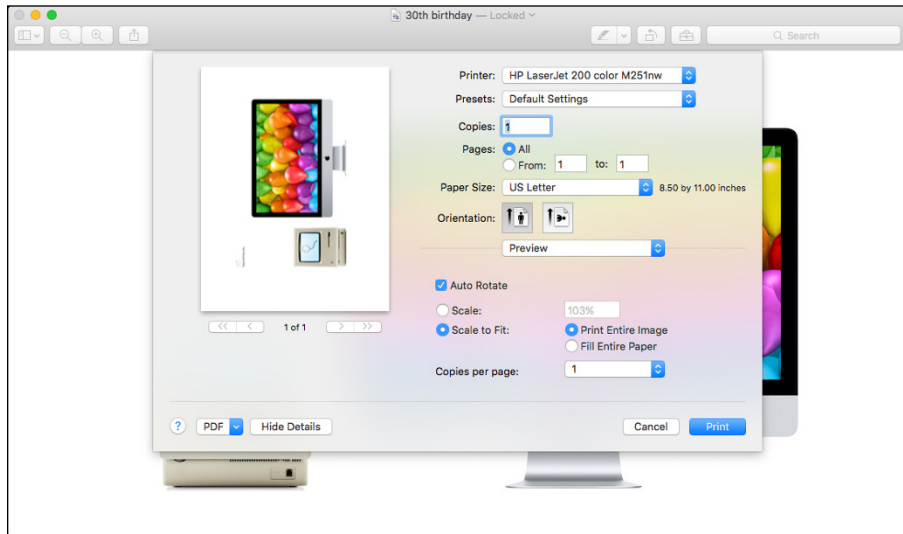


FIGURE 3-13: The Print sheet is available from any application with any real guts.

2. Click the Copies field, and enter the number of copies you need.

You can also enable or disable collation, just as you can with those oh-so-fancy copiers.

3. Decide what you want to print.

- *The whole shootin' match:* To print the entire document, use the default Pages radio button setting of All.
- *Anything less:* To print a range of selected pages, select the From radio button and enter the starting and ending pages (or, if the application allows it, a selection of individual pages).

4. (Optional) Choose application-specific printing parameters.

Each OS X application provides different panes so you can configure settings specific to that application. You don't have to display any of these extra settings to print a default document, but the power is there to change the look dramatically when necessary. To display these settings, open the pop-up menu in the center of the Print sheet and choose one of these panes. For example, if you're printing from Contacts, you can choose the Contacts entry from the pop-up menu and elect to print a phone list, an envelope, mailing labels, or an email list.

5. When everything is go for launch, click the Print button.

Of course, there are more settings and more functionality to the printing system in OS X. However, I can tell you from my experiences as a consultant and hardware technician that this short introduction to printing will likely suffice for 90 percent of the Mac owners on Earth. 'Nuff said.

And Just in Case You Need Help . . .

You can call on the resources described in this section if you need additional help while you're discovering how to tame El Capitan.



TIP

Some of the help resources are located on the Internet, so your Safari web browser will come in handy when you search for answers.

The El Capitan built-in Help system

Sometimes the help you need is as close as the Help menu on the Finder menu bar. You can get help for either of the following:

- » **A specific application:** In the application, just click Help. Then click in the Search box and type a short phrase that sums up your query (such as *startup keys*). You see a list of help topics on the menu. Just click a topic to display more information.
- » **General topics:** Click a Finder window, and then click Help on the menu bar. Again, you see the Search box, and you can enter a word or phrase to find in the Help system. To display the Help Center window, click the Help Center item under the Search box.

The Apple web-based support center

Apple has online product support areas for every hardware and software product it manufactures. Visit www.apple.com and click the Support tab at the top of the web page.



TIP

The Search box works just like the OS X Help system, but the knowledge base that Apple provides online has *a lot* more answers.

Magazines

Many magazines and publications (both in print and online) offer tips and tricks on using and maintaining OS X El Capitan.

My personal online favorites are Macworld (www.macworld.com) and the Wiley For Dummies website (www.dummies.com).

Mac support websites

A number of private individuals and groups offer support forums on the web. You can often get help from other Mac owners on these sites within a few hours of posting a question.

I'm very fond of CNET's MacFixIt (www.macfixit.com) and Mac OS X Hints (<http://forums.macosxhints.com>).

Local Mac user groups

I'd be remiss if I didn't mention your local Mac user group. Often, a user group maintains its own website and discussion forum. If you can wait until the next meeting, you can even ask your question and receive a reply from a *real live human being*. This is quite a thrill in today's web-centric world!

To locate a local user group using your Internet connection, launch Safari, click in the Address box and type

```
Mac User Group location
```

Instead of *location*, type the desired spot on the map, like

```
Mac User Group Columbia Missouri
```

Don't forget to press Return!



Shaking Hands with OS X

IN THIS PART . . .

Explore new features within El Capitan.

Use System Preferences to fine-tune how El Capitan works.

Use Spotlight to search your entire system in seconds.

Keep track of all your stuff by using Notes, Reminders, and Notifications.

Locate places and navigate with the Maps application.

IN THIS CHAPTER

Using Split View to divide your screen

Locating your pointer with a shake

Adding third-party extensions to Photos

Finding friends from the Notification Center

Hiding your Finder menu bar

Browsing attachments in Notes

Chapter 4

What's New in El Capitan?

Have you upgraded to El Capitan from the previous version of OS X, Yosemite? If so, you've opened the door to a number of new features, and this chapter was written especially for you. (And if you're not rubbing your hands together with gleeful anticipation, you *should* be — I know I am.) Here, you'll find descriptions of my favorite new features that ship with the latest version of OS X.

Note that a number of other new El Capitan features appear elsewhere in the book — for example, the discussion of pinned tabs appears within the Safari chapter. The new features you find here, however, are what I consider the *real* standouts, so they're showcased separately.

Let the fun begin!

Hey, Did You Just Split Your View?

I'm a huge fan of full-screen view, but from time to time it drove Mac owners bonkers — that's because full-screen view restricted you to displaying a single application window. Sure, you could open multiple applications and put each in full-screen view, but many tasks (especially those that involved comparison or collaboration) required the constant use of ⌘+Tab to switch between windows. Power users simply had to resign themselves to using full-screen view with one application.

Apple must have heard those cries of frustration, because the arrival of El Capitan introduces *Split View*, which allows you to display and use two applications simultaneously in full-screen view! To activate Split View, follow these steps:

- 1. Move your pointer over the Zoom/Full-Screen button in one of the desired application windows, and click and hold.**

El Capitan switches to full-screen view as usual, but you'll notice that the left half of the screen is highlighted in blue — this indicates the side of the screen that this application window will occupy.



REMEMBER

Application windows that have been minimized to the Dock can't be used in Split View. You also can't use application windows that are already set to full-screen view (go figure).



TIP

If you'd rather park the application in the other half of the screen, just move the pointer and drag the window to the right side. (At this moment, you're still holding down on the mouse or trackpad surface.)

- 2. Lift your finger from the mouse or trackpad to “drop” the window into the desired half of the screen.**
- 3. Click the desired application that should share the other half of the full-screen view.**

The available application windows (which are *not* currently minimized or in full-screen view) are shown as thumbnails, as you can see in Figure 4-1. Click a thumbnail, and the window expands to fill the other half of the Split View screen.

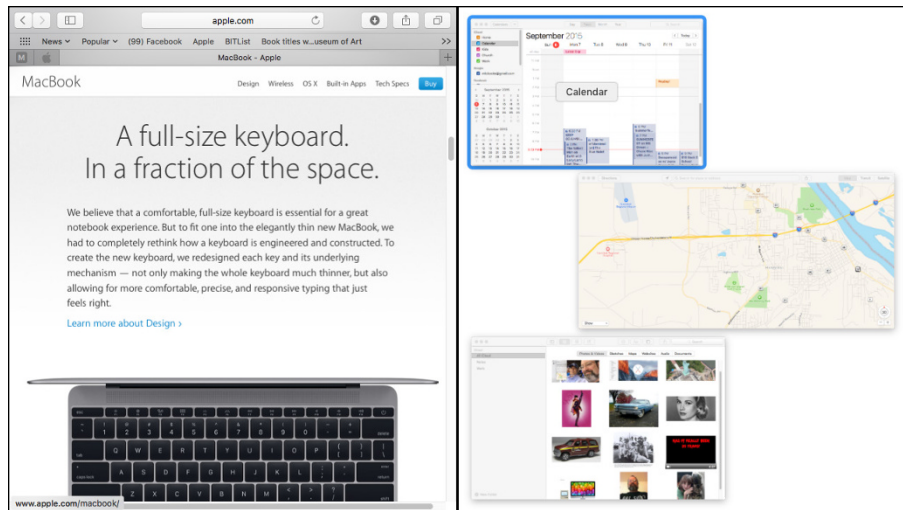
Once your Split View screen has been set up, you can switch between the two applications by simply clicking the desired window. If you need to resize one of the windows to make it larger, just move your pointer over the center line until it changes into a double-arrow icon; then click and drag the line to the desired spot.



TIP

You can display the Finder menu bar for the currently active window in Split View — just move your pointer to the top of the screen.

FIGURE 4-1:
One half of my
Split View screen
is ready, but
what goes in the
other half?



To exit Split View:

- » Display the application menu and click the Zoom/Full-Screen button.
- » Display the application menu and choose View ⇨ Exit Full Screen.
- » Press the Exit Full Screen shortcut: ⌘+Control+F.

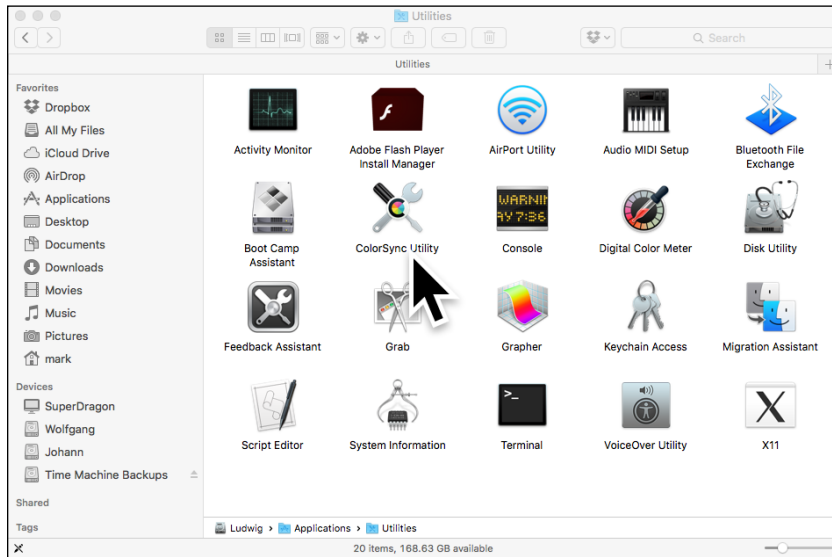
Unfortunately, not all applications currently support Split View, but look for this functionality to be added to a growing number of applications in the near future.

Lost Your Pointer? Give It a Shake!

Here's the scenario: You're right in the middle of editing an image in Photos on your iMac, and suddenly there's a knock at your door. After you handle the door-to-door vacuum salesperson, you return to your editing — but you can't find your pointer in the midst of all those Retina display high-definition pixels! To find your pointer, you've got to move it to one of the edges of the screen so you can catch sight of it again and get back to work, and sometimes that can take a few seconds.

Every computer owner has suffered from LPS (Lost Pointer Syndrome) at one time or another, and one of the software designers at Apple finally decided to do something about it. In El Capitan, if you lose sight of your pointer, just shake your finger rapidly from side to side on your trackpad (or shake your mouse back and forth), and the pointer temporarily expands to a much larger size (kind of like a perturbed puffer fish)! Figure 4-2 shows the pointer in its superhero state.

FIGURE 4-2:
An inflated Puffer
Fish Pointer
is always easier
to see.



I agree, the Puffer Fish Pointer isn't a revolutionary feature — Split View is certainly more impressive — but wait until you've lost your pointer, and you'll agree that it's pretty doggone cool!

Adding Functionality to Photos

Although El Capitan's Photos application contains the common image editing functions that most iMac owners will use most — such as cropping, rotating, and applying filters — amateur and professional photographers will find that Photos lacks the more powerful features available in applications like Apple's Aperture and Adobe's Photoshop and Photoshop Elements. When Photos was originally released, there was no way to add functionality to the application.

With the debut of El Capitan, Apple allows other third-party software developers to add features to Photos by using extensions. *Extensions* are common in the world of image editing applications, providing add-ons like advanced filters, textures, and borders to the editing tools that Photos already provides. Extensions can be purchased through the OS X App Store. To add extensions, load any photo in Edit mode; then click the button bearing three dots at the right side of the Editing pane and click Extensions.

Another "new" feature in Photos is actually the return of a familiar face. Photos once again allows you to enter location data for an image (also called *geotagging*).

Today's iOS devices — like the iPad and iPhone — can add location information automatically (as can many high-end digital cameras), but now you can manually add a location to an image. With the desired photo in the viewer, click the Get Info button on the Photos toolbar and then click the Add a Location button. (Manually adding a location also comes in handy when that automatic-location information is downright wrong. As a favorite editor of mine says, “I’ve never been to Tibet.”)

Find My Friends Arrives in OS X

If you've used the Find My Friends app on your iPhone or iPad, you know that it allows you to share your current location instantly with other folks who use iOS devices (as well as displaying their locations on a map on your device). You may be happy to know that the functionality of this popular app is now available within El Capitan — specifically, it can be added to the Notification Center as a widget.

To add the Find My Friends widget, click the Notification Center icon in the Finder menu bar; then click the Edit button at the bottom of the pane. (Figure 4-3 illustrates the widget list that appears at the right.) Click the Add icon next to the Find My Friends item to add it to your Notification Center.

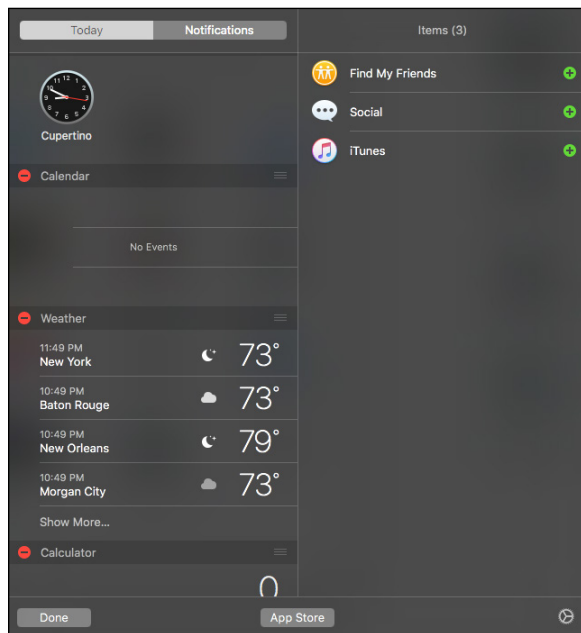


FIGURE 4-3:
Adding Find My
Friends to your
Notification
Center is a snap.

Banishing the Menu Bar

This feature might seem somewhat unsettling to longtime OS X power users: El Capitan enables you to automatically hide the menu bar, just as the Dock’s auto-hide functionality does. Why is this unnerving? It’s because the menu bar has been a rock-solid part of OS X since the very first version (called Cheetah, which was introduced way back in 2001), and power users just expect it to be there! However, the idea behind a hidden menu bar is the same as the idea behind the hidden Dock: You gain additional screen real estate for your applications, which can make a significant difference within Photoshop and Word.



TECHNICAL
STUFF

“But Mark, isn’t the menu bar technically ‘hidden’ in full-screen view?” Yes, dear reader; that is true, but full-screen view is a special case. In El Capitan, you can banish the menu bar from your *Desktop*, which is a completely different kettle of fish!

I’ve already turned the menu bar auto-hide feature on in Figure 4-4. To hide the menu bar on your iMac, click the System Preferences icon on the Dock, click the General icon, and click the Automatically Hide and Show the Menu Bar check box to enable it.

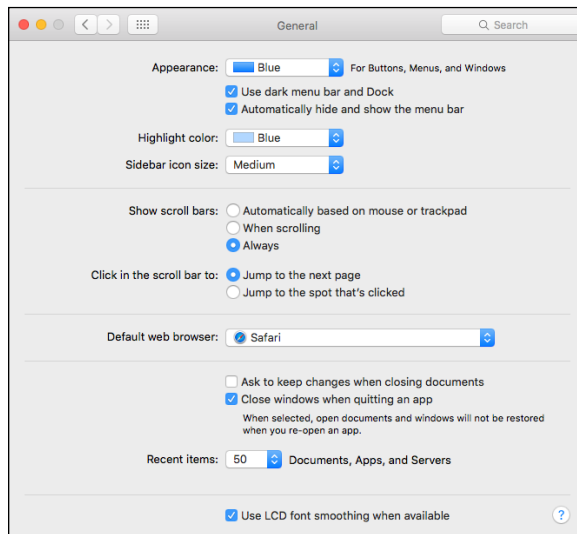


FIGURE 4-4:
You can auto-hide the menu bar in El Capitan... scandalous!

To display your menu bar at any time, just bump the top of your screen with your pointer. As soon as the pointer moves away from the menu bar, it scurries away until you need it again.

Browsing Attachments within Notes

As a longtime Notes user, I appreciate the “look-and-feel” updates made to this popular OS X application in El Capitan. However, I’m happiest about the new Notes *Attachment Browser*, which allows you to display all of the attachments you’ve added to your Notes from a single pane!

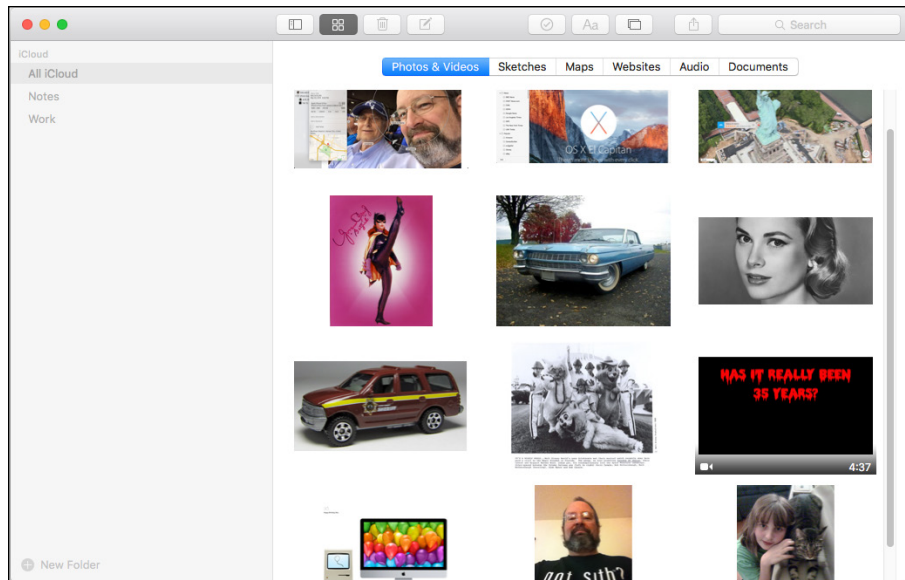
Why so gleeful? Older versions of the application required you to view each Note to find a specific attachment you had added, including

- » Photos and videos
- » Maps
- » Website links
- » Audio clips
- » Documents

I use Notes as a simple database, holding dozens of those “snippets” of information for later use in manuscripts and on Facebook, so as you can imagine, opening and checking each Note often took considerable time. Now I can click the Attachment Browser button on the Notes toolbar (displaying the pane you see in Figure 4-5), click the desired file type, and see every attachment of that type at one time.

To open the item, just double-click it. You can display the Note that contains the selected attachment by right-clicking the selection and choosing Go to Note from the menu that appears.

FIGURE 4-5: Searching for images and movies I've attached to Notes.



Chapter 5

A Nerd's Guide to System Preferences

Have you ever seen the old TV series *Voyage to the Bottom of the Sea*? You always knew you were on the bridge of the submarine *Seaview* because it had an entire wall made up of randomly blinking lights, crewmen darting about with clipboards, and all sorts of strange and exotic-looking controls on every available surface. You could fix just about anything by looking into the camera with grim determination and barking an order. After all, you were On the Bridge. That's why virtually all the dialogue and action inside the sub took place on that one (expensive) set: It was the nerve center of the ship, and a truly happenin' place to be, just like the bridge of the starship *Enterprise*.

In the same vein, I devote this chapter to the System Preferences window and the most commonly used settings within it. After all, if you want to change how El Capitan works or customize the features in our favorite operating system, you should head toward System Preferences. This one window is the nerve center of OS X and a truly happenin' place to be. (Sorry, no built-in wall of randomly blinking lights — but you do find exotic controls just about everywhere.)

An Explanation — without Jargon, No Less

The System Preferences window, shown in Figure 5-1, is a self-contained beast. You can reach it in several ways:

- » Click the Apple menu () and choose System Preferences.
- » Click the System Preferences icon on the Dock; it's a collection of gears.
- » Click the Apple menu (), choose Dock, and then choose Dock Preferences.
- » Click the Time and Date display on the menu bar and then choose Open Date and Time Preferences. (In fact, you can click most of the other menu status icons — including Bluetooth and Wi-Fi — and then choose Open Preferences.)
- » Right-click any uninhabited area of your Desktop and choose Change Desktop Background.
- » Last but not least, click the Launchpad icon on the Dock and then click the System Preferences icon.

When the System Preferences window is open, you can click any of the icons to switch to that *pane*. The entire window morphs to display the settings for the selected pane. For example, Figure 5-2 shows the Sound pane, which allows you to set a system alert sound, configure your iMac's built-in microphone, and choose output options.

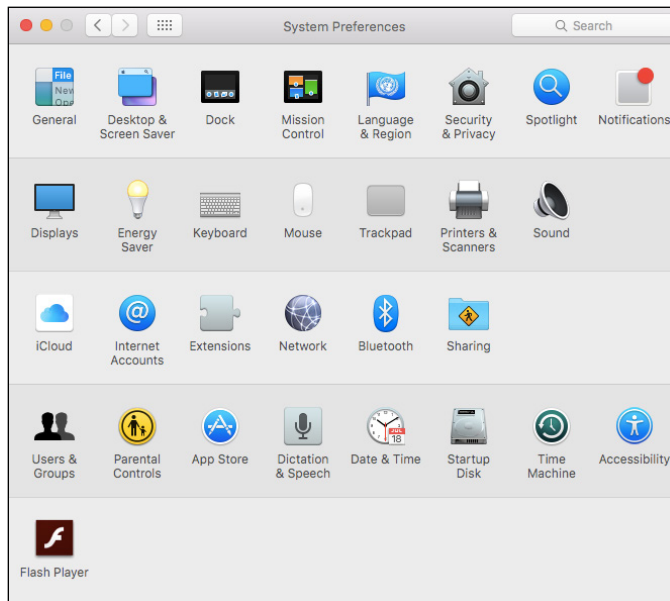


FIGURE 5-1:
The powerhouse
of settings and
switches: System
Preferences.

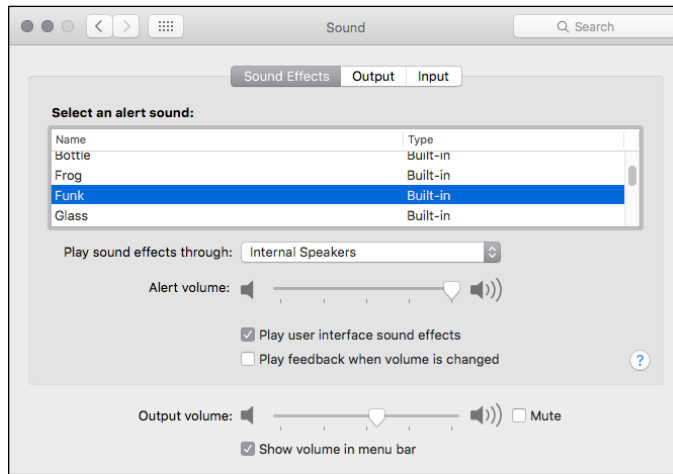


FIGURE 5-2: The Sound pane, proudly showing off the Sound Effects panel.

Many panes also include tabbed buttons at the top — in this case, Sound Effects, Output, and Input. You can click these tabs to switch to another section in the same pane. Many panes in System Preferences have multiple sections. This design allows our friends at Apple to group a large number of related settings in the same pane (without things getting too confusing).

To return to the top-level System Preferences pane from any other pane, just click the Show All button (at the upper left) or press $\mathbb{A}+L$. You can also click the familiar Previous and Next buttons to move backward through the panes you've already visited and then forward again, in sequence. (Yep, these buttons work just like the browser controls in Safari. Sometimes life is funny that way.)

Although the System Preferences panes are arranged by category when you first install El Capitan, you can also display the panes in alphabetical order. To arrange the panes in this way, choose View \rightarrow Organize Alphabetically. Note that you can also select any pane directly from the View menu. Choose View \rightarrow Customize, and you can hide specific icons from the System Preferences window. Just deselect the check box next to each icon you want hidden and then click Done. You can still reach hidden icons from the System Preferences View menu, so they're not banished forever.



TIP

In fact, you can right-click the System Preferences icon on the Dock to jump to any pane from the shortcut menu. *Wowzers!*

You won't find an OK button that you have to click to apply any System Preferences changes. Apple's developers do things the right way. Your changes to the settings in a pane are *automatically* saved when you click Show All or when you click the Close button in the System Preferences window. You can also press $\mathbb{A}+Q$ to exit the window and save all your changes automatically. This is one of my favorite shortcuts.

HEY, I HAVE BONUS ICONS IN MY WINDOW!

Some third-party applications and media plug-ins can actually install their own panes in your once-pristine System Preferences window. You see them arranged at the bottom of the window. (For example, Adobe's Flash Player adds an icon that you see at the bottom of Figure 5-1.) Naturally, I can't document these invited guests in this chapter, but they work the same way as any other pane in System Preferences. Click the icon, adjust any settings as necessary, and then close the System Preferences window to save your changes.



REMEMBER

If you see an Apply button in a pane, you can click it to immediately apply any changes you made without exiting the pane. This is perfect for settings you might want to try before you accept them, like many of the controls in the Network pane. However, if you're sure about what you changed and how those changes will affect your system, you don't have to click Apply. Just exit the System Preferences window or click Show All as you normally would.

Locating That Certain Special Setting

Wouldn't it be great if you could search through all the different panes in System Preferences — with those countless radio buttons, check boxes, and slider controls — from one place, even when you're not quite sure what you're looking for?

Figure 5-3 shows exactly that kind of activity taking place. Just click the System Preferences Spotlight Search box (at the upper right, with the magnifying-glass icon), and type just about anything. For example, if you know part of the name of a particular setting you need to change, type that. El Capitan highlights the System Preferences panes that might contain matching settings. And if you're a Switcher from the Windows world, you can even type what you might have called the same setting in Windows XP, Vista, 7, or 8!

The System Preferences window dims, and the icons that might contain what you're looking for stay highlighted. *Slick.*



TIP

You can also search for System Preferences controls by using the Spotlight menu and Spotlight window. Find more on this cool feature in Chapter 6.

If you need to reset the Search box to try again, click the X icon that appears at the right side of the box to clear it.

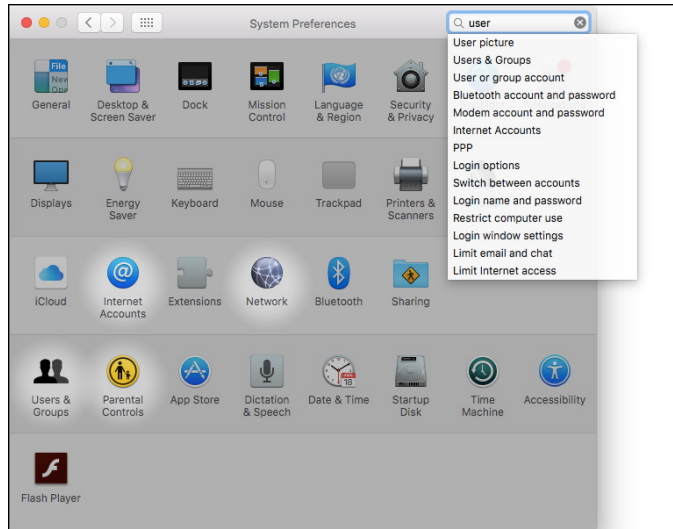


FIGURE 5-3: Searching for specific settings is a breeze with the Search box.

Popular Preferences Panes Explained

It's time to get down to brass tacks: Open the most often-used panes in System Preferences to see what magic you can perform. I won't discuss every pane, because I cover many of them in other chapters. (In fact, you might never need to open some System Preferences panes, such as the Language & Region pane.) However, this chapter covers just about all the settings you're likely to use on a regular basis.

The Displays pane

If you're a heavy-duty gamer, or you work with applications such as Keynote or Adobe Photoshop, you probably switch your monitor's characteristics regularly. To switch easily, visit the Displays pane, shown in Figure 5-4. It includes two sections:

- » **Display:** To allow El Capitan to choose the best resolution for your iMac's display, select the Default for Display radio button. To manually select a resolution (perhaps for games), select the Scaled radio button, and then click the resolution you want to use from the Resolutions list that appears. (In most cases, you want to use the highest resolution.) Move the Brightness slider to adjust the brightness level of your iMac's display. If you like, you can enable the Automatically Adjust Brightness check box to allow your iMac to select a brightness level. To automatically adjust the brightness to match the ambient light around you, enable the Ambient Light Compensation check box.



TIP

Ready to stream content to your TV directly from your iMac — *without cables*? You can use El Capitan's wireless AirPlay Mirroring feature to send the display from your iMac to your HD TV. AirPlay Mirroring requires an Apple TV unit that supports this feature. You can also send the audio from your iMac directly to an AirPlay-enabled receiver or speaker system. To make it easier to control AirPlay mirroring, select the Show Mirroring Options in the Menu Bar When Available check box. (Note that the icon will only appear in your menu bar when you have an Apple TV unit within range.)

- » **Color:** Click a display color profile to control the colors on your screen. To load a profile, click the Open Profile button. To create a custom ColorSync profile and calibrate the colors that you see, click the Calibrate button to launch the Display Calibrator. This easy-to-use assistant walks you step by step through creating a ColorSync profile matched to your iMac's gamma and white-point values.

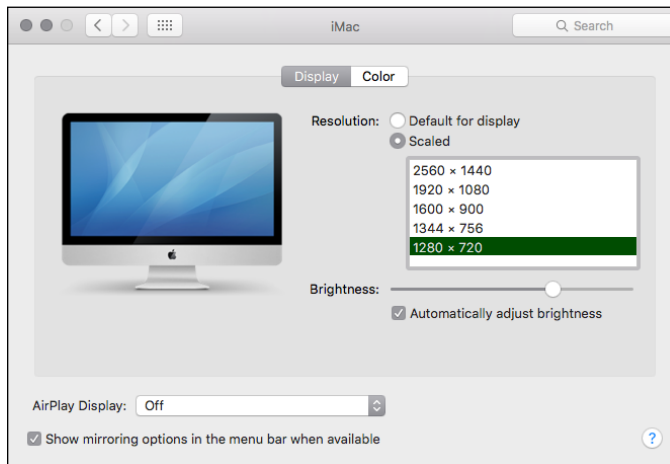


FIGURE 5-4: The Displays pane makes it easy to change your screen resolution.

The Desktop & Screen Saver pane

No offense to the awesome El Capitan “sunlit peaks” background, but who doesn’t want to choose his or her own background? And what about that nifty screen saver you just downloaded from the Apple website? You can change both the background and screen saver by using these options in the Desktop & Screen Saver pane.

The settings on the Desktop panel, shown in Figure 5-5, are

- » **Current Desktop picture:** You can click a picture in the thumbnail list at the right half of the screen to use it as your Desktop background. The Desktop is immediately updated, and the thumbnail appears in the *well* (the upper-left

box in Figure 5-5). To display a different image collection or open a folder of your own images, click the Add Folder button at the lower left of the window (a plus sign) and browse for your heart's desire; then click Choose to select a folder and display the images it contains.

- » **Layout:** You can tile your background image, center it, fill the screen with it (cropping the edges if necessary), and stretch it to fill the screen (without cropping). Note that filling the screen (in either case) may distort the image. The layout pop-up menu appears only when you're using your own pictures, so you don't see it if you're using a Desktop image supplied by Apple.
- » **Change Picture:** Change the Desktop background automatically after the delay period that you set, including each time you log in and each time your Mac wakes up from sleep mode.
- » **Random Order:** To display screens randomly, enable the Random Order check box. Otherwise, the backgrounds are displayed in the sequence in which they appear in the thumbnail list.

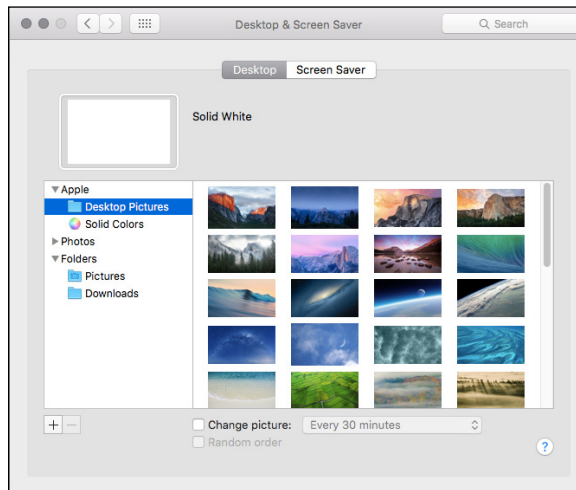


FIGURE 5-5: Show The Man who's boss, and pick your own Desktop background.

The settings on the Screen Saver tab are

- » **Screen Savers:** In the Screen Savers list at the left, click any screen saver to preview (on the right). To try out the screen saver in full-screen mode, click the Preview button. (You can end the test by moving the cursor.) If the screen saver module you select has any configurable settings, click the Screen Saver Options button to display them. (A screen saver is *not* configurable if the Screen Saver Options button isn't enabled.) Choose the Random screen saver to display a different screen saver module each time the screen saver is activated.

- » **Start After:** Specify the period of inactivity that triggers the screen saver. To disable the screen saver, choose the Never setting at the top of the list. (Your Start After delay should be a shorter time than the Display Sleep delay you set in the System Preferences Energy Saver pane. Otherwise, you won't see the great screen saver at all. I describe the Energy Saver pane later in this chapter.)
- » **Show with Clock:** If you want your selected screen saver to display the time as well, select this check box.
- » **Hot Corners:** Click the Hot Corners button, and then click any of the four pop-up menus at the four corners of the screen. Doing so designates that corner as an *activation hot corner* (immediately activates the screen saver) or as a *disabling hot corner* (prevents the screen saver from activating). As long as the cursor stays in the disabling hot corner, the screen saver doesn't kick in, no matter how long a period of inactivity passes. Note that you can also set the Sleep, Mission Control, Launchpad, Notification Center, and Dashboard activation corners from here. (For the scoop on these features, see the next section.)



TIP

For additional security, check out the Security & Privacy pane in System Preferences, where you find the Require Password After Sleep or Screen Saver Begins check box. When you select this check box, El Capitan requires your user account password before allowing anyone to turn off the screen saver (a great security enhancement, as you can imagine).

Mission Control preferences

Figure 5-6 shows the Mission Control, Spaces, and Dashboard settings you can configure in this group. You can use Mission Control to view all the application windows you're using at one time so that you can select a new active window. Or you can move all windows aside so that you can see the Desktop. Dashboard presents mini-applications (or *widgets*), which you can summon and hide by pressing a single key.

The settings are

- » **Automatically Rearrange Spaces Based on Most Recent Use:** If this check box is selected, Mission Control presents your most recently used Spaces first in the thumbnails at the top of the screen.
- » **When Switching to an Application:** When selected, this check box allows you to switch applications between Spaces desktops by using the ⌘+Tab shortcut. El Capitan jumps to the Desktop that has an open window for the application you choose, even if that Desktop is not currently active.

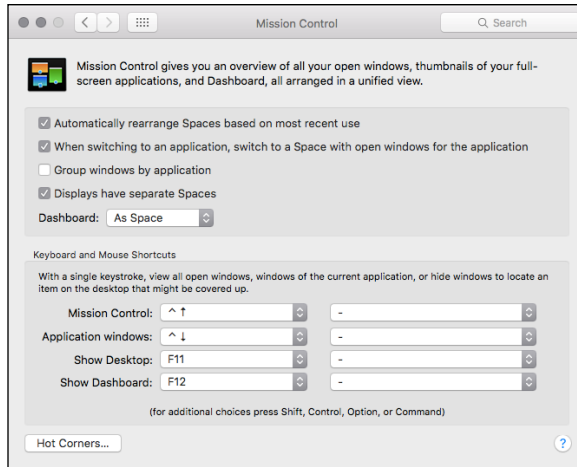


FIGURE 5-6:
Set your Mission Control preferences here.

» **Group Windows by Application:** When selected, this check box automatically arranges windows in the Mission Control screen by the application that created them.

» **Displays Have Separate Spaces:** If you have multiple monitors connected to your Mac, you can select this check box to create a separate Spaces display for each monitor.



TIP

To display your Dashboard as a Space (a virtual desktop) in the Mission Control screen, click the Dashboard pop-up menu and choose the As Space option. If you prefer your Dashboard widgets to appear as an overlay over your Desktop, select the As Overlay option from the pop-up menu.

» **Keyboard and Mouse Shortcuts:** From each pop-up menu, set the key sequences (and mouse button settings) for Mission Control, Application Windows, Show Desktop, and Show Dashboard.



REMEMBER

You're not limited to keyboard and mouse shortcuts in the pop-up menus. Press the Shift, Control, Option, and ⌘ keys while a pop-up menu is open, and you see these modifiers appear as menu choices! (Heck, you can even combine modifiers, such as ⌘+Shift+F9 instead of just F9.)

» **Hot Corners:** Click the button at the lower left to specify your hot corner settings. These four pop-up menus operate just like hot corners and active screen corners in the Desktop & Screen Savers pane, allowing you to control the operation of the screen management features within El Capitan. Click one to designate that corner as one of the following:

- A *Mission Control corner* displays the Mission Control screen.
- An *Application Windows corner* displays only the windows from the active application.

- A *Desktop corner* moves all windows to the outside of the screen to uncover your Desktop.
- A *Dashboard corner* displays your Dashboard widgets.
- A *Launchpad corner* activates the Launchpad screen.
- A *Notification Center corner* displays the Notification Center strip at the right side of your Desktop.

Note that you can also set the Screen Saver Start and Disable corners from here, as well as put your display to sleep.

The General pane

The talented General pane, shown in Figure 5-7, determines the look and operation of the controls that appear in application windows and Finder windows. It looks complex, but I cover each option here.

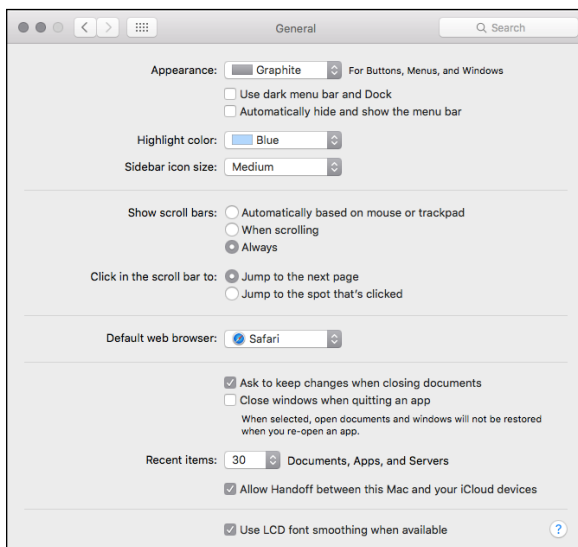


FIGURE 5-7: Appearances might not be everything, but they're easy to find here.

The settings are

- » **Appearance:** Choose a color to use for buttons, menus, and windows. Click the Use Dark Menu Bar and Dock check box to switch to a dark scheme for your Finder menu bar and Dock. You can also hide the Finder menu bar; you can display it at any time by moving your pointer to the top of your iMac's screen.

- » **Highlight Color:** Choose a color to highlight selected text in fields and pop-up menus.
- » **Sidebar Icon Size:** Select the size of the icons in the Finder window Sidebar. It's the strip to the left of the Finder window that displays your devices and favorite locations on your system. If you have a large number of hard drives, or if you've added several folders to the Sidebar, reducing the size of the icons allows you to display more of them without scrolling.
- » **Show Scroll Bars:** Specify when El Capitan should display scroll bars in a window. By default, they're placed automatically when necessary, but you can choose to display scroll bars always or only when you're actually scrolling through a document.
- » **Click in the Scroll Bar To:** By default, OS X jumps to the next or previous page when you click in an empty portion of the scroll bar. Select the Jump to the Spot That's Clicked radio button to scroll the document to the approximate position in relation to where you click.
- » **Default Web Browser:** Click this pop-up menu to specify which application El Capitan should use to display web pages. By default, OS X uses the Safari web browser.
- » **Ask to Keep Changes When Closing Documents:** If you select this check box, El Capitan prompts you for confirmation if you attempt to close a document with unsaved changes. If the check box is deselected, El Capitan allows the unsaved document to be closed without saving a new version.
- » **Close Windows When Quitting an Application:** If this check box is deselected, the OS X Resume feature automatically saves the state of an application when you quit. When you relaunch the application again, El Capitan restores all application windows and opens the documents you were working on when you quit. In effect, you can continue using the application just as if you had never quit. If you select the check box, El Capitan does not restore your work, and you have to reload your document.
- » **Recent Items:** The default number of recent applications, documents, and servers (available from the Recent Items item in the Apple menu []) is 10. To change the default, open the pop-up menus here and choose up to 50. (I like 20 or 30.)
- » **Allow Handoff Between this Mac and Your iCloud Devices:** If this check box appears within the General pane, you can enable it to turn on Handoff functionality within El Capitan. (I discuss Handoff within the confines of Chapter 9.) Note that this check box will not appear on older iMacs without compatible Bluetooth hardware.
- » **Use LCD Font Smoothing When Available:** By default, this check box is enabled, making the text on your iMac's display appear more like the printed page. You can turn off this feature to speed up text display slightly.

The Energy Saver pane

I'm an environmentalist — it's surprising how many techno types are colored green — so the settings on this pane are pretty doggone important. When you use them correctly, you not only conserve power but also invoke the intelligence of El Capitan to automatically start up and shut down your iMac whenever you like!

Move the Computer Sleep slider, shown in Figure 5-8, to specify when El Capitan should switch to sleep mode. The Never setting disables sleep mode. To choose a separate delay period for blanking your screen, drag the Display Sleep slider to the desired period. You can also power down the drive to conserve energy and prevent wear and tear (an especially good feature for iMacs with magnetic hard drives).

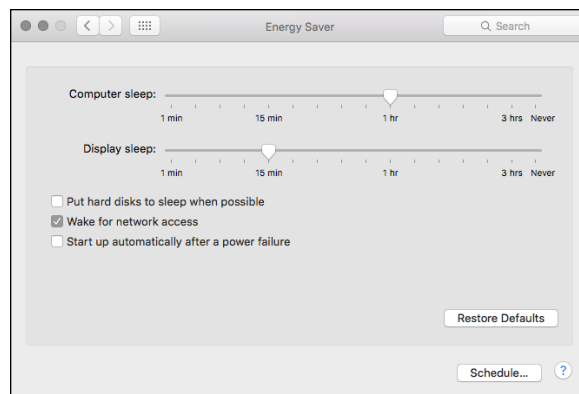


FIGURE 5-8: Reduce your iMac power consumption from the Energy Saver pane.



TIP

If you want to start up or shut down your iMac at a scheduled time, click the Schedule button. Select the desired schedules (the Start Up or Wake check box and the Shut Down/Sleep check box) to enable them. Then click the up and down arrows next to the time display to set the trigger time. Click OK to return to the Energy Saver pane.



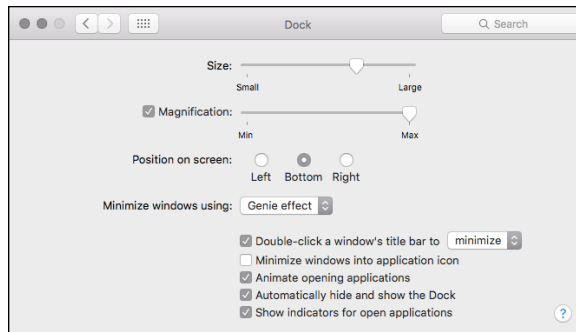
TIP

An active network connection can wake your iMac from sleep mode in El Capitan if the Wake for Network Access check box is enabled.

The Dock pane

I'll come clean: I think the Dock is the best thing since sliced bread! (I wonder what people referred to before sliced bread was invented?) You can use the settings shown in Figure 5-9 to configure the Dock's behavior until it fits your personality like a glove:

FIGURE 5-9:
Customize your
Dock with these
controls.



- » **Size:** Pretty self-explanatory. Just drag the slider to change the Dock's scale.
- » **Magnification:** When you select this check box, each icon in the Dock swells like a puffer fish when you move the cursor over it. (The Magnification slider determines just how much it magnifies.) I really like this feature because I resize my Dock smaller, and I have a large number of Dock icons.
- » **Position on Screen:** Select a radio button here to position the Dock on the left, bottom, or right edge of the Desktop.
- » **Minimize Windows Using:** El Capitan includes two cool animations that you can choose from when shrinking a window to the Dock (and expanding it back to the Desktop). Click the Minimize Windows Using pop-up menu to specify the genie-in-a-bottle effect or the scale-up-or-down-incrementally effect.
- » **Double-Click a Window's Title Bar to Minimize/Zoom:** Select this check box to minimize or zoom a Finder or application window by simply double-clicking the window's title bar.
- » **Minimize Windows into Application Icon:** If this check box is not enabled, minimized application windows appear as thumbnail icons on the Dock. To minimize application windows into the application icon on the Dock — which can save space on your Dock — select this check box. (To restore a window that's been minimized into the application icon, right-click the icon on the Dock and choose Restore from the menu that appears.)
- » **Animate Opening Applications:** Active souls who like animation probably get a kick out of the bouncing application icons on the Dock, which indicate that you've launched an application and that it's loading. If you find this effervescence overly buoyant or distracting, deselect this check box.
- » **Automatically Hide and Show the Dock:** Select this check box, and the Dock disappears until you need it. (Depending on the size of your Dock, the Desktop real estate you gain can be significant.) To display a hidden Dock, move the cursor over the corresponding edge of the Desktop.

» **Show Indicators for Open Applications:** OS X indicates which applications are running on the Dock with a small gray dot in front of the icon. To disable these indicators, deselect this check box.

The Sharing pane

So you're in a neighborly mood, and you want to share your toys with others on your local wired or wireless network. Perhaps you'd like to start your own website or protect yourself from the Bad Guys on the Internet. All these fun diversions are available from the Sharing pane in System Preferences, as shown in Figure 5-10.

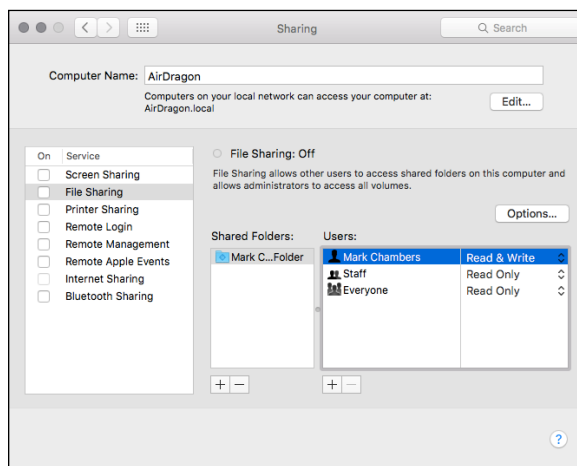


FIGURE 5-10:
Use controls on the Sharing pane to share your toys.

Click the Edit button to change the default network name assigned to your iMac during the installation process. Your current network name is listed in the Computer Name text field.

Each entry in the services list controls a specific type of sharing, including DVD and CD Sharing (if you have an optical drive), Screen Sharing, File Sharing (with other Macs and PCs running Windows), Printer Sharing, Remote Login, Remote Management (using Apple Remote Desktop), Remote Apple Events, Internet Sharing, and Bluetooth Sharing. To turn on any of these services, select the On check box for that service. To turn off a service, click the corresponding On check box to deselect it.

From a security standpoint, I highly recommend that you enable only the services you actually use. Each service you enable automatically opens your El Capitan firewall for that service. Here's a Mark's Maxim to remember:



AUTHOR
SAYS

Poking too many holes in your firewall is *not* A Good Thing.

When you click one of the services in the list, the right side of the Sharing pane changes to display the settings you can specify for that particular service.

The Time Machine pane

iMac users are thrilled with the Time Machine automatic backup feature that's built in to El Capitan. It's saved my stuff numerous times. You can easily configure how Time Machine handles your backups from this pane, as shown in Figure 5-11. Chapter 22 covers how to use Time Machine. Of course, you need an external drive (or an AirPort Time Capsule wireless backup device) for the best backup security. Note that Time Machine doesn't work with a CD or DVD rewriteable drive; you must use an external drive or a USB flash drive.



FIGURE 5-11:
Put Time Machine
to work, and your
data is always
backed up.

To enable Time Machine, click the On toggle switch and then select a disk to hold your Time Machine backup data on the sheet that appears. Click Use Disk to confirm your choice. (Your external backup drive should be at least twice the capacity of your internal drive, thus ensuring that your backup files have the elbow room they need.) If you have an external Time Capsule wireless unit, click Set Up instead.

By default, Time Machine backs up all the drives on your system; however, you may not need to back up some folders on your iMac. To save time and backup drive space, Time Machine allows you to exclude specific folders from the backup process. Click Options, and then click the Add button (with the plus sign) to select the drives or folders you want to exclude. They appear in the Exclude These Items From Backups list.



TIP

To remove an exclusion, select it in the list and click the Delete button (with the minus sign). Note that the Estimated Size of Full Backup figure increases, and Time Machine adds the item you deleted from the list to the next backup.



TIP

If you enable the Show Time Machine in Menu Bar check box, you can elect to back up your Mac immediately by clicking the Time Machine icon on the Finder menu bar and then choosing Back Up Now.

By default, El Capitan warns you when deleting older backup files, but you can turn this off from the Options sheet as well.

iCloud preferences

From the El Capitan iCloud Preferences pane, shown in Figure 5-12, you can specify which types of data are automatically pushed to your iMac and iOS devices. If you haven't created an iCloud account yet — or if you signed out of an existing account earlier — System Preferences prompts you to enter your Apple ID and password. Click Sign In to display the contents of the iCloud pane.



FIGURE 5-12: Control and configure your iCloud activity with these settings.

El Capitan allows you to set up Family Sharing, where up to six accounts can share photos, iTunes media and apps, and a common calendar. Group members can even display the current location of other members who are using iMacs or iOS devices! Click the Set Up Family button and then click Continue to launch the Family Sharing setup assistant.

The check boxes for each category are

» **iCloud Drive:** Enable and disable iCloud Drive access for specific applications.

- » **Photos:** Push the latest photos and video clips you've added in Photos to other devices, and update your Photos library with photos and video clips pushed from your iOS devices.
- » **Mail:** Synchronize your Mail account settings between devices.
- » **Contacts:** Push your Contact cards between devices.
- » **Calendars:** Push your calendar events to and from your iOS devices.
- » **Reminders:** Synchronize the reminders you've set between devices.
- » **Notes:** Synchronize your Notes between devices.
- » **Safari:** Synchronize your Safari bookmarks.
- » **Keychain:** Share passwords for applications and websites between your devices.
- » **Documents & Data:** Automatically synchronize the documents you create and your personal settings between your iMac and other iOS devices.
- » **Back to My Mac:** Control file and screen sharing across all the Macs sharing this iCloud account. Back to My Mac must be enabled on all computers that will use this feature.
- » **Find My Mac:** Locate your iMac from a web browser or your iOS device. You can also choose to remotely lock your computer — or even *wipe your Mac's hard drive* to prevent someone from stealing your data!



WARNING

Wiping your iMac remotely is a drastic step that will prevent you from locating it in the future!

To display the storage currently being used by your mail, backups, documents, and application data, click the Manage button at the lower right of the pane. Apple provides each iCloud account 5GB of space for free, but you can elect to buy additional storage from this sheet.

Notifications preferences

The Notifications group is shown in Figure 5-13. Each application that can display notifications appears in the list at the left of the pane.



TIP

Click the Do Not Disturb entry in the list at the left to set Do Not Disturb mode, where Notification banners, alerts, and sounds are disabled. You can specify a time period, turn on Do Not Disturb when your iMac is in sleep mode, or turn on Do Not Disturb when you're mirroring (or sending) the video from your iMac to a TV or projector. You can also optionally allow FaceTime calls from anyone while

Do Not Disturb is active or just from those you've marked as Favorites in FaceTime. If you select Allow Repeated Calls, a FaceTime caller can call a second time within three minutes without being disabled.

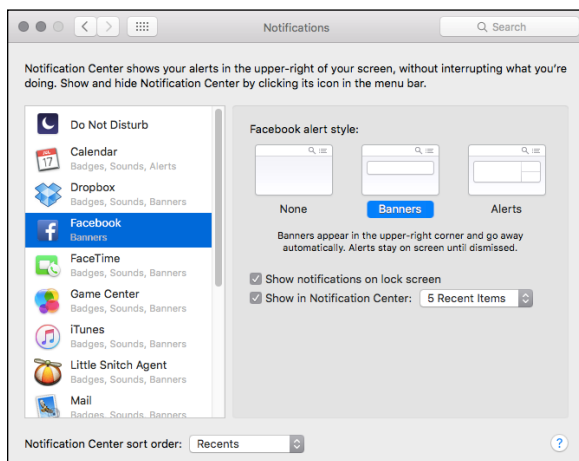


FIGURE 5-13:
You can individually configure each application that uses notifications.

Click an application in the list at the left to configure its notifications. Different applications display different options in the settings pane, but the settings can include the following:

- » **Alert Style:** These three buttons specify which type of alert should appear under the Notification Center icon in the menu bar. You do not need to display the Notification Center to see alerts, which appear on your Desktop. Choose None to disable alerts for this application. Choose Banners to display alert messages that automatically disappear after a delay. Choose Alerts to display alert messages that remain onscreen until you click the confirmation button in the Alert dialog.
- » **Show Notifications on Lock Screen:** Select this check box to allow notifications even if your iMac is displaying the Lock screen.
- » **Show in Notification Center:** To display notification messages from this application in the Notification Center, select this check box. You can also specify how many recent messages from this application are displayed.
- » **Badge App Icon:** This check box toggles on and off the display of this application's icon in alert boxes and in the Notification Center. It also activates the numeric display of pending items on the icon itself (for example, unread mail and messages).
- » **Play Sound for Notifications:** To play a sound when alerts appear, enable this check box.



TIP

You can change the order that notifications are sorted in the Notification Center using the Notification Sort Order drop-down list box at the bottom of the pane. The default sort is by most recent, but you can choose Recents by App to sort recent notifications grouped by applications. For the ultimate in custom notifications, choose Manually by App from the drop-down list box and drag the applications in the list at the left into your desired order!

IN THIS CHAPTER

Mastering basic Spotlight searching skills

Selecting text and keywords for best results

Displaying results in the Finder search window

Customizing Spotlight within System Preferences

Chapter 6

Searching Amidst iMac Chaos

What would you say if I told you that you could search your entire system for all the data connected with a person — and in only the short time it takes to type that person’s name? And I’m not just talking about files and folders that might include that person’s name. I mean *every* email message and *every* Calendar event that references that person — and even that person’s Contacts card to boot. Heck, how about if that search could dig up every occurrence of the person’s name inside your PDF documents? What if it could even search folders shared on other Macs across your network?

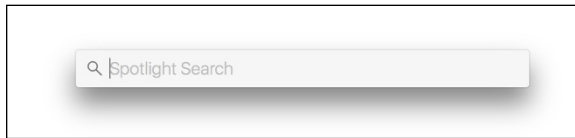
You’d probably say, “That makes for good future tech. I’ll bet I can do that in five or ten years. It’ll take Apple at least that long to do it — and just in time for me to buy a new iMac! (Harrumph.)”

Don’t be so hasty. You can do all this right now. (In fact, this functionality has been part of OS X for a number of years.) The technology is the OS X feature named *Spotlight*, built into El Capitan. In this chapter, I show you how to use it like a fearsome iMac power guru. I also show you how to take advantage of Internet search widgets you can display within the Dashboard. (From what I hear, there’s good stuff on the Internet, too.)

Doing a Basic Search

Figure 6-1 shows the Spotlight search box, which is always available from the Finder menu bar. Click the magnifying glass icon once (or press ⌘+spacebar), and the Spotlight search box appears on your Desktop, front and center.

FIGURE 6-1:
Lots of power purrs behind this single Spotlight search box.



To run a search, simply begin typing. (The words you type that you want to match are called *keywords*.) Matching items appear as soon as you type, and the search results are continually refined while you type the rest of your search keywords. You don't need to press Return to begin the search.

After a second or two, the Spotlight search box expands to display the results of your search, and the list is updated automatically in real time while you continue to type. The most-relevant items are grouped into categories — such as Messages, Definitions, Documents, Folders, Images, PDFs, and Contacts — right in the Spotlight search box. Spotlight takes a guess at the item that's most likely the match you're looking for (based on your Search Results list in System Preferences, which I cover later in the chapter) and presents it first. To open the top item like a true El Capitan power user, just press Return. (My brothers and sisters, it just doesn't get any easier than that.)



TIP

Although one or two keywords are typically enough to do the job, you can also type phrases, such as **emails from Mark Chambers** or **songs with sunshine in the title**.



TIP

Single-click any item in the list, and *shazam!* — Spotlight uses the Quick Look technology built in to El Capitan to display the contents (such as a thumbnail image of a document or an album cover) or information on the item! For example, if the item is an iTunes playlist, you see the song list in the results pane on the right, and you can click one of the songs to open iTunes and play it. If the item is a Mail message, click it once in the list to view the contents of the message — without leaving the Spotlight box.

When you click an item in the list, Spotlight indicates which application will be used to open the item by displaying the icon for that application in the upper-right corner of the Spotlight box. For example, you'll see the iTunes icon for a song and the Safari icon for a website.

Literally, any text string is acceptable as a Spotlight search. However, here's a short list of the common search criteria I use every day:

- » **Names and addresses:** Because Spotlight has access to the Contacts application in El Capitan, you can immediately display contact information using any portion of a name or an address.
- » **Email message text:** Need to open a specific email message, but you'd rather not launch Mail and spend time digging through the message list? Enter the person's email address or any text string contained in the message you're looking for.
- » **File and folder names:** A simple item name is the classic search favorite. Spotlight searches your entire system for that one file or folder in the blink of an eye.
- » **Events and Reminder items:** Yep, Spotlight gives you access to your Calendar events and those all-important Reminders you've created.
- » **Specific songs and playlists:** Itching to hear "Rock Me Amadeus" by Falco? With the power of Spotlight and your iTunes library, you can satisfy your musical needs in seconds!
- » **System Preferences:** Now things start to get *really* interesting! Try typing the word **desktop** in the Spotlight field. At least one of the results in the list will be a System Preference pane! That's right: Every setting in System Preferences is referenced in Spotlight. (For example, the Desktop background setting resides on the Desktop & Screen Saver pane in System Preferences.)
- » **Weather, stocks, and sports scores:** Put Spotlight to work, and you can get instant displays of current weather and forecasts (type **weather** followed by a town name), stock figures (type the desired stock abbreviation), and even sports scores (type your favorite team name).
- » **Web pages:** *Whoa.* Stand back, Google. You can use Spotlight to search the web — and, if necessary, the web pages you've recently displayed in Safari! However, it's important to note that Spotlight can't search data stored online, like the files you may have saved on a "cloud-based" backup site. Spotlight can only search the text on the web pages themselves.
- » **Metadata:** This category is pretty broad, but it fits. If you're not familiar with the term *metadata*, think of the information stored by your digital camera each time you take a photo — exposure setting, time and date, and even the location where the photo was taken, which are also transferred to iPhoto when you import. Here's another example: I like to locate Word documents on my system using the same metadata that's stored in the file, such as the contents of the Comments field in a Word document. Other supported applications include Adobe Photoshop images, Microsoft Excel spreadsheets, Keynote presentations, iTunes media, and other third-party applications that offer a Spotlight plug-in.

To reset the Spotlight search and try another text string, press ⌘+A to select the entire contents and then press Delete.

After you find the item you're looking for in the list at the bottom of the Spotlight box, you can *double-click* the entry in the list to do any of these things:

- » Launch it (if the item is an application).
- » Open it in System Preferences (if it's a setting or description on a Preferences pane).
- » Open it within the associated application (if the item is a document, website, or data item).
- » Display it in a Finder window (if the item is a folder).



TIP

Here's another favorite time-saver: You can display all the files of a particular type on your system by using the file type as the keyword. For example, to provide a list of all images on your system, just use *images* as your keyword. The same goes for *movies* and *audio*, too.

How Cool Is That? Discovering What Spotlight Can Do

Don't get fooled into simply using Spotlight as another file-'n'-folder-name search tool. Sure, it can do that, but Spotlight can also search *inside* PDFs, Pages, Word documents, and HTML files, finding matching text that doesn't appear in the name of the file! To wit: A search for *El Capitan* on my system pulls up all sorts of items, not only files with *El Capitan* in their names, but also files with the text *El Capitan* within the documents themselves:

- » **Apple Store SF.ppt** is a PowerPoint presentation with several slides containing the text *El Capitan*.
- » **bk01ch03.doc** is a rather cryptically named Microsoft Word file chapter of this book that mentions El Capitan in several spots.
- » **Conference Call with Amy** is a Calendar event pointing to a conference call with my editor about upcoming El Capitan book projects.



IS SPOTLIGHT SECURE?

So how about all those files, folders, contacts, and events that you *don't* want to appear in Spotlight? What if you're sharing your Mac as a multiuser computer or accessing other Macs remotely? Can others search for and access your personal information through Spotlight?

Definitely not! The results displayed by Spotlight are controlled by file and folder permissions as well as your account login, just as the applications that create and display your personal data are. For example, you can't access other users' calendars using Calendar, and they can't see your Mail messages. Only *you* have access to your data, and only after you've logged in with your username and password. Spotlight works the same way. If a user doesn't normally have access to an item, the item simply doesn't appear when that user performs a Spotlight search. (In other words, only you get to see your stuff.)

However, you can hide certain folders and disks from your own Spotlight searches if necessary. Check out the final section of this chapter for details on setting private locations on your system.

Not one of these three examples has the words *El Capitan* occurring anywhere in the title or filename, yet Spotlight found them because they all contain the text *El Capitan* therein. That, dear reader, is the true power of Spotlight, and it can literally guarantee you that you'll never lose another piece of information in the hundreds of thousands of files and folders on your hard drive!

Heck, suppose that all you remember about a file is that you received it in your mail last week or last month. To find it, you can type time periods, such as *yesterday*, *last week*, or *last month*, to see every item that you saved or received within that period. (Boy howdy, I love writing about TGIs — that's short for Truly Good Ideas.)

Be careful, however, when you're considering a search string. Don't forget that (by default) Spotlight matches only those items that have *all* the words you enter in the Spotlight box. To return the highest number of possible matches, use the fewest number of words that will identify the item. For example, use *horse* rather than *horse image*, and you're certain to be rewarded with more hits. On the other hand, if you're looking specifically for a picture of a knight on horseback, using a series of keywords — such as *horse knight image* — shortens your search considerably. It all depends on what you're looking for and how widely you want to cast your Spotlight net.

To allow greater flexibility in searches, Apple also includes those helpful Boolean friends that you may already be familiar with: AND, OR, and NOT. For example, you can perform Spotlight searches such as these:

- » **Horse AND cow:** Collects all references to both those barnyard animals into one search
- » **Batman OR Robin:** Returns all references to either Batman or Robin
- » **Apple NOT PC:** Displays all references to Apple that don't include any information about dastardly PCs

Expanding Your Search Horizons

I can just hear the announcer's voice now: "But wait, there's more! If you double-click the Show in Finder menu item at the bottom of your search results list, we'll expand your Spotlight search box into the Finder search window!" (Fortunately, you don't have to buy some ridiculous household doodad.)



TIP

Keyboard mavens will appreciate the Finder search window shortcut key, and I show you where to specify this shortcut in the final section of this chapter.

Figure 6-2 illustrates the Finder search window. To further filter the search, click one of the buttons on the search criteria bar to create your own custom filter. Click the button with the + (plus) on the search criteria bar and then click the pop-up menus to choose criteria, such as the type of file, the text content, or the location on your system (for example, your hard drive, your Home folder, or a network server). You can also filter your results listing by the date when the items were created or last saved. To add or delete criteria, click the + (plus) and - (minus) buttons at the right end of the search criteria bar. To save a custom filter that you've created, click the Save button.

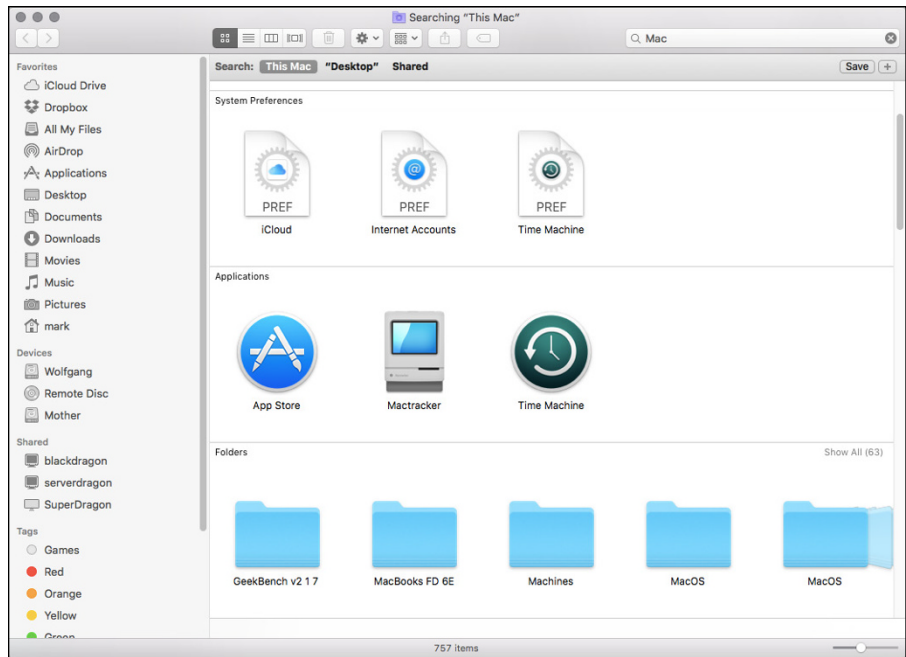
Images appear as thumbnail icons, so you can use that most sophisticated search tool — the human eye — to find the picture you're looking for. (If you don't see thumbnail images, click the Icon view button on the toolbar.) Don't forget that you can increase or decrease the size of the icons by dragging the slider at the bottom right of the window.



TIP

To display the contents of an item in the list (without leaving the comfortable confines of the Finder search window), click the item to select it, and press the spacebar for a better view. Note that El Capitan must recognize the format of the file, and it must be supported by at least one application.

FIGURE 6-2:
The spacious
borders of the
Finder search
window.



Again, when you're ready to open an item, just double-click it in the Finder search window.

As I mention earlier, Spotlight can look for matching items on other Macs on your network only if those remote Macs are configured correctly. To allow another Mac to be visible to Spotlight on your system, enable File Sharing on the other Mac. (Oh, and remember that you need an admin-level account on that Mac — or access to a good friend who has an admin-level account on that Mac.)

Follow these steps to enable file sharing on the other Mac:

1. **On the Dock, click the System Preferences icon (the one with the gears).**
2. **Click the Sharing pane.**
3. **In the service list on the left side of the Sharing pane, select the On check box next to the File Sharing item to enable it.**
4. **Click the Close button in the System Preferences window (or, if you're a keyboard power user, simply press the ⌘+Q shortcut).**



REMEMBER

You can search only those items that you have rights and permissions to view on the remote Mac (such as the contents of the Public folders on that computer). I discuss these limitations earlier in this chapter, in the sidebar “Is Spotlight secure?”

Customizing Spotlight to Your Taste

You might wonder whether such an awesome OS X feature has its own pane in System Preferences — and you'd be right again. Figure 6-3 shows off the Spotlight pane in System Preferences. Click the System Preferences icon on the Dock and then click the Spotlight icon to display these settings.

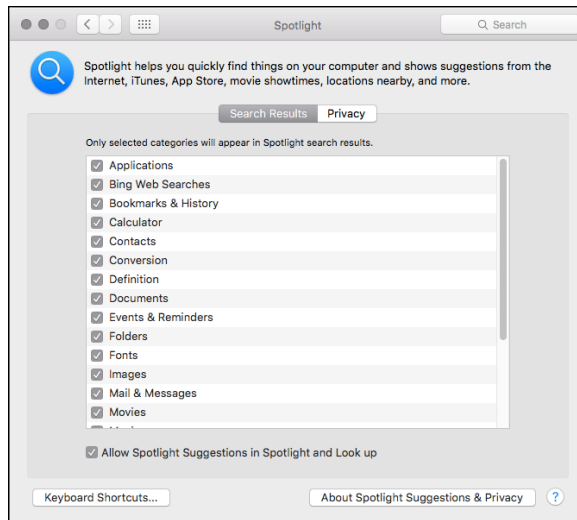


FIGURE 6-3:
Fine-tune your
Spotlight menu
and Results
window from
System
Preferences.

Click the Search Results tab to

- » **Determine which categories appear in the Spotlight search box.** For example, if you don't use any presentation software on your Mac, you can clear the check box next to Presentations to disable this category (thereby making more room for other categories that you will use).
- » **Specify the Spotlight search box and Finder search window keyboard shortcuts.** You can enable or disable either keyboard shortcut and choose the key combination from the pop-up menu. By default, the menu keyboard shortcut is $\text{⌘}+\text{spacebar}$, and the Finder search window keyboard shortcut is $\text{⌘}+\text{Option}+\text{spacebar}$.

Click the Privacy tab (shown in Figure 6-4) to specify disks and folders that should *never* be listed as results in a Spotlight search. I know, I know — I say earlier that Spotlight respects your security, and it does. However, the disks and folders that you add to this list won't appear even if you are the one performing the search — a great idea for folders and removable drives that you use to store sensitive information, such as medical records.

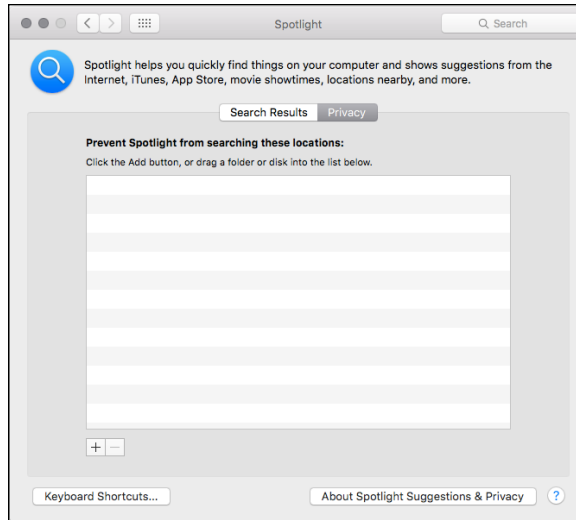


FIGURE 6-4:
When certain folders and disks must remain private (even from you!), add them to this list.

To add locations that you want to keep private, click the Add button (a plus sign) and navigate to the desired location. Click the location to select it and then click Choose. Alternatively, you can drag folders or disks directly from a Finder window and drop them onto the pane.

Chapter 7

Using Reminders, Notes, Notifications, and Maps

As I've said many times before in my books, "If it works in one place, it's likely to show up in another." In this case, four popular time-saving (and headache-preventing) apps have crossed over from the world of iOS devices — the iPhone, iPad, and iPod touch — and have securely landed on your El Capitan Desktop. These apps are Reminders, Notes, Notification Center, and Maps, all taken from the iOS world.

That's not the only good news, though: These four Mac applications work seamlessly with an iCloud account. So if you also use an iOS device (with the same Apple ID), much of the data you store — such as the notes you take and the reminders you make — is automatically synchronized between all your Apple computers and devices!

Because all four of these new applications have a similar goal — keeping you in touch with the information, daily tasks, locations, and digital events that matter to you — I decided to cover them in one shiny chapter. Consider this chapter a guide that demonstrates how you can remind, note, notify, and map like a mobile power user!

Remind Me to Use Reminders

You don't need to look far to find the Reminders application on your Mac. Just click the Reminders icon on the Dock to display the main window, as shown in Figure 7-1.

These are highlights of the Reminders window:

- » **Search box:** Click here and type a phrase or name to search for it among your reminders.
- » **Reminders Sidebar:** You can add as many separate Reminder lists as you like in the application (one for work, for example, and another for your Mac user group). In the Sidebar, you can switch quickly between your lists. (Note that two lists, Reminders and Completed, already appear.)



TIP

You can hide or show the Reminders Sidebar at any time by using the View menu or by pressing \mathbb{G} +Option+S. You save a significant amount of screen real estate when the display is hidden.

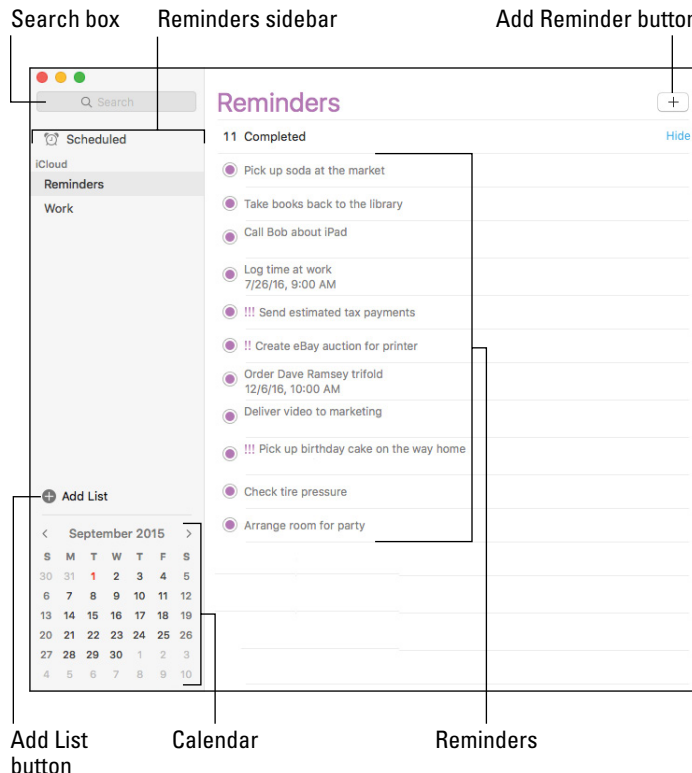


FIGURE 7-1:
The main Reminders window in action.

- » **Calendar:** This handy calendar indicates which days of the current month already have reminders pending: They're displayed with a dot under the date. You can jump to any date by clicking it. To move forward and backward through the months, click the Previous and Next buttons next to the month name. (Note that this calendar does not sync or exchange reminder dates with the Calendar.) To display the Calendar, click View ⇄ Show Calendar; to hide the Calendar, click View ⇄ Hide Calendar.
- » **Add List button:** Click this button to add a new Reminder list to the Sidebar; from the keyboard, press ⌘+L. The list name is highlighted in a text box, so you can simply type the new name and press Return.
- » **Reminders:** These entries are the reminders themselves. Each is prefaced by a radio button so you can select the radio button when the reminder is complete, thereby moving that reminder automatically to the Completed list. And yes, if you click the Show link next to the number of completed reminders to display them and deselect the radio button for a reminder, that reminder entry returns (like a bad penny) to the original list.
- » **Add Reminder button:** Click this button to add a new reminder to the currently selected list; from the keyboard, press ⌘+N. In its simplest form, a reminder is just a short phrase or sentence. Press Return afterward to save it to your list.

Adding a reminder is straightforward. First, click a date in the calendar display to jump to that date and then click the Add Reminder button. Type a few words and press Return to create a basic reminder. However, if you hover your cursor over the reminder you just created, an Info button (the lowercase *i* in a circle icon) appears next to the text. The game is afoot! Click the Info button to display the settings you see in Figure 7-2.

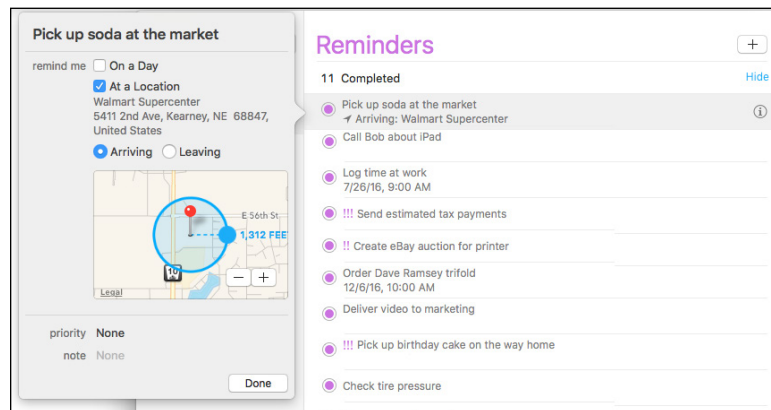


FIGURE 7-2:
Editing a
reminder.

These fields are on the Edit sheet:

- » **Reminder text:** Click this text to edit the reminder text itself.
- » **On a Day:** Enable this check box if the reminder should appear in Notification Center on a particular day. By default, the date is the one selected when you created the reminder. You can click the Date and Time fields to change them.
- » **At a Location:** This is a powerful feature. Select the At a Location check box, and a pop-up menu appears below the check box. Now you can choose a card from your Contacts application that includes an address (or simply type an address in the box). Reminders monitor your current location on your iPad or iPhone by using Location Services. They notify you when you're leaving or arriving at that location (and, optionally, on the date and time you specify in the On a Day field). You could create a reminder that notifies you on your iPhone when you're arriving at the mall on September 15 to pick up the watch that's being repaired. *Shazam!*
- » **Repeat:** If you select the On a Day check box, you can also set this reminder to automatically repeat every day, week, two weeks, month, or year at the same time.
- » **Priority:** You can assign one of four priorities to the reminder: Low, Medium, High, or None. Assigning a priority prefaces the reminder text with one (Low), two (Medium), or three (High) blue exclamation points so the reminder stands out from the crowd.
- » **Note:** Click next to the Note field to enter a free-form text note along with the reminder.

Click Done on the Edit sheet when you've finished making changes. You can edit a reminder as often as you like. I sometimes have to change the date on a reminder multiple times as my schedule changes.



TIP

To delete a reminder from the list, right-click it and choose Delete from the menu that appears.

iCloud connectivity allows Reminders to share information with other Macs and iOS devices, as well as Microsoft Outlook on both PCs and on Macs running OS X. To share reminders, click the System Preferences icon on the Dock, click the Internet Accounts icon, and then click one of the accounts on the left side of the pane. If an account — such as the iCloud account — allows you to share data from the Reminders application, you'll see a Reminders check box on the right side of the pane.

Taking Notes the El Capitan Way

Imagine a notepad of unlimited pages that's always available whenever you're around your Mac, iPhone, iPod touch, or iPad. That's the idea behind Notes, and it's superbly simple! To open the Mac version of the application, click the Notes icon on the Dock. The window shown in Figure 7-3 appears.

The salient stuff in the Notes window includes these items:

- » **Search box:** If you're hunting for a specific note, click in this box and type a phrase or name to search for it.
- » **Folders list:** You can create new folders to hold specific kinds of notes. In Figure 7-3, for example, I added a Work folder. To add a new folder, choose File ⇨ New Folder or press ⌘+Shift+N and then type the new folder name. To switch between folders, display the Folders list and click the desired folder. You can display or hide the Folders list from the View menu.

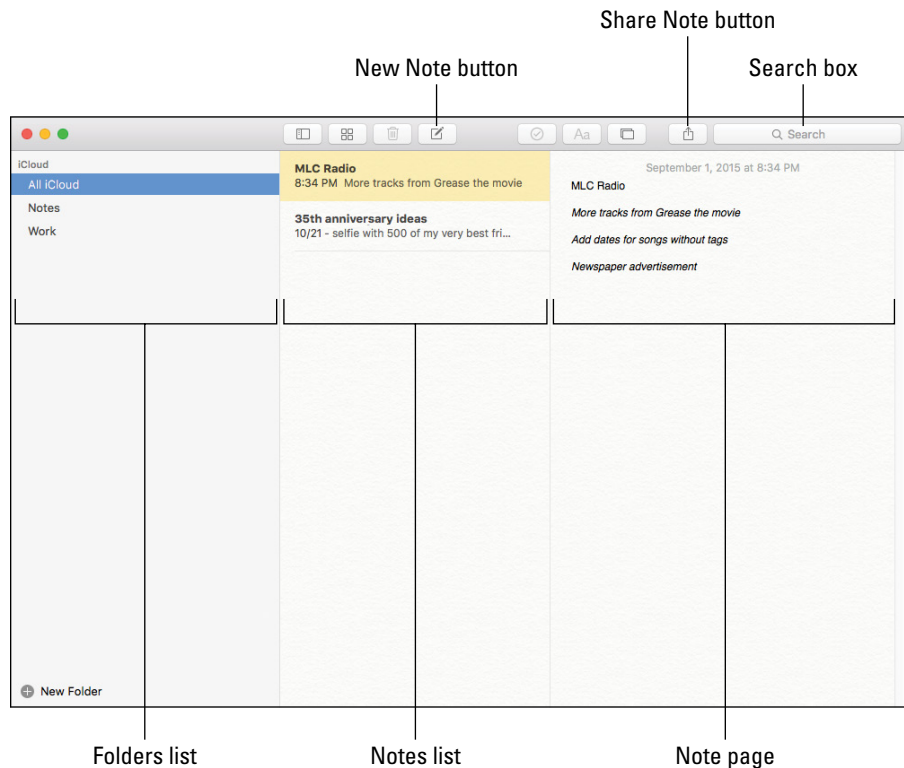


FIGURE 7-3:
The notable
Notes application
window.

- » **Notes list:** Each note you create appears as a separate entry in the Notes list. You can click a note in the list to switch to it immediately.
- » **New Note button:** Click this button to add a new note. You can also right-click the Notes list and choose New Note from the contextual menu. Notes uses the first line of text you type as the title of the note, which appears in the list.
- » **Note page:** This free-form pane is where you type the body of your note. You can also drag images from a Finder window and include them in the body of the note, or embed PDF and audio files by dragging them from a Finder window as well.
- » **Share button:** Open this pop-up menu to share the contents of the current note, just like the Share button that appears on the Finder window toolbar. Sharing options can include a new email message, a new message in the Messages application, a new reminder and new postings to Twitter, LinkedIn and Facebook.

To edit a note, click it to select it in the Notes list and then simply make your changes or additions in the Note page. You can format the text from the Format menu — everything from changing fonts and colors to inserting bulleted and numbered lists.

To delete a note you no longer need, right-click it in the Notes list and choose Delete from the menu that appears. The application prompts you for confirmation before the deed is done.

Like Reminders, the Notes application can share information with Macs and iOS devices, as well as Outlook on both Macs and PCs. The process is the same: Open System Preferences and click the Internet Accounts icon, and then click the desired account at the left of the pane. Accounts that support sharing data from Notes will display a Notes check box at the right side of the pane.

Staying Current with Notification Center

Unlike Reminders and Notes, Notification Center isn't an application you launch! Instead, the Notification Center icon appears at the far-right side of the Finder menu bar, and it's always running.

Click the icon (or, if you're using a trackpad, swipe with two fingers from the right edge to the left) to display your notifications. These notifications can be generated by a whole host of El Capitan applications and functions, including Calendar, Mail, FaceTime, Reminders, Game Center, Photo Stream, Messages, Safari, Facebook, and even the Mac App Store. Third-party applications can also generate notifications.

You can also click the Today button at the top of the Notification Center to display all sorts of information that specifically applies to today's date (as shown in Figure 7-4), including things like Calendar events, Reminders, the current weather, the OS X calculator, and the latest stock figures. To switch back to Notifications view, click the Notifications button at the top of the Notification Center.



You can add applets called *widgets* to Today view as well, allowing you to customize the information you see there. Notification widgets are very similar to Dashboard widgets; you can download them from the App Store.

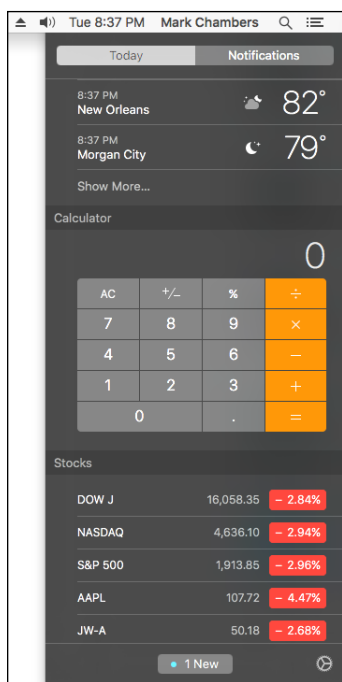


FIGURE 7-4: Notification Center muscles your desktop to the side.

I love how Notification Center doesn't interfere with open applications. It simply moves the entire Desktop to the left so you can see the center. You can close Notification Center at any time by clicking anywhere on the Desktop to the left, clicking the Notifications icon on the Finder menu bar again, or swiping in the opposite direction.

Notification entries that appear in Notification view are grouped under the application that created them. You can delete many entries from Notification Center by clicking the Delete button that appears next to the application heading. (The button bears an X symbol.) Other entries, such as Calendar alerts, remain in Notification Center until a certain time has elapsed.

But wait, there's more to Notification Center than just a strip of happenings! Depending on the settings you choose, notifications can also appear without Notification Center's being open at all. These notifications are displayed as pop-up *banners* (which disappear in a few seconds) and *alerts* (which you must dismiss by clicking a button). Figure 7-5 illustrates a typical alert notification from iTunes.

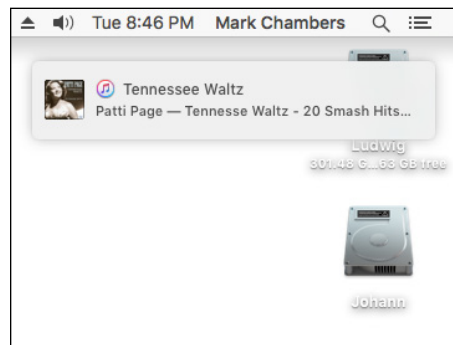


FIGURE 7-5:
An alert notification appears on your Desktop.

El Capitan can also allow *actions* in notifications. Depending on the application or function that generates the notification, you may see buttons on a banner or an alert that allow you to take care of business (without requiring the application to be running). If a new email message is received in Apple Mail, you can choose to reply to or delete the message. Websites can display updates as notifications, and you can answer a FaceTime or (via the new Handoff feature) iPhone call directly from the notification.



TIP

You can configure the notifications for all your applications from the Notifications pane in System Preferences, which you can reach easily if Notification Center is open. Just click the gears icon at the lower right of the screen.

Introducing the Maps Application

If you own an iPad, iPhone, or iPod touch, prepare yourself for a joyful state: your beloved Maps application also resides on your Dock! As long as you have a connection to the Internet, Maps is ready to display locations, provide directions, and even allow for informal views of important sites worldwide! (Recognize the grand dame in Figure 7-6?)

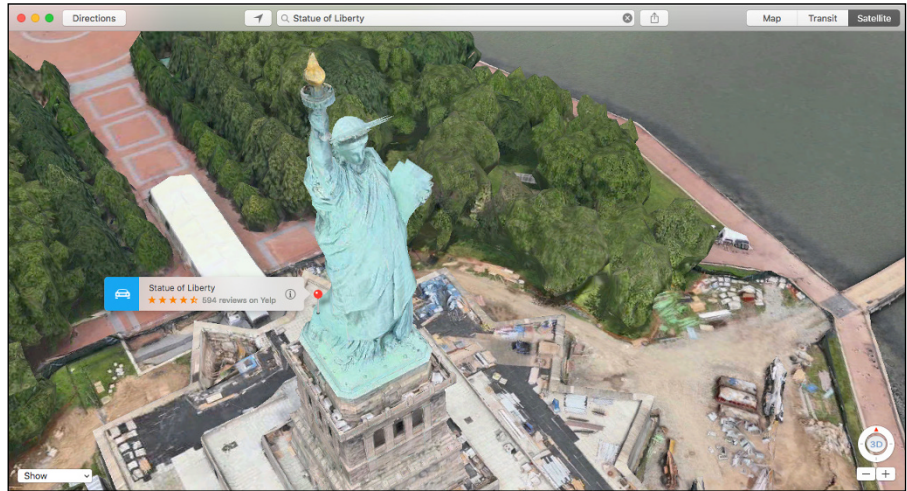


FIGURE 7-6: The Statue of Liberty shines in the Maps application.

Displaying an overhead view of an address is one of the simplest chores in all of OS X. From the Maps window, just click in the Search box at the top of the window, type the address, and press Return. Maps displays the address with a red pushpin to help you locate it.



TIP

Depending on the location you've chosen, you may also see a tiny Info icon (which looks like a lowercase *i* within a circle) next to the name. To view more information, click the Info icon.



TIP

If you are in range of a Wi-Fi signal and have turned Location Services on, you can quickly map your current location; just click View ⇄ Go to Current Location or press ⌘+L.

Ah, but why stop with just a simple address? You can also enter the following types of information:

- » The name of a landmark, monument, or building (for example, *Statue of Liberty*).
- » The name of a business or restaurant (or even a genre of food, such as *Chinese*) followed by the city name. Maps displays matching sites with pushpins (complete with reviews), and you can click any of the pushpins to find out more information on a location. Figure 7-7 illustrates a search for *pizza* in my hometown of Columbia, Missouri. You can see the Info pop-up window that appears when I click the Info icon next to the restaurant name, complete with a link to its website and reviews aplenty.
- » Attractions and services, followed by the city name. You can search for a gas station, movie theater, or local park.

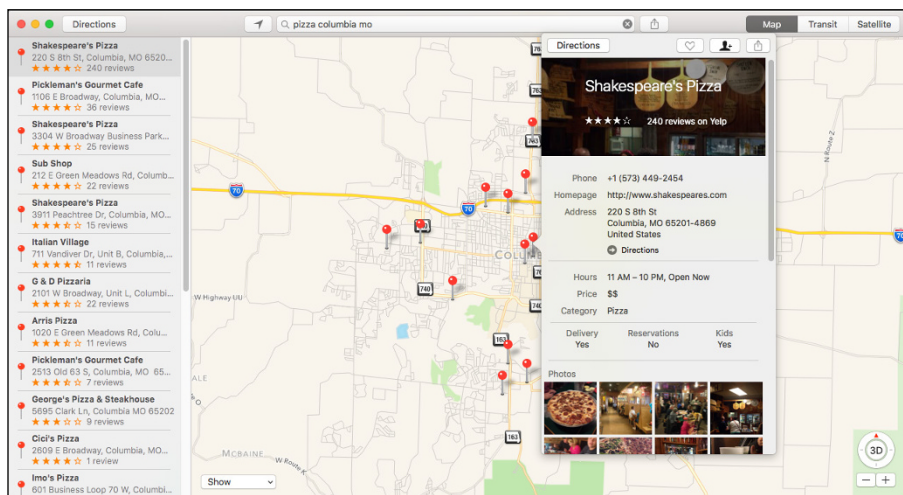


FIGURE 7-7:
Looks like this
pizza joint is
highly rated.



TIP

If you need to zoom in or zoom out on a Maps display, use the scroll function on your pointing device, click the plus and minus buttons at the bottom-right corner of the Maps window, or use the ⌘+plus and ⌘+minus shortcuts. To move around the Maps window, click and drag the map in the desired direction.



TIP

Teachers and parents, take note: A virtual flyby of a famous site in Maps is a valuable (and cool) resource.

Switching Views in Maps

A traditional printed map offers you only one view, which may be perfectly fine for determining a route but provides no visual interest. (The word *banal* comes to mind.) Maps, on the other hand, offers three types of views, each of which offers certain advantages:

- » *Standard (or Map) mode* is a familiar line map, with streets and highways marked. Standard mode is best for planning a road trip, just like your father's old-fashioned paper map.
- » *Transit mode* displays public transportation routes and bus, subway, and train schedules. Note, however, that Transit information is not available in every location.
- » *Satellite mode* is a photographic overhead view without streets or highways marked, which is great for panoramic views of your neighborhood or a location and its surroundings.

To select your view, click one of the two buttons at the top of the Maps window, or press ⌘+1 for Standard/Map, ⌘+2 for Transit, or ⌘+3 for Satellite. Figure 7-6, shown earlier in this chapter, illustrates Satellite view mode, whereas Figure 7-8 shows off Standard view.

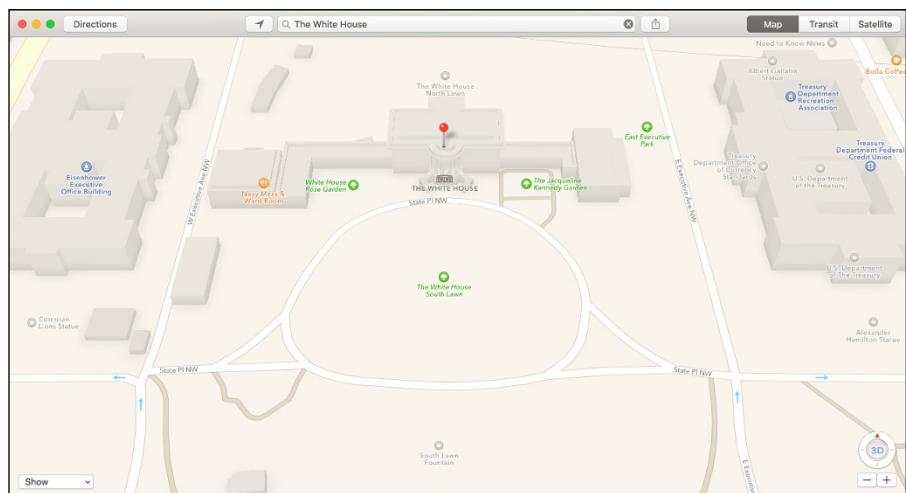


FIGURE 7-8:
Standard view
reminds me of an
auto GPS unit.

Have you noticed the Show pop-up menu at the lower-left corner of the Maps window? If you're using Satellite view, you can click the Show menu and choose Show Labels to toggle street names on and off. The Show pop-up menu also allows you to display traffic conditions and toggle the 3D map.



TIP

“Wait, there’s a 3D map option?” Yes, indeed, and no special glasses are required! For additional visual thrills, you can angle the Maps display with a slight 3D effect — nothing quite as grand as a 3D TV, but it does help add depth to Satellite and Hybrid views. To toggle 3D on and off, press $\text{⌘}+\text{O}$, click the Show pop-up menu, or click the 3D button at the lower-left corner of the window.



TIP

By default, Maps is oriented with north at the top of the screen, but if you need to change the orientation, click the red compass arrow at the bottom-right corner of the screen and drag in the desired direction. To immediately return to north at the top of the screen, press ⬆ or click View \leftrightarrow Snap to North.

Getting Directions Over Yonder

My primary use for a map is getting directions from one point to another, and Maps doesn’t disappoint when it comes to navigation. Click the Directions button to display the panel you see in Figure 7-9, and you’re ready to plot your course.

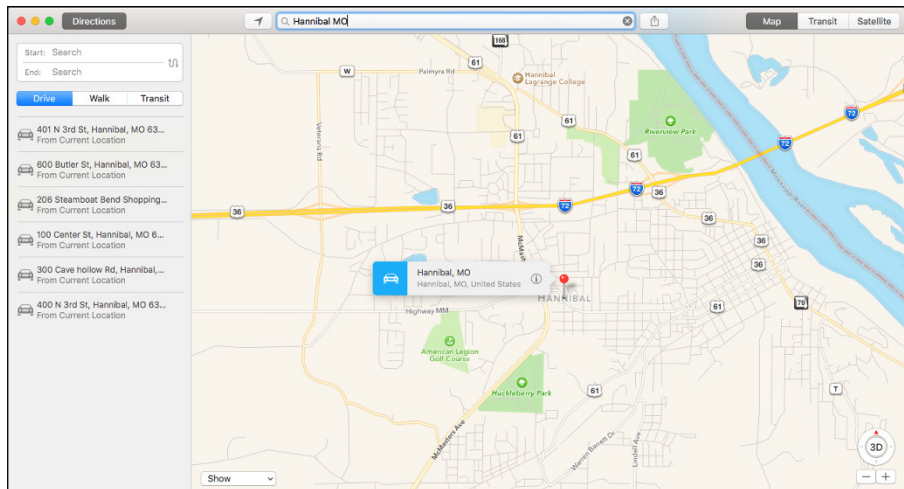


FIGURE 7-9:
The Directions panel is ready to provide directions to your next clambake.

Follow these steps to get directions between two addresses:

1. In the Start box, type the starting address.

As you type, Maps provides a pop-up list of suggestions taken from your recent locations, as well as addresses from your Contacts database and matching streets from around the globe. To choose one of these suggestions, just click it. To clear the contents of the field, click the X button that appears at the right side of the box.

2. Press Tab to move to the End box.

3. In the End box, type the destination address.

Note that your destination doesn't have to be a specific address. Memphis, TN, for example, works just fine.

4. Click the Driving button for road directions or the Walking button for walking directions.

5. Press Return to generate your directions.

Maps usually offers more than one route for your trip. The first route provided is typically the fastest or shortest, and it appears in bright blue. To view one of the other routes, just click a light-blue line, and it turns bright blue to indicate that it's now the selected route. (You can see the approximate mileage and time for the selected route at the top of the turn list.) The turn-by-turn list provides approximate mileage for each leg of the journey.

You can easily print the route map and directions by choosing File⇨Print (or by pressing ⌘+P) and then clicking the Show Details button at the bottom of the Print sheet to display all the options.



TIP

If you'd rather create a PDF document with your map and directions, choose File⇨Export As PDF.

Finally, Maps allows you to share your maps and directions by using Mail, Messages, Twitter, or Facebook. Click the Share button at the top of the window and then select the desired sharing method. (You can even send your maps and directions to your iOS devices, like your iPhone or iPad!)

3

Connecting and Communicating

IN THIS PART . . .

Surf the web with ease by using Apple's Safari browser.

Sync documents automatically and share data by using iCloud.

Create multiple user accounts on your iMac.

Connect to a wired or wireless network.

Take photos and video clips by using Photo Booth.

Make video calls to friends and family by using FaceTime.

IN THIS CHAPTER

Introducing the Safari window and controls

Visiting websites with Safari

Moving between sites

Creating and using bookmarks

Receiving files with Safari

Surfing with your tabs showing

Saving web pages to disk

Protecting your privacy on the web

Blocking those irritating pop-ups

Chapter 8

Let's Go on Safari!

I proudly surf the web via a lean, mean — and fast — browser application. That's Safari, of course, and it keeps getting better with each new version of OS X. Safari delivers the web the right way, without the wait. You'll find that features have been added to Safari that no other browser offers, like the Reading List, which allows you to easily select articles and pages for later perusal.

If you need a guide to Safari, this is your chapter. Sure, you can start using Safari immediately, but wouldn't you rather read a few pages so that you can surf like a power user?

Within these pages, I show you how to use those other controls and toolbar buttons in Safari — you know, the ones in addition to the Forward and Back buttons. You discover how to keep track of where you've been and where you'd like to go.

Pretend You've Never Used This Thing

Figure 8-1 illustrates the Safari window. You can launch Safari directly from the Dock, or you can click the Safari icon in Launchpad.

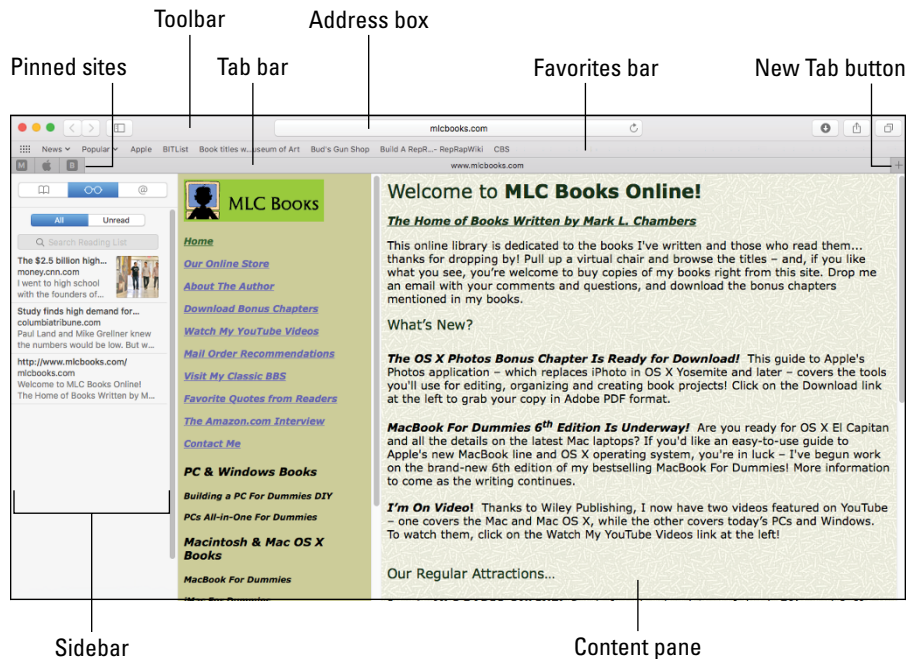


FIGURE 8-1: Safari at a glance.

These are the major sections of the Safari window:

- » **Toolbar:** Here are the most often-used commands for tasks such as navigation, sharing content, and searching Google (or Yahoo!, or DuckDuckGo, or Bing). Also, here you can type or paste the address for websites that you'd like to visit. You can easily hide the toolbar to provide more real estate in your browser window for web content. To toggle hidden mode, choose View ⇧ Hide/Show Toolbar.
- » **Favorites bar:** Consider this bar to be a toolbar that allows you to jump directly to your favorite websites with a single click or two. I show you later, in the section "Adding and Using Bookmarks," how to add sites to and remove sites from your Favorites bar. For now, remember that you can toggle the display of the Favorites bar by choosing View ⇧ Hide/Show Favorites Bar or by pressing ⌘+Shift+B.



TIP

- » **Tab bar:** This toolbar allows you to quickly switch between multiple web pages that you've loaded, using what appear to be old-fashioned file folder tabs. (Something familiar — familiar is good.) To hide or display the Tab bar, press ⌘+Shift+T or choose View ⇨ Hide/Show Tab Bar. In El Capitan, you can also pin sites to the Tab bar permanently (more on this later in the chapter).
- » **Safari sidebar:** The sidebar pane allows you to organize and read your bookmarks, reading list, and shared links. To hide or display the sidebar, press ⌘+Shift+L or choose View ⇨ Hide/Show sidebar.
- » **Content pane:** Congratulations! At last, you've waded through the pregame show and reached the area where web pages are displayed. The Content pane can be scrolled, and when you minimize the Safari window to the Dock, you get a *thumbnail* (minimized) image of the Content pane.

The Content pane often contains underlined text and graphics that transport you to other pages when you click them. These underlined words and icons are *links*, and they zip you right from one area of a site to another area (or to a different site altogether). You can tell when your pointer is resting on a link because it changes to that reassuring pointing-finger hand. Handy! (Sorry about that.)

- » **Status bar:** The status bar displays information about what the pointer is resting on, such as the address for a link or the name of an image; it also updates you about what's happening while a page is loading. To hide or display the status bar, press ⌘+⌥ (forward slash) or choose View ⇨ Hide/Show Status Bar.

Visiting Websites

Here's the stuff that virtually everyone over the age of five knows how to do . . . but I get paid by the word, and some folks might just not be aware of the many ways to visit a site. You can load a web page using any of these methods:

- » **Click the Address box.** If you're not viewing your Top Sites display, just click the Address box to display a scrolling thumbnail list of your Favorites and most frequently visited sites. Click a thumbnail to jump immediately to that page. That's about as simple as life gets!
- » **Type (or paste) a website address in the Address box on the toolbar, and press Return.** If you're typing an address and Safari recognizes the site as one that you've visited in the past, it "helps" by autocompleting the address for you. Press Return if you want to accept the suggested site. If this site is a new site, just keep typing.

The Safari Address box also acts as a *smart address* field, displaying a new pop-up menu of sites that match the text you enter. Safari does this by using sites taken from your History file and your bookmarks, as well as sites returned from Google, Yahoo!, DuckDuckGo, or Bing. If the site you want to visit appears in the list, click it to jump there immediately.

- » **Click a Bookmarks or Favorites entry.** Bookmarks appear in the sidebar and the Bookmarks menu, while Favorites appear in the Favorites bar. (More on creating bookmarks later in this chapter.)
- » **Click a tab for a pinned site.** Pinned tabs appear as icons at the left side of the Tab bar.
- » **If the Home button appears on your toolbar, click the button to go to the home page that you specify.** Read more on this in the upcoming section “Setting Up Your Home Page.”
- » **If the Show Top Sites button appears on the toolbar, click it to open the Top Sites display.** Safari displays a wall of preview thumbnail pages from your most frequently visited sites, and you can jump to a site just by clicking the preview. You can anchor a thumbnail to keep it onscreen permanently by hovering your pointer over the thumbnail and clicking the pin icon that appears, or you can delete a thumbnail by clicking the X button that appears. Click the Favorites button (which bears a star) at the top-right corner of the screen to switch to a display of your favorites.

Because each thumbnail is updated with the most current content, the Top Sites wall makes a great time-saver. Quickly make a visual check of all your favorite haunts from one screen!



TIP

- » **Click an item you saved earlier in the sidebar’s Reading List tab.** To display items in your list, click the button bearing the eyeglasses icon at the top of the sidebar.
- » **Click a link in the sidebar’s Shared Links list.** Shared links appear in the sidebar when you click the button bearing the @ symbol.
- » **Click a page link in Apple Mail or another Internet-savvy application.** These links are typically highlighted or underlined to make them easier to see.
- » **Click a page link in another web page.** By default, Safari opens the new page in a separate tab.
- » **Select a web address in a document, click the Services menu, and choose Open Page in Safari.** Safari automatically loads and displays the page.
- » **Type a search term in the Address box.** By default, Safari uses Google as a search engine, but you can also use Yahoo!, Bing, or DuckDuckGo if you prefer. To set the default search engine, choose Safari ⇨ Preferences; then, on the Search Engine tab, click the Search Engine drop-down menu. (You can

immediately switch to another engine by clicking the magnifying-glass icon that appears as you're typing in the Address box.)

Click the Address box, type the contents that you want to find, and press Return. Safari presents the search results page on Google for the text you entered. (In case you've been living under the Internet equivalent of a rock for the last several years, *Google* [www.google.com] is the preeminent search site on the web. People use Google to find everything from used auto parts to ex-spouses.)

- » **Click a Safari page icon on the Dock or in a Finder window.** Drag a site from your Favorites bar (or drag the icon from the left side of the Address box), and drop it on the right side of the Dock. Clicking the icon that you add launches Safari and automatically loads that site.



TIP

This trick works only on the side of the Dock to the right of the vertical line. More on that all-important divider in a bit.

If you minimize Safari to the Dock, you see a thumbnail of the page with the Safari logo superimposed on it. Click this thumbnail on the Dock to restore the page to its full glory.



TIP

Speaking of full glory, Safari supports the same full-screen mode as many other El Capitan applications. Click the Zoom/Full Screen button at the top-left corner of the Safari window to switch to full-screen mode, or press the Control+⌘+F shortcut (a good shortcut to memorize because it works with virtually all El Capitan-compatible applications). To make things convenient for you, the toolbar and Favorites bar remain. To exit full-screen mode, press Esc or the Control+⌘+F shortcut again.

Navigating the Web

A typical web surfing session is a linear experience. You bop from one page to the next, absorbing the information you want and discarding the rest. After you visit a few sites, however, you may find that you need to return to where you've been or head to the familiar ground of your home page. Safari offers these navigational controls on the toolbar:

- » **Back:** Click the Back button (the left-facing arrow) on the toolbar to return to the last page you visited. Additional clicks take you to previous pages, in reverse order. The Back button is disabled if you haven't visited at least two sites.



TIP

- » **Forward:** If you've clicked the Back button at least once, clicking the Forward button (the right-facing arrow) takes you to the next page (or through the pages) where you originally were, in forward order. The Forward button is disabled if you haven't used the Back button and haven't navigated to another page.

Safari supports several trackpad gestures. You can swipe in either direction with two fingers to move backward and forward, just as you would move with the Forward and Back buttons. To zoom in and out on the Content pane, you can double-tap the trackpad or pinch with two fingers — yes, just like on an iPhone. (Ever get the notion that someday we'll just have a single box called "The Device" that does it all?)



REMEMBER

- » **Home:** Click this button (look for the little house) to return to your home page.

Not all these buttons and controls must appear on your toolbar; you may never see many of these toolbar controls unless you add them yourself. To display or hide toolbar controls, choose View ⇄ Customize Toolbar. The sheet that appears works just like the Customize Toolbar sheet in a Finder window: Drag the control you want from the sheet to your Safari toolbar, or drag a control that you don't want from the toolbar to the sheet. As with most buttons and controls in Mac applications, if you hover your pointer over an unfamiliar button on the toolbar, Safari displays a tooltip to identify the button for you.

- » **New Tab:** Click this button (it looks like a little tab with a plus sign) to open a new tab in the Tab bar. I get knee-deep into tabbed browsing later in the chapter.
- » **Show All Tabs:** A click of this toolbar button displays all the tabbed sites you've opened, as well as the iCloud Tabs from Safari on your other Macs, PCs, and iOS devices.
- » **AutoFill:** If you fill out lots of forms online — when you're shopping at websites, for example — you can click the AutoFill button (which looks like a little text box and a pen) to complete these forms for you. You can set what information is used for AutoFill by choosing Safari ⇄ Preferences and clicking the AutoFill toolbar button.



WARNING

To be honest, I'm not a big fan of **automatically** releasing *any* of my personal information to *any* website, so I don't use AutoFill. If you do decide to use this feature, make sure the connection is secure (look for the padlock icon in the Address box) and read the site's Privacy Agreement page first to see how your identity data is treated.

- » **Top Sites:** Click this button to display the Top Sites screen I discuss earlier. If you're having trouble finding it, the button bears a tiny, fashionable grid of squares.

- » **Text Size:** Shrink or expand the size of text on the page, offering smaller, space-saving characters (for the shrinking crowd) or larger, easier-to-read text (for the expanding crowd) by clicking one of the Text Size buttons, which are labeled with a small and large letter A, respectively. From the keyboard, you can press ⌘+= (equal sign) to expand and ⌘+- (hyphen) to shrink.
- » **Favorites bar:** Click this button (which carries the Bookmarks symbol sandwiched between two horizontal lines) to display or hide the Favorites bar.
- » **Stop/Reload:** Click Reload (which has a circular arrow in the Address box) to *refresh* (reload) the contents of the current page. Although most pages remain static, some pages change their content at regular intervals or after you fill out a form or click a button. By clicking Reload (look for the curved arrow in the Address box), you can see what's changed on these pages. (I use Reload every hour or so with CNN.com, for example.) While a page is loading, the Reload button turns into the Stop button — with a little X mark — and you can click it to stop the loading of the content from the current page. This feature is a real boon when a download takes *foorrevverr*, which can happen when you're trying to visit a popular or slow website. Using Stop is also handy if a page has very large graphics that are likely to take a long time to load.
- » **Sidebar:** Click this toolbar button at the left side of the Address box to hide or display the Safari sidebar. You find the complete description of the sidebar in an upcoming section.
- » **History:** Click this button (which bears a clock symbol) to display or hide the History list, which I discuss later in this chapter.
- » **Downloads:** This toolbar button appears only if you're currently downloading a file (or if you've downloaded files that haven't been cleared yet). Click it to display the files you've downloaded recently, and click the Clear button to clear the contents of the Download list. Note that clearing the list does not delete the files you've downloaded; it simply cleans things up. You can also double-click a completed download in the list to open it immediately. (More on downloading in a couple pages.)



TIP

When you're downloading a file, a tiny progress bar appears in the Downloads button on the toolbar to show you how much you've received. Now that, good reader, is *progress!* (Let's see whether my editor allows such a horrible pun to remain.) Anyway, you can click the Downloads button during the file transfer to pause or stop the download completely.

- » **Open in Dashboard:** Click this button to create a Dashboard widget using the contents of the currently displayed web page. Safari prompts you to choose which clickable section of the page to include in the widget's borders (such as the local radar map on your favorite weather website). Click Add, and Dashboard loads automatically with your new widget. (You find out more about widgets in Chapter 3.)

- » **Mail:** Click this button (bearing an envelope icon) to send an email message with a link to the current page, just as if you clicked the Share button and chose Email This Page. Safari automatically opens Apple Mail (or your default email application) and creates a new message with the link already in the body. *Shazam!*
- » **Print:** Click this convenient button to print the contents of the Safari window. (Dig that crazy printer icon!)
- » **Share:** If you have an iPhone, iPod touch, or iPad, you're probably familiar with this button, which carries a rectangle and arrow symbol. Click the Share button to send the current page (or a link to it) to various destinations, including your Reading List, an email message, your Messages application, AirDrop, Facebook, LinkedIn, or Twitter. You can also add a bookmark to the current page by using the Share button. Figure 8-2 illustrates the Share button in action.

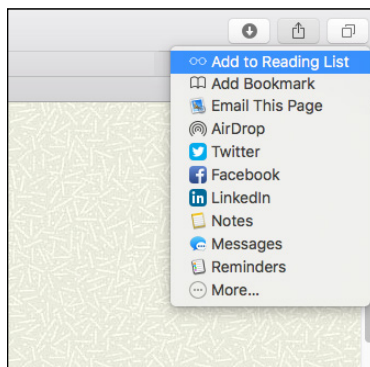


FIGURE 8-2: The Share button makes it easy to spread goodness and light — even in an election year!

Setting Up Your Home Page

Choosing a home page is one of the easiest methods of speeding up your web surfing. A large percentage of the iMac owners whom I've talked with have never set their own home page, however; instead, they simply use the default home page provided by their browser. Declare your independence! With Safari running, take a moment to follow these steps to declare your freedom to choose your own home page:

1. **In Safari, display the web page that you want to become your new home page.**



TIP

I recommend selecting a page with few graphics or a fast-loading popular site.

2. Choose Safari ⇨ Preferences, or press ⌘+, (comma).
3. Click the General tab.
You see the settings shown in Figure 8-3.
4. Click the Set to Current Page button.
5. Click the Close button to exit the Preferences dialog.

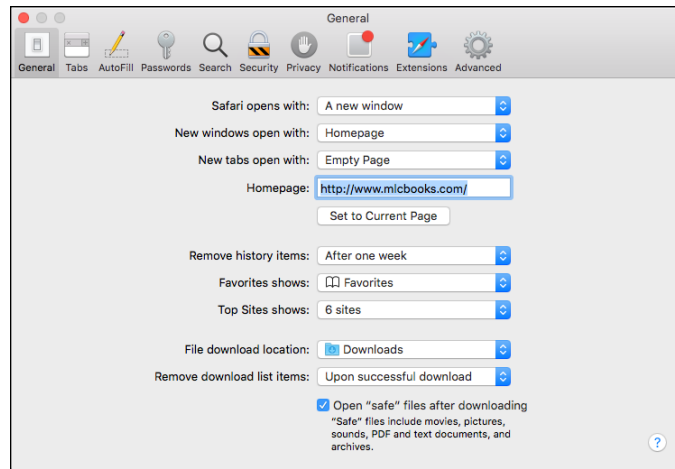


FIGURE 8-3:
Adding your own
home page is an
easy change you
can make.

Alternatively, open the New Windows Open With pop-up menu and choose Empty Page if you want Safari to open a new window with a blank page. This choice is the fastest one for a home page.



TIP

Visit your home page at any time by clicking the Home button on the toolbar. If that button doesn't appear on your toolbar, you can add it by choosing View ⇨ Customize Toolbar.

Adding and Using Bookmarks

No doubt about it: Bookmarks make the web a friendly place. As you collect bookmarks in Safari, you're able to immediately jump from one site to another with a single click of the Bookmarks menu or the buttons on the Favorites bar.

To add a bookmark, first navigate to the desired page and then do any of the following:

» Choose Bookmarks ⇨ Add Bookmark.

» Press the **⌘+D** keyboard shortcut. Safari displays a sheet where you can enter the name for the bookmark and also select where it appears (on the Favorites bar, Top Sites display, Bookmarks folder, or Bookmarks menu).

» Drag the icon next to the web address from the Address field to the Favorites bar. This trick also works with applications besides Safari, including Mail and Messages. Drag the icon from the Safari Address field to the other application window, and the web page link is added to your document.



TIP

You can also drag a link on the current page to the Favorites bar, but note that doing this adds a bookmark only for the page corresponding to the link — not the current page.

To jump to a bookmark, do one of the following:

» Choose it from the Bookmarks menu. If the bookmark is contained in a folder, which I discuss later in this section, hover your pointer over the folder name to show its contents and click the bookmark.

» Click the bookmark on the Favorites bar.

If you've added a large number of items to the Favorites bar, click the More icon on the edge of the Favorites bar to display the rest of the buttons.

» Click the Show Sidebar button on the Safari toolbar, click the Bookmarks button in the sidebar, and then click the desired bookmark. The sidebar (shown in Figure 8-4) displays all your bookmarks, allowing you to review each collection at your leisure.

» Click Bookmarks ⇨ Edit Bookmarks (or press **Option+⌘+B**) to open the Bookmark list. For those who prefer more information (and more onscreen elbow room) while selecting or organizing their bookmarks, the Bookmark list is the cat's meow. It displays both the name and web address for each bookmark in your collection.

The more bookmarks you add, the more unwieldy the Bookmarks menu and the sidebar can become. To keep things organized, choose Bookmarks ⇨ Add Bookmark Folder and type a name for the new folder. With folders, you can organize your bookmarks into *collections*, which appear in the column at the left of the sidebar, as folders in the Bookmark list, and as menus on the Bookmarks bar. (Collections also appear as separate submenus in the Bookmarks menu on the Safari menu bar.) You can drag bookmarks into the new folder to help reduce the clutter.



TIP

To delete a bookmark or a folder from any of these locations, right-click it and choose Delete from the contextual menu.



FIGURE 8-4: The sidebar's Bookmarks tab puts all your bookmarks in easy reach.

Working with the Reading List and Shared Links

Now that you know all about bookmarks, I'll introduce you to two other methods of loading, saving, and retrieving specific pages in Safari — and they're both hiding in the now-familiar confines of the Safari sidebar! These two sidebar celebrities are the Reading List and Shared Links.

Saving pages for later with the Reading List

The sidebar's Reading List tab allows you to save entire pages for later perusal. From the keyboard, press $\mathring{C}+\text{Shift}+L$ to display the sidebar, and click the Reading List button. Click Bookmarks \Rightarrow Add to Reading List or press $\mathring{C}+\text{Shift}+D$ to add the current page to the list, or hover your pointer over the left side of the Address box and click the circular icon with the plus sign that appears. (Oh, and don't forget that you can click the Sharing icon on the toolbar and choose Add to Reading List to achieve the same victory.)

Ah, but when you click one of those entries in the Reading List and then click the Show Reader View icon (it looks like a paragraph) that appears at the left side of the Address box, the real magic begins! If you click the Show Reader View icon, the

Reader panel appears to display text articles free of advertisements and silly pop-ups. And if an article is continued over multiple web pages, the Reader panel automatically stitches them together to form a continuous block of text. (Think of an e-book displayed in iBooks on your iMac, and you get the idea.) You can also print or email the article from the Reader panel.

To delete an item from the Reading List, right-click the item and click Remove Item from the contextual menu, or click the X icon that appears next to the title.



REMEMBER

If the Show Reader View icon appears in Safari's Address box and you're *not* using the Reading List, don't panic! Because the page you're reading contains text articles, Safari is offering to display it in the Reader panel. (If a page has nothing to display in the Reader panel, the icon disappears.) To display the page in the Reader panel, click the Show Reader View button in the Address box. To return to your mundane browsing experience, click the Reader icon again.

Visiting pages recommended by friends

If you're a fan of the Twitter, Facebook, or LinkedIn social media sites, listen up: El Capitan introduces shared links to Safari! After you've added your Twitter, Facebook, LinkedIn, and other social media account information in the Internet Accounts pane in System Preferences, Safari automatically adds links posted by your friends on both services on the sidebar's Shared Links tab.

To visit a shared link, just click it. To search for a specific shared link, click in the Search Links box at the top of the Shared Links list and type a portion of the link (or just type the person's name to see all the links he's posted).



REMEMBER

The Shared Links tab doesn't appear in the sidebar unless you've successfully added your Twitter, Facebook, LinkedIn, or other account information in System Preferences' Internet Accounts pane. Additional social media connections can be added in the Extensions pane within System Preferences.

Downloading Files

A huge chunk of the fun you'll find on the web is the capability to download images and files. If you've visited a site that offers files for downloading, typically, you just click the Download button or the download-file link, and Safari takes care of the rest. While the file is downloading, feel free to continue browsing or even download additional files; the Downloads status list helps you keep track of what's going on and when everything will be finished transferring. To display the

Downloads status list from the keyboard, press ⌘+Option+L. You can also click the Download button at the upper-right corner of the window to display the Download list.

By default, Safari saves any downloaded files to the Downloads folder on your Dock, which I like and use. To specify the location where downloaded files are stored (if you'd like to scan them automatically with an antivirus program, for example), follow these steps:

1. Choose Safari ⇨ Preferences, or press ⌘+, (comma).
2. Click the General tab (refer to Figure 8-3), and open the File Download Location pop-up menu.
3. Choose Other.
4. Navigate to the location where you want the files stored.
5. Click the Select button.
6. Click the Close button to exit Preferences.

To download a specific image that appears on a web page, move your pointer over the image, right-click, and choose Save Image As from the menu that appears. Safari prompts you for the location where you want to store the file.

You can choose to automatically open files that Safari considers safe — things like movies, text files, and PDF files that are *very* unlikely to store a virus or a damaging macro. By default, the Open “Safe” Files after Downloading check box is selected on the General pane of the Safari Preferences dialog. If, however, you're interested in preventing *anything* you download from running until you've manually checked it with your antivirus application, you can deselect the check box and breathe easy.



TIP

Luckily, Safari has matured to the point that it can seamlessly handle most multimedia file types that it encounters. If you've downloaded a multimedia file and Safari doesn't seem to be able to play or display it, try loading the file in QuickTime Player. *QuickTime Player* is the Swiss Army knife of multimedia players; it can recognize a huge number of audio, video, and image formats. To launch the Player, click the Spotlight search icon and type **QuickTime Player**.

Using Subscriptions and History

To keep track of where you've been, you can display the History list by clicking the History menu in Safari. To return to a page in the list, just choose it from the History menu. Note that Safari also arranges older history items by the date you visited a site so you can easily jump back a couple of days to that page you forgot to bookmark!

Safari also searches the History list automatically, when it fills in an address you're typing; that's the feature I mention in the earlier section "Visiting Websites."

To view your Top Sites display, press $\mathbb{⌘}$ +Option+1 or choose Show Top Sites from the History menu. You can also click the Top Sites button at the far left side of the Favorites bar or on the Safari toolbar (if you've added it).



TIP

You can add a site manually to your Top Sites by dragging a bookmark from the sidebar to the Top Sites icon in the Favorites bar, or by dragging a link or URL address from another application to the Top Sites icon in the Favorites bar. (A plus sign appears next to your pointer to indicate the addition.) To rearrange screens in the Top Sites display, just drag a screen thumbnail to the desired location. If you prefer that a specific thumbnail remain in the same place, hover your pointer over the thumbnail and click the gray pushpin icon, which turns blue to indicate that the thumbnail is pinned in place.

If you're worried about security and would rather not keep track of where you've been online, find out how to clear the contents of the History file in the upcoming section "Handling ancient history."

Tabs Are Your Browsing Friends

Safari also offers *tabbed browsing*, which many folks use to display (and organize) multiple web pages at one time. If you're doing a bit of comparison shopping for a new piece of hardware among different online stores, tabs are ideal. (Heck, tabbed browsing is so popular that Apple added tabs to Finder windows with the release of OS X Mavericks!)

When you hold down the $\mathbb{⌘}$ key and click a link or bookmark using tabs, a tab representing the new page appears at the top of the Safari window. Just click the tab to switch to that page. When you hold down Shift+ $\mathbb{⌘}$, the tab is both created and displayed. (If you don't hold down $\mathbb{⌘}$, things revert to business as usual, and Safari replaces the contents of the current tab with the new page.)

You can also open a new tab by clicking the plus sign that appears at the upper-right corner of the Safari window or by pressing ⌘+T. To move between multiple tabs, simply click the desired tab header. If you're finished with a page, you can remove a tabbed page by hovering your pointer over the tab and clicking the X button that appears.



TIP

Trackpad fans will appreciate Safari's two gestures that control tabs. With multiple tabs active, you can do these things:

- » Pinch to display them all in the *All Tabs view* display (as shown in Figure 8-5).
- » With All Tabs view open, swipe with two fingers to move among tabs.

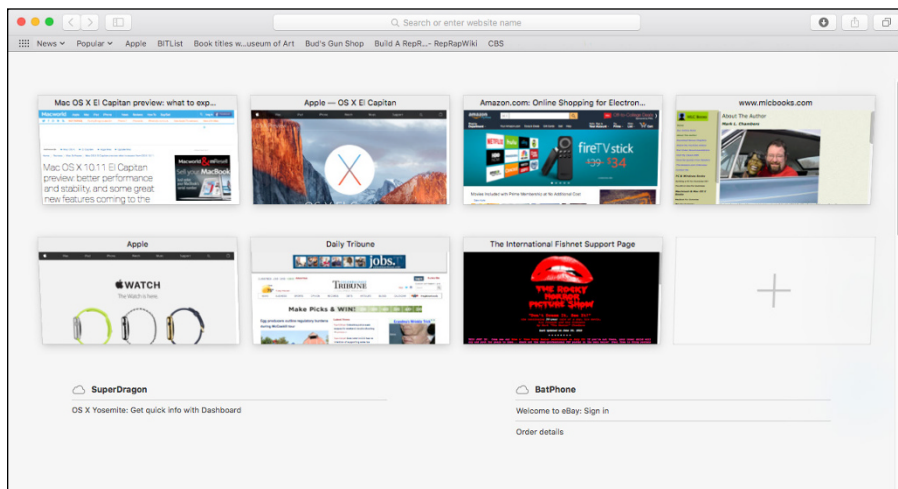


FIGURE 8-5:
Hang on, Martha;
we've struck tabs!

To display your tabs in All Tabs view without a trackpad, click the Show All Tabs button that appears at the right side of the Safari toolbar. From All Tabs view, you can click any tab thumbnail to switch immediately to that tab. (Note that the iCloud Tabs shared from your other Macs and iOS devices appear at the bottom of the All Tabs view display.) To close a tab in All Tabs view, move your pointer over the thumbnail and click the X button that appears. To close the All Tabs view display, click the Hide All Tabs button at the right side of the Safari toolbar.



TIP

All Tabs view also displays the iCloud tabs you've set on your other Macs (running OS X Lion or later) and iOS devices (running iOS 7 or later).

POWER USERS PIN SITES!

With the arrival of OS X El Capitan, Safari has gained a new type of tab, called a *pinned tab*, which allows you to immediately jump to a specific page! Pinned sites hang out at the left side of the Tab bar, usually sporting a recognizable symbol (taken from the site itself). Unlike standard tabs that I discuss in this section, however, pinned tabs are updated automatically in the background from the moment you launch Safari, which is perfect for sites like your Facebook page or Twitter feed that are constantly changing.

To set a pinned tab, navigate to the page you want to pin and choose Window ⇨ Pin Tab. The pinned tab is added at the far left of the Tab bar, and you can click it at any time to immediately return to that page.

To remove a pinned tab, click the tab to switch to that page and then choose Window ⇨ Unpin Tab.

To fine-tune your tabbed browsing experience, choose Safari ⇨ Preferences to display the Preferences dialog, and click Tabs. From there, you can specify whether a new tab or window automatically becomes the active window in Safari.



TIP

If you open a page that plays audio — either as background music or as part of a video shown on the page — you can click the speaker icon that appears in the tab header to mute that audio. (Think really, *really* irritating video advertisements.) To unmute the audio, click the speaker icon again.

Printing Web Pages

If you've encountered a page that you'd like to print, follow these steps:

1. **Display the desired page.**
2. **Choose File ⇨ Print, or press ⌘+P.**
3. **Select the number of copies, and specify whether you'd like to print the entire page, only the current page, or a range of pages.**
4. **Click Print.**



TIP

A quick word about printing a page in Safari: Some combinations of background and text colors might conspire to render your printed copy worthless. In a case like that, use your printer's grayscale setting (if it has one), or click the Show Details button at the bottom of the Print sheet and deselect the Print Backgrounds check box (which can save you quite a bit of ink or toner). Alternatively, you can simply click and drag to select the text on the page, press ⌘+C to copy it, and paste the text into TextEdit, Word, or Pages, where you can print the page on a less offensive background (while still keeping the text formatting largely untouched). You can also save the contents of a page as an electronic PDF file by choosing File⇨Export As PDF or by clicking the PDF pop-up menu at the bottom of the Print sheet.



TIP

If you'd rather mail the contents of a web page to a friend, click the Share button and choose Email This Page. (If you've added the Mail button to your toolbar, one click does the job.) Mail loads automatically, complete with a prepared email message. Just address it to the recipients, and click Send.

Protecting Your Privacy

No chapter on Safari would be complete without a discussion of security, against both outside intrusion from the Internet and prying eyes around your iMac. Hence this last section, which covers protecting your privacy.

Although diminutive, the padlock icon that appears at the left side of the Address box when you're connected to a secure website means a great deal! A *secure site* encrypts the information you send and receive, making it much harder for those of unscrupulous ideals to obtain private data, such as credit card numbers and personal information. You can click the padlock icon (next to the site name) to display the security certificate in use on that particular site. A secure site web address begins with the prefix `https:` instead of `http:`. (The extra *s* stands for *secure*. A Good Thing.)

Yes, there are such things as bad cookies

First, a definition of this ridiculous term: A *cookie*, a small file that a website automatically saves on your Mac's drive, contains information that the site uses on your future visits. A site might save a cookie to preserve your site preferences for the next time or — for shopping at a site like Amazon.com — to identify you automatically and help customize the offerings that you see.

In and of themselves, cookies aren't bad things. Unlike a virus, a cookie file isn't going to replicate itself or wreak havoc on your system, and only the original site can read the cookie that it creates. But many folks don't appreciate acting as a gracious host for a slew of little snippets of personal information (not to mention that some cookies have highly suggestive names, which can lead to all sorts of conclusions; end of story).

You can choose to accept some or all cookies, or you can opt to disable cookies. You can also set Safari to accept cookies only from the sites you choose to visit. To change your *Cookie Acceptance Plan* (or CAP, for those who absolutely crave acronyms), follow these steps:

- 1. Choose Safari ⇨ Preferences.**
- 2. Click the Privacy tab.**
- 3. Choose how to block cookies and website data via these radio-button choices:**
 - *Always Block:* Block cookies.
 - *Allow from Current Website Only:* Restrict cookies to the website you're currently visiting.
 - *Allow from Websites I Visit:* I use this option, which allows sites such as Amazon.com to work correctly without allowing a barrage of superfluous cookies.
 - *Always Allow:* Accept all cookies.
- 4. To view the cookies currently on your system, click the Details button.**



REMEMBER

If a site's cookies are blocked, you might have to take care of things manually, such as by providing a password on the site that used to be read automatically from the cookie.

- 5. Click the Close button to save your changes.**



TIP

Feeling nervous about the data stored by the websites you visit? You can always delete *all* that stored information with a single click. On the Privacy pane of the Safari Preferences dialog, click the Remove All Website Data button. You'll be asked to confirm your draconian decision.

The Privacy pane also includes the Ask Websites Not to Track Me check box, which works . . . *sometimes*. Unfortunately, it's up to a particular website whether to honor Safari's request for privacy. (Also, some sites — such as Amazon.com — use tracking legitimately, to keep track of your likes and purchases each time you return.) If you're especially worried about leaving a trail of breadcrumbs behind you on the web, however, I recommend selecting this check box.

Finally, you can also limit the access that websites have to your iMac's Location Services, which can pinpoint your current location. (Facebook's website, for example, uses Location Services if you allow it.) Access can be set through prompting (either once a day or just the first time you visit the site), or you can deny access to Location Services for all websites.

Banishing pesky iCloud Keychain passwords

I'm the world's biggest critic of *keychains*, which El Capitan uses to automatically provide all sorts of login information throughout the system. In Safari, for example, the password information is automatically entered for you whenever a website you've approved requires you to log in.

To be more specific, I'm sure many readers will adopt *iCloud Keychain*, which stores password and credit card information for Safari and wirelessly distributes that information automatically to other Macs and iOS devices using the same Apple ID. (Apple even says that the passwords generated by iCloud Keychain are more complex and harder to crack, which *sounds* more secure, right?)

I'd rather keep a pet piranha in a cereal bowl than use this feature! Why? Whenever you're logged in, *anyone* using your iMac gets control of your online persona (in the form of your passwords to secure websites). Safari, like an obedient puppy, automatically provides access to sites with stored keychain passwords.



REMEMBER

If you'd like to take the far-less-convenient-but-*much*-safer, old-fashioned route of remembering your passwords yourself, follow my lead: Visit the iCloud pane in System Preferences, and deselect the Keychain check box to turn the iCloud Keychain feature off.

Now that I've warned you thoroughly, I feel better about mentioning the Passwords tab in Safari Preferences for those who *do* decide to use iCloud Keychain. From the Passwords tab, you can view the iCloud Keychain information that Safari uses and remove a specific password (or all passwords) from your iCloud Keychain.

Handling ancient history

As you might imagine, your History file leaves a very clear set of footprints indicating where you've been on the web. To delete the contents of the History menu, choose History ⇨ Clear History (at the bottom of the History menu).

Safari also allows you to specify an amount of time to retain entries in your History file. Open the Safari Preferences dialog, click the General tab (refer to Figure 8-3), and then click the Remove History Items pop-up menu to specify the desired amount of time. Items can be rolled off daily, weekly, biweekly, monthly, or yearly.

Setting notifications

In El Capitan, Safari can allow websites you've approved to send you messages using Notification Center; you can control which sites have been given this functionality from the Notifications tab in Safari's Preferences dialog. To prevent a website from sending notifications, click the Deny button next to the offending site in the list. You can also remove a website from the list by clicking it and clicking the Remove button.

Avoiding those @*!^%\$ pop-up ads

I hate pop-up ads, and I'm sure you do, too. To block many of those pop-up windows with advertisements for everything from low-rate mortgages to "sure-thing" Internet casinos, open the Safari Preferences dialog, click the Security tab, and verify that Block Pop-Up Windows is selected.

IN THIS CHAPTER

Introducing iCloud

Using your iCloud Drive

Sharing documents with iOS devices
by using Handoff

Setting iCloud preferences

Managing iCloud storage

Chapter 9

Expanding Your Horizons with iCloud

Readers often ask me to name my favorite reasons why they should switch platforms. In other words, why should a Windows user who thinks all is well move to the Apple universe? I always mention the superior hardware and the fact that El Capitan is (in my honest opinion) a much better operating system than Windows 10. My favorite selling point is *innovation*. Apple comes up with the best ideas first, and everyone else plays catch-up.

Here's the perfect example: The folks at Apple got tired of constantly synchronizing their iOS devices with their computers over a USB cable. Remember those archaic days? When you took a photo with your iPhone or created a new document with your iPad, your new additions just sat there in their original locations until you had a chance to sync your device with your iMac. But with Apple's iCloud functionality, your stuff gets *automatically* synchronized and backed up across the Internet!

In this chapter, I save you the trouble of researching all the benefits of iCloud. Heck, that's one of the reasons you bought this book, right?

So How Does iCloud Work, Anyway?

Today's iOS devices can all display or play the same media: photos, music, books, TV shows, and such. Heck, iOS devices (your iPhone, iPad, and iPod touch) can even share applications. Therefore, it makes sense to effortlessly share all your digital media across these devices, and that's what iCloud is all about. Apple calls this synchronization *pushing*.

Here's how the pushing process works. Imagine that you just completed a Pages document on your iMac (an invitation for your son's birthday party), but you're at the office, and you need to get the document to your family so they can edit and print it with your son's iPad.

Before iCloud, you had to attach the document to an email message or upload it to some type of online storage such as Dropbox or Microsoft's OneDrive, and then a family member had to download and save the document to the iPad before working with it. With iCloud, you simply save the document on your iMac to the Pages folder on your iCloud Drive, and OS X automatically pushes the document to the iPad (using the same Apple ID). Your document appears on the iPad, ready to be opened, edited, and printed — and it appears on any other devices using the same Apple ID as well. Figure 9-1 gives you an idea of what's happening in the background when one of your devices pushes data using iCloud.

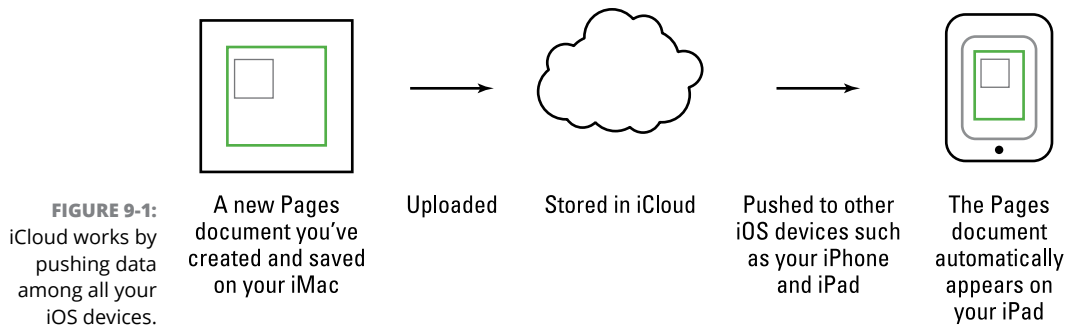


FIGURE 9-1: iCloud works by pushing data among all your iOS devices.

iCloud isn't limited to digital media, though. El Capitan can also automatically synchronize your email accounts, Calendar calendars, and Contacts entries with other iOS devices across the Internet, so staying in touch is much easier (no matter where you are or which device you happen to be using at the moment).

Apple also throws in 5GB of free online storage that you can use for all sorts of things — not only digital media files, but also documents you'd like to save online for safekeeping. Items you buy through the iTunes Store, iBooks Store, or App

Store — music, video, podcasts, books, and applications — do not count against your 5GB limit. (More on how you can expand that 5GB limit later in the chapter.)



REMEMBER

To join the iCloud revolution, you need an Apple ID. If you didn't create one during the initial El Capitan setup, you can create an Apple ID from the App Store.



TIP

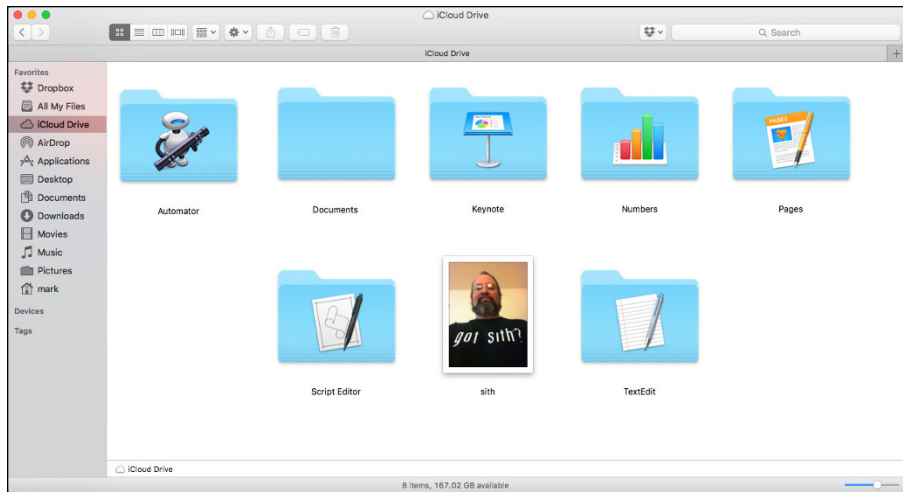
You can also access your documents through the web at www.icloud.com. Log in with your Apple ID and password to send mail; access your contacts and calendar; edit your notes and reminders; locate your devices; and use online versions of Pages, Numbers, and Keynote. (And there's no need to tote your Mac with you wherever you go!) However, always maintain the security of your iCloud account, especially on public-access computers, and don't allow any web browser to save your iCloud password.

Moving, Saving, and Opening iCloud Documents

iCloud online storage for your documents is definitely neat. Your iCloud Drive functions much like other popular online storage services like Dropbox and Microsoft OneDrive, allowing you to save documents, load documents, and move files to and from your iMac's drive with ease, using a Finder window. In fact, iCloud Drive keeps things tidy for you: If you move a file from your iCloud Drive to your local drive, it's also deleted automatically from iCloud Drive on your other Macs and iOS devices that use the same Apple ID. (El Capitan prompts you for permission first, of course.)

Figure 9-2 illustrates my iCloud Drive in action. You can access your iCloud Drive from the Finder window sidebar. Note that iCloud folders are automatically created for supported applications, allowing you to click the corresponding iCloud folder in the application's Open dialog. (In other words, *both* your iCloud Drive and the application-specific iCloud folder are available within the application's Open dialog. It's about as convenient as you can get!)

FIGURE 9-2:
Each of these
iCloud folders can
joyously store
documents.



Putting Handoff to Work

If you're like me, your favorite moment in a team track event is the all-important handoff of the baton from one runner to the next, making Handoff the perfect name for this El Capitan feature, because it actually transfers what you're doing on your iOS devices to matching applications on your Mac!

Suppose that you're using Maps on your iPhone, and you realize that you'd rather view the location on your iMac's larger screen (as well as print it on the USB printer connected to your iMac). If you're within Bluetooth-signal range of your iMac, Handoff is ready to go: An icon for the OS X version of Maps automatically appears on the left side of the Dock in El Capitan. One click of that icon, and your iMac opens Maps and displays the same location!

You're not restricted to one application, either. Each time you open an application that Handoff supports (such as Safari and Mail), El Capitan offers you the chance to open the matching application on your iMac and displays the current data from the iOS app. All this is completely trouble-free: There's nothing to configure or set.

Caveats? Only three at the time of this writing:

- » **Bluetooth is required.** Bluetooth networking must be turned on for both the iOS device and the iMac for Handoff to work, and the iOS device must be within a 30-foot radius of your iMac. (That's the maximum distance over which Bluetooth hardware can broadcast; walls and other obstructions reduce that range.)

- » **You need the right hardware.** To use Handoff, you need an iPhone 5 (or later), a fourth-generation iPad (or later), any iPad mini, or a fifth-generation iPod touch (or later). On the computer side, you must have a 2012 model iMac (or later) that includes Bluetooth LE hardware.
- » **iOS 8 is a must.** Handoff is compatible only with iOS devices running iOS 8 or later.

Handoff works in the other direction as well, allowing you to pick up where you left off on your iMac application by transferring the active session to your iPhone, iPad, or iPod touch. Swipe the icon that appears on your iOS device to start the ball rolling.

Configuring iCloud

You control all the settings for iCloud from El Capitan’s iCloud pane in System Preferences (shown in Figure 9-3). Click the System Preferences icon on the Dock and then click the iCloud icon. At the sign-in prompt, enter your Apple ID and your password. System Preferences then guides you through basic iCloud configuration.



FIGURE 9-3:
The iCloud pane
appears in
System
Preferences.

Most of the check boxes on the iCloud Preferences pane control whether a particular type of data — such as a Contacts entry, password, Mail message, or calendar in Calendar — is pushed to all your iOS devices. (Alternatively, you can specify which applications will have access to your iCloud Drive by clicking the Options button.)

Note, however, that you can enable three other unique features from this pane:



REMEMBER

» **Photos:** Click the Options button and enable the My Photo Stream check box to allow your iMac to automatically receive photos from your iOS devices. Take a photo with your iPhone, for example, and that image is immediately pushed to your iMac, iPad, and iPod touch. On Mac computers, however, Photo Stream goes one step further: The photos appear automatically in Photos in a special album titled Photo Stream. You can also enable iCloud Photo Sharing, which allows you to share photos with others from Photos.

To turn on My Photo Stream or iCloud Photo Sharing in Photos, choose Photos ⇨ Preferences, click the iCloud button, and select the desired check boxes.

» **Back to My Mac:** If you enable Back to My Mac, you can remotely control your iMac from another Mac computer (or vice versa) by using El Capitan's Screen Sharing feature. You can also transfer files between the two computers. Back to My Mac works over both a broadband Internet connection and a local network. Available Mac computers show up in the Shared section of the Finder window sidebar. Note that you must manually turn on Screen Sharing in the System Preferences Sharing pane before you can remotely control another Mac.

» **Find My Mac:** Talk about Buck Rogers! Imagine locating a lost or stolen iMac from your iPhone or iPad. Now think about this: With Find My Mac, you can even lock or completely wipe your Mac's hard drive *remotely*, preventing unauthorized use and erasing your private data! After you access your iMac from another iOS device, you can play a sound, send a message to be displayed onscreen, remotely lock the machine, or remotely wipe the drive.

After you wipe the drive, though, you can't locate your iMac again.



WARNING



TIP

You can also enable Family Sharing from the iCloud pane, which allows you to share purchased media and apps with as many as six users' accounts. Participants can share a special Photo Stream, apps, and media (purchased from the iTunes Store, iBooks Store, or App Store), common reminders and a common calendar — and no, they don't actually need to be members of the same family. To launch the Family Sharing Setup assistant, click the Set Up Family button and follow the onscreen instructions.

Managing Your iCloud Storage

Apple knows that you're curious about how much space you've taken up in your personal iCloud. To monitor your iCloud storage, click the Manage button at the bottom-right corner of the iCloud System Preferences pane. On the sheet that

appears — shown in Figure 9-4 — you can see how much space you're using for document and data storage.

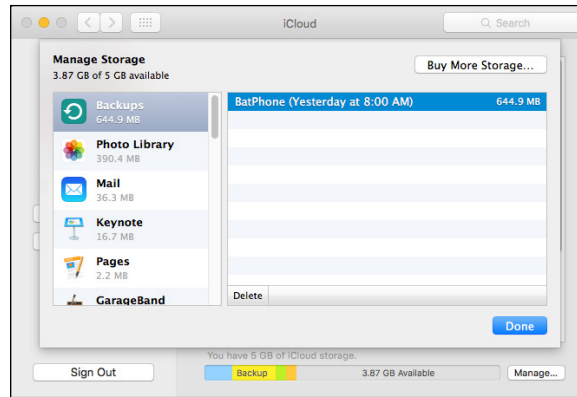


FIGURE 9-4: Checking on your iCloud storage.

Click the data type in the left column, and iCloud displays the amount of storage space that's being used for that data. In Figure 9-4, I'm checking the amount taken by my iPhone backup. (I set my iPhone to back up wirelessly to my iCloud storage.) Other items that might appear in this sheet include Mail and selected iPad and iPhone apps that support iCloud.



TIP

If you find yourself running out of iCloud storage space, delete any stored item by selecting it in the list at the right side of the sheet and clicking Delete.

And if you need more elbow room than 5GB, Apple is happy to provide 50GB, 200GB, or even a whopping 1TB of additional storage for a monthly subscription fee of 99 cents, \$2.99 or \$9.99, respectively. (Naturally, these prices are subject to change.) Click the Manage button on the iCloud pane in System Preferences and then click the Buy More Storage button to subscribe.

IN THIS CHAPTER

Enjoying the advantages of a multiuser iMac

Understanding access levels

Adding, editing, and deleting user accounts

Restricting access for managed accounts

Configuring your login window

Sharing files with other users

Securing your stuff with FileVault

Chapter 10

Creating a Multiuser iMac

Everybody wants a piece. (Of your iMac, that is.)

Perhaps you live in a busy household with kids, significant others, grandparents, and a wide selection of friends — all of them clamoring for a chance to spend time on the Internet, take care of homework, or enjoy a good game.

On the other hand, your iMac might occupy a classroom or a break room at your office — someplace public, yet everyone wants his own Private Idaho on the iMac, complete with a reserved spot on the hard drive and his own hand-picked attractive Desktop background.

Before you throw your hands up in the air in defeat, read this chapter and take heart! Here, you find all the step-by-step procedures, explanations, and tips to help you build a *safe* multiuser iMac that's accessible to all.

(Oh, and you still get to use it, too. That's not being selfish.)

Once Upon a Time (An Access Fairy Tale)

Okay, so you don't have Cinderella, Snow White, or that porridge-loving kid with the trespassing problem. Instead, you have your brother, Bob.

Every time Bob visits your place, it seems he needs to do "something" on the Internet, or he needs a moment with your iMac to bang out a quick message, using his web-based email application. Unfortunately, Bob's forays onto your iMac always result in stuff getting changed, like your Desktop settings, Contacts database, and Safari bookmarks.

What you need, good reader, is a visit from the Account Fairy. Your problem is that you have but a single user account on your system, and El Capitan thinks that Bob is *you*. If you turn your iMac into a multiuser system and give Bob his own account, though, El Capitan can tell the difference between the two of you — keeping your druthers separate!

With a unique user account, El Capitan can track all sorts of things for Bob, leaving *your* computing environment blissfully pristine. A user account keeps track of stuff such as

- »» Contacts entries
- »» Safari bookmarks and settings (sigh)
- »» Desktop settings, including background images, screen resolutions, and Finder tweaks
- »» iTunes libraries, just in case Bob brings his own music (resigned sigh)

Also, Bob gets his own reserved Home folder on your iMac's hard drive, so he'll quit complaining about how he can't find his files. Oh, and did I mention how user accounts keep others from accessing *your* stuff? And how you can lock Bob out of where-he-should-not-be, such as certain applications, Messages, Mail, and websites (including that offshore Internet-casino site that he's hooked on)?

Naturally, this is only the tip of the iceberg. User accounts affect just about everything you can do in El Capitan and on your iMac. The moral of my little tale? A Mark's Maxim to the rescue:



AUTHOR
SAYS

Assign others their own user accounts, and let El Capitan keep track of everything. Then you can share your iMac with others and still live happily ever after!

Big-Shot Administrator Stuff

Get one thing straight right off the bat: *You* are the administrator of your iMac. In network-speak, an *administrator* (or *admin* for short) is the one with the power to Do Unto Others — creating new accounts, deciding who gets access to what, and generally running the multiuser show. In other words, think of yourself as the Monarch of OS X. (The ruler, not the butterfly.)



TIP

I always recommend that you have only one (or perhaps two) accounts with administrator-level access on any computer. In this way, you can be assured that no one can monkey with your iMac while you're away from the keyboard. So why might you want a second admin account? Well, if you're often away on business, you might need to assign a second administrator account to a *trusted* individual who knows as much about your iMac as you do. (Tell 'em to buy a copy of this book.) That way, if something breaks or an account needs to be tweaked in some way, the other person can take care of it while you're absent (but without getting access to your personal data). Even if it's just you using your iMac, a second admin account makes it easier to troubleshoot problems with El Capitan (including those that affect your own user account). If necessary, don't forget you can always log in to your second admin account and change the password to guarantee security!

In the following sections, I explain the typical duties of a first-class iMac administrator.

Deciding who needs what access

The three most common user account levels are

- » **Admin (administrator):** See the preceding section.
- » **Standard level:** Perfect for most users, these accounts allow access to just about everything but don't let the user make drastic changes to El Capitan or create new accounts.
- » **Managed with parental controls level:** These accounts are standard accounts with specific limits assigned by you or another admin account.

Another Mark's Maxim is in order:



Assign other folks standard-level accounts and then decide whether each new account needs to be modified to restrict access as a managed account. Never assign an account admin-level access unless you deem it truly necessary.

Standard accounts are quick and easy to set up, and I think they provide the perfect compromise between access and security. You'll find that standard access allows your users to do just about anything they need to do, with a minimum of hassle.

Managed accounts (with parental controls) are highly configurable, so you can make sure that your kids don't end up trashing the hard drive, sending junk mail, or engaging in unmonitored chatting. (*Note: Attention, all parents, teachers, and anyone designing a single public access account for a library or organization: This means you.*)

Adding users

All right, Mark. Enough pregame jabbering. Show this good reader how to set up new accounts! Your iMac already has one admin-level account set up for you (created during the initial El Capitan setup process). You need to be logged in to that account to add a user. To add a new account, follow these steps:

- 1. In the Users & Groups pane (from System Preferences), click the New User button (plus sign) at the bottom of the accounts list to display the empty user record sheet shown in Figure 10-1.**



If the New User button is disabled and you can't click it, click the padlock at the bottom left of the System Preferences pane, and provide your password to unlock the Users & Groups pane.

- 2. Select the access level for this user from the New Account pop-up menu.**

By default, the user receives a standard-level account. You can also choose an administrator account, a managed standard account with parental controls already enabled, a group account, or a sharing-only account.



The sharing-only account allows the user to copy or open shared files from your iMac remotely (from another computer), but that user can't directly log in to your iMac. The group account allows you to assign access levels based on the group name that you specify for files and folders.

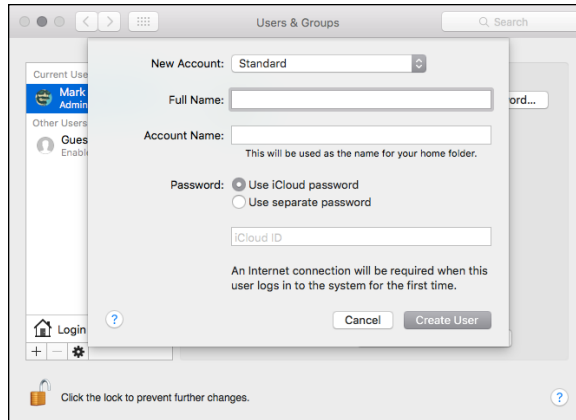


FIGURE 10-1:
Fill out those
fields, and you
have a new user.

- 3. In the Full Name text box, type the name you want to display for this account (both in the Current User list and on the Login screen); then press Tab to move to the next field.**



TIP

OS X automatically generates an *account name* in the Account Name field for use as your screen and buddy name in Messages and various network applications. The account name is also the name of the folder that OS X creates on the computer's hard drive for this user. You can keep the default account name or type a new one, but the new name can't contain any spaces.

- 4. Choose to use an iCloud password (also known as an Apple ID password) or a separate password you create for this account.**

If you choose to use an existing iCloud password, enter the desired iCloud ID (Apple ID).

- 5. If you choose Use Separate Password, type the password for the new account.**

Click the button with the key icon next to the Password field, and El Capitan is happy to display Password Assistant, complete with a suggestion. Click the Suggestion pop-up menu to see additional suggestions. You can choose the password's length and choose among several types: letters and numbers, numbers only, memorable, completely random, or even FIPS-181 compatible (government-quality). Password Assistant automatically copies the current password you're considering into the Password and Verify text boxes.

As always, when you enter a password or its verification, OS X displays bullet characters for security.

- 6. Press Tab, type the password in the Verify text box, and press Tab again.**

7. (Optional) If you decide to use the password hint feature, you can enter a short sentence or question in the Hint text box.

The hint is displayed after three unsuccessful attempts at entering the account password.



WARNING

From a security standpoint, password hints are taboo. (Personally, I *never* use 'em. If someone is having a problem logging in to a computer I administer, you better believe I want to know *why*.) Therefore, despite the recommendation that El Capitan shows here, I strongly recommend that you skip this field. If you decide to offer a hint, *keep it vague!* Avoid hints like “Your password is the name of the Wookiee in *Star Wars*.” And don't embed the password in the hint!

8. Click the Create User button to finish and create the account.

The new account shows up in the Current User list and in the Login screen.

Each user's Home folder has the same default subfolders, including Movies, Music, Pictures, and Sites. A user can create new subfolders within his or her Home folder at any time.

Here's one more neat fact about a user's Home folder: No matter what the account level, most of the contents of a Home folder can't be viewed by other users. (Yes, that includes admin-level users. This way, everyone using your iMac Pro gets his or her own little area of privacy.) In the Home folder, only the Sites and Public folders can be accessed by other users — and only in a limited fashion. (Read all about Home folders in Chapter 3.)

Modifying user accounts

Next, consider the basic modifications you can make to a user account, such as changing existing information or selecting a new picture to represent that user's unique personality.

To edit an existing account, log in with your admin account, display the System Preferences window, and click Users & Groups to display the account list. Then follow these steps:

1. In the list to the left of the window, click the account you want to change.



REMEMBER

If the accounts in the list are disabled and you can't select one, you must unlock the Users & Groups pane. Click the lock at the bottom left of the System Preferences pane (and type your password, if prompted).

2. Edit the settings you need to change.

Examples include temporarily enabling administrator rights for an account (by selecting the Allow User to Administer This Computer check box) and changing the account password (by clicking the Change Password button).

3. Click the round picture well (the circle that displays the image) to specify the thumbnail image that appears in the Login list next to the account name.

Apple provides several good images in the preview collection. Just click a thumbnail to select it.

4. To replace your account image, drag a new image from a Finder window or the iPhoto window and drop it into the picture well.

Note that some of these choices are available only when you're using an Admin-level account.

- *To choose an image from the default set of El Capitan icons:* Click the picture well, click the Defaults tab (see Figure 10-2), click the desired image, and then click Done.
- *To choose an icon image from those you've recently used:* Click the Recents tab, click the desired image, and then click Done.
- *To choose an icon image from your iCloud Photo Stream:* Click the iCloud Photos tab, click the desired image, and then click Done.
- *To choose an image from your iPhoto Faces collection:* Click the Faces tab, click the desired image, and then click Done.



FIGURE 10-2: Choose the image that best represents a user.

Click the Linked tab to choose the icon image you've used on your personal card within the Contacts application. Oh, and don't forget your iMac's built-in FaceTime HD camera — simply click the picture well and click the Camera tab to grab a picture. When you're set to take the photo, click the camera icon, and then click Done to accept it. *Most cool.*

- 5. After you make your changes, press $\text{⌘}+\text{Q}$ to save them and close the System Preferences window.**



TIP

Standard-level users have some control of their accounts; they're not helpless, after all. Standard users can log in, open System Preferences, and click Users & Groups to change the account password or picture as well as the My Card assigned to them in the El Capitan Contacts application. All standard users can also set up login items, which I cover later in this chapter. Note, however, that managed users may not have access to System Preferences, so they can't make changes. (Read about this in the upcoming section "Managing an account's access settings.")

I banish thee, mischievous user!

Not all user accounts last forever. Students graduate, coworkers quit, kids move out of the house (at last!), and Bob might even find a significant other who has a faster cable modem. We can only hope.

Anyway, no matter what the reason, you can delete a user account at any time. Log in with your admin account, display the Users & Groups pane in System Preferences, and then follow these steps to eradicate an account:

- 1. In the user list at the left of the window, click the account you want to delete.**
- 2. Click the Delete User button (which bears the Minus Sign of Doom).**

OS X displays the confirmation sheet shown in Figure 10-3.



TIP

Note that the contents of the user's Home folder can be saved in a disk image in the Deleted Users folder (just in case you need to retrieve something). Alternatively, you can choose to leave the deleted user's Home folder as is, without removing it (but naturally, you won't regain any space, even though the user account is deleted).

If you're absolutely sure you won't be dating that person again, select the Delete the Home Folder radio button (which doesn't save anything in the Deleted Users folder). You regain all the drive space that was being occupied by the contents of the deleted user's Home folder. As an extra measure of protection, you can also choose to securely erase the contents of the deleted user's Home folder.

3. Do one of the following:

- To delete the account, click Delete User.
- If you're not sure, click the Cancel button to abort and return to the Accounts list.

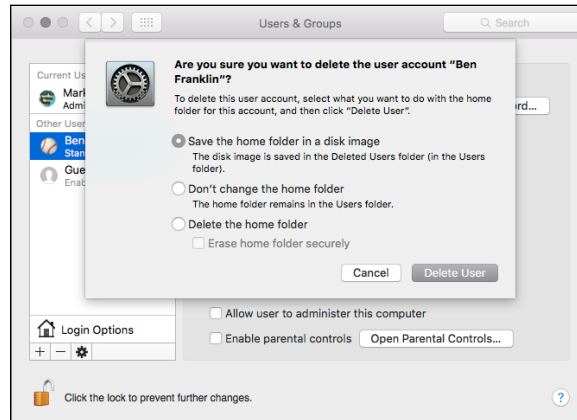


FIGURE 10-3: This is your last chance to save the stuff from a deleted user account.

WORKING WITH THE GUEST ACCOUNT

The *Guest* account is a convenient method of granting someone temporary access to your iMac. In fact, your guest doesn't even need a password to log in. Your Guest account has all the attributes of a standard account, so the visitor has little chance of accidentally (or deliberately) damaging your system. Nevertheless, after the guest user logs out, the Guest account is flushed, and all the data and files that person created using the account are deleted automatically. (This allows the next guest to start with a clean slate.)

By default, the Guest account is disabled. To turn on this feature, open System Preferences, click Users & Groups, and then click the Guest User entry in the list. (You may have to click the Lock icon at the lower-left corner of the Users & Groups pane and provide your admin password before you can continue.) Click the Allow Guests to Log In to This Computer check box to enable it.

Oh, and don't forget that you can enable specific parental controls for the Guest account, just as you can for any other standard-level account. This feature should come in handy if your child has a slumber party coming up this weekend.

Time once again for a Mark's Maxim:



AUTHOR
SAYS

Always delete unnecessary user accounts. Otherwise, you're leaving holes in your Mac's security.

Setting up login items and parental controls

Every account on your iMac can be customized. Understandably, some settings are accessible only to admin-level accounts, and others can be adjusted by standard-level accounts. In the following sections, I introduce you to the things that can be enabled (or disabled) in a user account.

Automating with login items

Login items are applications or documents that can be set to launch or load automatically as soon as a specific user logs in — for example, Apple Mail or Contacts. In fact, a user must be logged in to add or remove login items. Even an admin-level account can't change the login items for another user.



REMEMBER

A user must have access to the Users & Groups pane in the System Preferences window to use login items. As you can read in the following section, a user can be locked out of System Preferences, which makes it more difficult for login items to be deleted for that account. (Go figure.) Therefore, if the account is managed and access to System Preferences has been turned off, an administrator must enable the account's access to System Preferences, allowing the managed user to delete login items.

To set login items for your account, follow these steps:

- 1. Click the System Preferences icon on the Dock and then click the Users & Groups icon.**
- 2. Click the Login Items tab to display the settings shown in Figure 10-4.**

It bears repeating: You can change the Login Items for only the account that's currently logged in, so be sure that the desired account appears under the Current User heading in the list at the left.

- 3. Click the Add button (with the plus sign) to display a file selection sheet.**

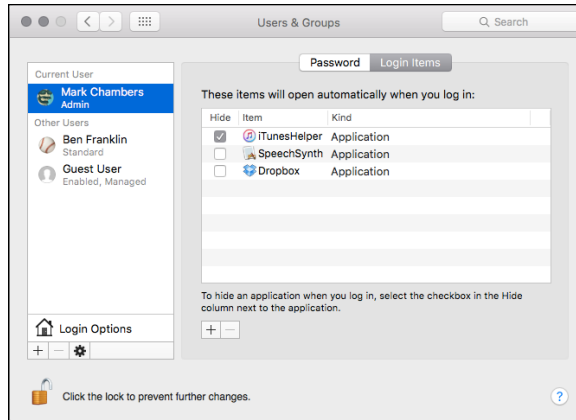


FIGURE 10-4:
Add apps to your
Login Items list.

4. Navigate to the application you want to launch each time you log in, click it to select it, and then click Add.

If you're in the mood to drag and drop, just drag the applications you want to add from a Finder window, and drop them directly into the list.

5. Press ⌘+Q to quit System Preferences and automatically save your changes.



TIP

If the application is running at the moment, you can take an easy shortcut and avoid these steps: Simply right-click the application icon on the Dock and choose Options ⇨ Open at Login from the pop-up menu that appears.

Login items are launched in the order in which they appear in the list, so feel free to drag the items into any order you like.

Managing an account's access settings

A standard-level account with restrictions is a *managed* account. (You can read about these accounts earlier in this chapter.) With these accounts, you can restrict access to many different places in El Capitan and your iMac's applications by using *parental controls*. (Naturally, admin-level accounts don't have parental controls, because an admin account has no restrictions.)



REMEMBER

In short, parental controls come in handy in preventing users — family members, students, coworkers, friends, or the public at large — from damaging your files, your software, or El Capitan itself. If an account has been restricted with parental controls, the account description changes from Standard to Managed in the Accounts list.

To display the parental controls for a standard account, start here:

1. **Log in with an admin-level account.**
2. **Open System Preferences, and click Users & Groups.**
3. **Click the desired Standard account in the list, and select the Enable Parental Controls check box.**

If necessary, click the Lock icon at the lower-left corner to confirm your access.

Now click the Open Parental Controls button to display the five categories (tabs) shown in Figure 10-5:

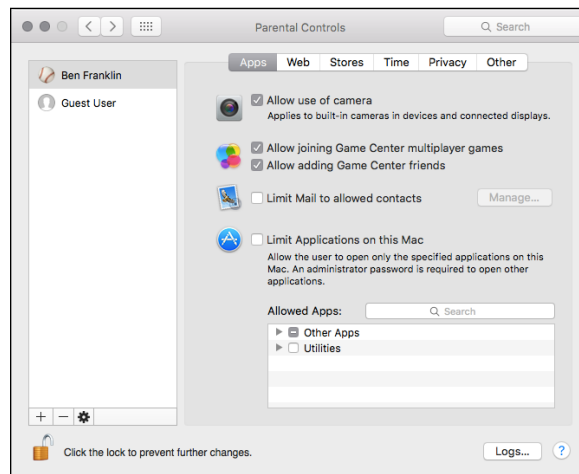


FIGURE 10-5: You can restrict access to many functions in a Standard account.

- » **Apps:** These settings (which I discuss in more detail in a second) affect what the user can do in El Capitan, as well as what the Finder itself looks like to that user.
- » **Web:** El Capitan offers three levels of control for websites:
 - *Allow Unrestricted Access to Websites:* Select this radio button to allow unfettered access for this user.
 - *Try to Limit Access to Adult Websites:* You can allow Safari to automatically block websites it deems adult. To specify particular sites that the automatic “adult filter” should allow or deny, click the Customize button.
 - *Allow Access to Only These Websites:* Choose this radio button to specify which websites the user can view. To add a website, click the Add (plus sign) button, and respond to the El Capitan prompt for a title and the website address.

- » **Stores:** You can specify whether the user can use the iTunes Store and the iBooks Store, as well as restrict access within both stores to music, movies, TV shows, apps, and books by age or rating.
- » **Time:** Parents, click the Time button, and you'll shout with joy! Check out the options on this pane, shown in Figure 10-6. You can limit an account to a certain number of hours of use per weekday (Weekday Time Limits) and per weekend day (Weekend Time Limits). You also can set a bedtime computer curfew time for both weekdays (called Bedtime in Figure 10-6) and weekend days.

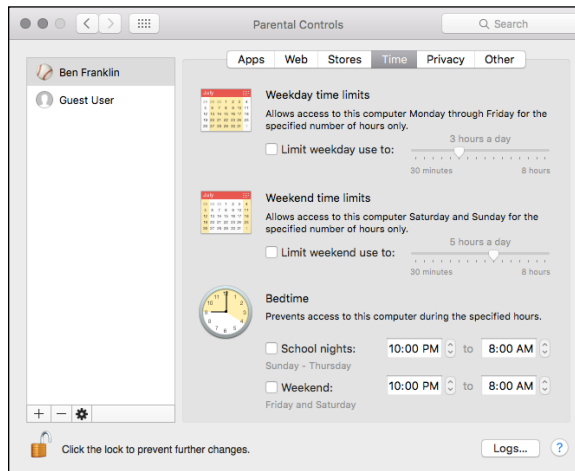


FIGURE 10-6: El Capitan keeps track of your kid's computer use (so that you don't have to).

- » **Privacy:** From this tab, you can individually configure the user's ability to launch apps or access social media. Use the convenient check boxes to allow or prevent changes to the settings used by Location Services, Contacts, Calendars, Reminders, Twitter, Facebook, and Diagnostic Apps. For even more control, click the Manage Privacy button to jump immediately to the Privacy tab of the Security & Privacy pane (allowing you to fine-tune which apps can access specific data).
- » **Other:** These settings control the Dictionary and hardware devices such as your printer and DVD burner. They include
 - *Turn Off Dictation:* Enable this check box to turn off the Dictation feature in El Capitan.
 - *Disable Editing of Printers and Scanners:* When this check box is selected, the user cannot modify the printers and printer queues in the Print & Scan pane in System Preferences. If this option is enabled, the user can still print

to the default printer and switch to other assigned printers but can't add or delete printers or manage the OS X print queue. (If the print job encounters a problem, that user has to bug you to fix things.)

- **Block CD and DVD Burning in the Finder:** Select this check box to prevent the user from recording CDs or DVDs via the built-in disc-recording features in OS X. (Note, however, that if you load a third-party recording program, such as Toast, the user can still record discs with it — unless you also disable access to that program in the Apps section.)
- **Restrict Explicit Language in Dictionary:** With this check box selected, profane terms in the Dictionary are hidden for this user.
- **Prevent the Dock from Being Modified:** Select this check box, and the user can't remove applications, documents, and folders from the Dock in the full Finder. (This is a great choice if you don't want the contents of the Dock changing according to the whims of other users.)
- **Use Simple Finder:** I discuss the Simple Finder later in this section; it's a great idea for families and classrooms with young children.



TIP

You may want to create a single standard-level account for an entire group of people to use. Maybe you want to leave the iMac in kiosk mode in one corner of the office, or perhaps everyone in a classroom will use the same account on the iMac. Keep your one admin-level account close to your bosom, and create a standard-level account for the Unwashed Horde.

El Capitan keeps different types of *text log files*, which track where the user goes on the Internet, the applications launched by the account, and the contents of any Messages conversations in which the user participated. Click the Logs button on any Parental Controls screen to monitor all the logs for a particular account.



REMEMBER

You can always tell whether an account has been assigned parental controls, because the account description changes from Standard to Managed in the User list.

Of particular importance are the Finder and the applications controls. Click the Apps tab (refer to Figure 10-5) to modify these settings:

- » **Allow Use of Camera:** Specify whether the account has access to your iMac's built-in camera. (Note that an external USB Web camera is unaffected by this setting.)
- » **Allow Joining Game Center Multiplayer Games/Allow Adding Game Center Friends:** These two check boxes allow or disable the user's access to the multiplayer games in Game Center and allow or prevent the user from adding friends in Game Center.



TIP

» **Limit Mail to Allowed Contacts:** Select this check box to specify the email addresses that this user can communicate with. (Note that this feature affects only Apple Mail; other mail clients, web-based mail, instant-messaging applications, and audio/video chat applications aren't controlled.) To add an address to which the user can email, click the Manage button, then click the familiar Add button bearing the plus sign. To delete an address, click the Manage button, select the offending address and click the Delete button (bearing the minus sign).

If you want a notification if the user is attempting to send an email to someone who's not on the list, select the Send Requests To check box and then type your email address in the text box.

» **Limit Applications on this Mac:** When this option is selected, you can choose which specific applications the user sees. These restrictions are in effect whether the user has access to the full Finder or just the Simple Finder. Click the triangle icon next to the desired group heading in the Allowed Apps list to expand the group. To locate a specific application, click in the Search box and type the application name.

You can fine-tune application limits in a number of ways using these controls, from turning limits off altogether to modifying the access to single applications:

- *To allow access to all applications:* Simply disable the Limit Applications on this Mac check box.
- *To allow or restrict access to all the applications of a specific type:* Enable or disable the check box next to the desired group heading. Clicking the Other Apps check box to disable it, for example, prevents the user from launching any of the applications in that group.
- *To allow or restrict access to an individual application:* Select the check box next to any application to select or deselect it.



TIP

To add a new application to the Allowed Apps list, drag its icon from the Finder and drop it in the list in the Other Apps group. After you add an application, it appears in the Other Apps group, and you can toggle access to it just like the applications in the named groups.

These settings can work hand in hand with the El Capitan *Gatekeeper* feature, which prevents anyone from launching applications that were not downloaded from the App Store (or are not Apple-approved).

You can restrict your standard-level users even further by assigning them the Simple Finder set of limitations. The Simple Finder is a highly simplified version of the regular OS X Finder. It has a basic Dock that contains only the Finder icon; the Trash icon; and the folders for the user's approved applications, documents, and shared files.

The Simple Finder is the network administrator's idea of a foolproof interface for OS X: A user can access only the system files and resources needed to do a job, with no room for tinkering or goofing off.

A Simple Finder user can still make the jump to the full version of the Finder by clicking the Finder menu, choosing Run Full Finder, and entering an admin-level username and password.



TIP

Would you like to set up a public-access iMac? You can also change the Automatic Login account from the Users & Groups pane. Click the Login Options button under the User list and then click the Automatic Login pop-up menu to choose the account that automatically logs in when OS X starts. On the confirmation sheet that appears, enter the account password, and click OK. I've made it clear elsewhere that using Automatic Login is typically *not* smart for security-conscious iMac owners, but it can be a good feature if you're preparing an iMac for public use. If you set the Automatic Login to your public standard-access account, OS X automatically uses the correct account if the iMac is rebooted or restarted.



REMEMBER

You can always choose Log Out from the Apple menu () to log in under your own account, or use the Fast User Switching feature I describe in the next section.

Mundane Chores for the Multiuser Laptop

After you're hip to user accounts and the changes you can make to them, you can turn to topics that affect all users of your iMac. These topics include how they log in, how a user can share information with everyone else on the computer, and how each user account can be protected from unscrupulous outsiders with state-of-the-art encryption. (Suddenly, you're James Bond! I told you El Capitan would open new doors for you.)

Logging in and out in El Capitan For Dummies

Hey, how about the login screen itself? How do your users identify themselves? Time for another of my "Shortest books in the *For Dummies* series" special editions. (The title is practically longer than the entire book.)

Exploring your login options

El Capitan offers four methods of logging folks in to your multiuser iMac, all of which are available from the Login Options button on any admin account:



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- » **The username and password login:** This screen is the most secure type of login screen you'll see in El Capitan, because you have to type your account username and password. (A typical hacker won't know all the usernames on your iMac.) Press Return to complete the process.

When you enter your password, you see bullets rather than your password because El Capitan displays bullet characters to ensure security. Otherwise, someone could simply look over your shoulder and see your password.

Mark's Maxim: Keep your iMac secure: Use a username and password login, and always choose a password that's tough to guess.

- » **The list login:** This login screen offers a good middle of the road between security and convenience. Click your account image in the list, and type your password when the login screen displays the password prompt. Press Return to continue.
- » **Fast User Switching:** This feature allows another user to sit down and log in while the previous user's applications are still running in the background. This is perfect for a fast email check or a scan of your eBay bids without forcing someone else completely off the iMac. When you turn on Fast User Switching, El Capitan displays the currently active user's name at the right side of the Finder menu bar.

To switch to another account:

1. Click the current user's name in the Finder menu (see Figure 10-7).
2. Click the name of the user who wants to log in.

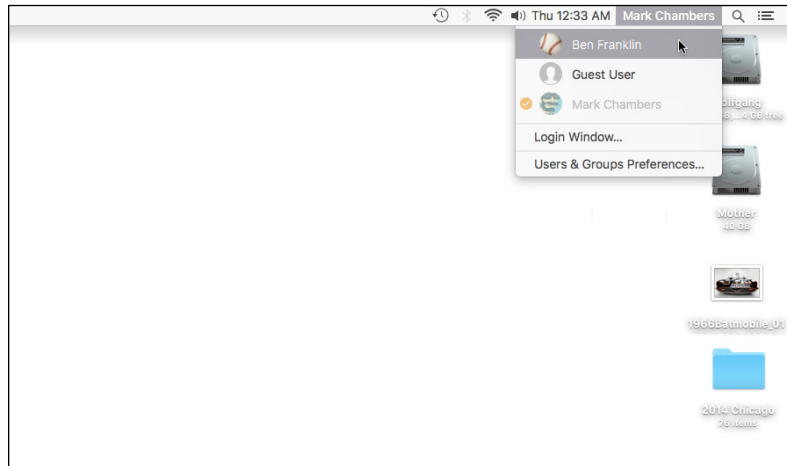


FIGURE 10-7:
The Fast User Switching menu, unfurled for all to see.



WARNING

El Capitan displays the login window, just as if your computer had been rebooted.

The previous user's stuff is still running, so you definitely **shouldn't** reboot or shut down the computer!

To switch back to the previous user:

1. Click the username again on the Finder menu bar.
2. Click the previous user's name.

For security, El Capitan prompts you for that account's login password.

» **Automatic login:** This option is the most convenient method of logging in but offers *no* security whatsoever. El Capitan automatically logs in the specified account when you start or reboot your iMac.

I *strongly recommend* that you use automatic login only if

- Your iMac is in a secure location, such as your home or a locked office.
- You can guarantee that you're the only one using your iMac. **Period.**
- You're setting up a public-access computer kiosk, in which case you want your iMac to immediately log in with the public account.

Working in a public environment? *Never* set an admin-level account as the auto login account. This is the very definition of an SDI, or *Supremely Dumb Idea*.



WARNING

Changing your login settings

To set up a username/password or list login, open System Preferences, click the Users & Groups icon, and then display the Login Options settings, shown in Figure 10-8. (If necessary, click the Lock icon at the lower-left corner to confirm your access.) Here's a rundown of key login settings:

- » **Automatic Login:** To set Automatic Login, click the Automatic Login pop-up menu and choose the account that El Capitan should use.
- » **Display Login Window As:** Select the List of Users radio button for a list login screen, or select the Name and Password radio button to require your users to type their full usernames and passwords.
- » **Show Fast User Switching Menu As:** Select this check box to enable Fast User Switching. Click the pop-up menu to specify how accounts should appear on the Finder menu bar (as full names, short names, or account icons).

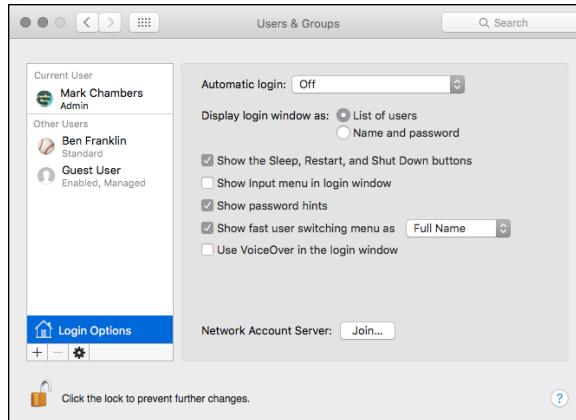


FIGURE 10-8: Configure your login settings from the Login Options pane.

Logging out

Logging out of El Capitan all the way (without Fast User Switching) is a cinch. Just click the Apple menu () and then choose Log Out. (From the keyboard, press ⌘+Shift+Q.) A confirmation dialog appears that automatically logs you off in one minute. And that one minute is important, because if someone walks up and clicks Cancel, he'll be using your iMac with your account! Therefore, it's a good idea to bypass the confirmation dialog by pressing Option while choosing Log Out (or by combining it with the keyboard shortcut). Your iMac returns to the login screen, ready for its next victim. Heed this Mark's Maxim:



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Always click the Log Out button in the logout confirmation dialog before you leave your iMac (or use the Option key to bypass the confirmation dialog), and double-check to make sure the logout completes successfully.

Interesting stuff about sharing stuff

You might wonder where shared documents and files reside on your iMac. That's a good question. Like just about everything in El Capitan, the answer is simple. The Users folder on your iMac has a *Shared* folder within it. To share a file or folder, place it in the Shared folder.



TIP

You don't have to turn on file sharing in the Sharing pane of System Preferences to use Shared folders on your iMac. File sharing affects only network access to your machine by users of other computers.

Each user account on your iMac also has a *Public* folder in that user's Home folder. The Public folder is a read-only folder that other users on your iMac (and across the network) can access. They can only open and copy the files it contains. (Sorry, no new documents or changes to existing documents from other users.) Every

user's Public folder contains a *Drop Box* folder, where other users can copy or save files but can't view the contents. Think of the Drop Box as a mailbox where you drop off stuff for the other user.

Encrypting your Home folder can be fun

Allowing others to use your iMac always incurs a risk — especially if you store sensitive information and documents on your computer. Although your login password should ensure that your Home folder is off-limits to everyone else, consider an extra level of security to prevent even a dedicated hacker from accessing your stuff. All it takes is a forgetful moment in an airport or classroom, and your personal and business data is suddenly within someone else's reach. Top-notch security is a Supremely Good Thing!

To this end, El Capitan includes *FileVault*, which automatically encrypts the contents of your iMac's drive. Without the proper key (in this case, either your login password or the FileVault recovery key), the data stored on your drive is impossible for just about anyone to read. (I guess the FBI or CIA would be able to decrypt it, but they're not likely a worry at your place!)

The nice thing about FileVault is that it's completely transparent to you and your users. In other words, when you log in, El Capitan automatically takes care of decrypting your files and folders. You won't know that FileVault is on the job (which is how computers are *supposed* to work).

To turn on FileVault protection for a specific account, follow these steps:

1. **Click the System Preferences icon on the Dock and then click the Security & Privacy icon.**
2. **Click the FileVault tab and then click the Turn On FileVault button.**
3. **Specify whether your iCloud (Apple ID) account can be used to reset your password and unlock your disk, and click Continue.**

For most iMac owners, the Allow My iCloud Account to Unlock My Disk option is probably just fine, but if you're security-conscious (or you've shared your iCloud account information with others), click the Create a Recovery Key and Do Not Use My iCloud Account radio button.

4. **If you decide to create a separate recovery key, write down the FileVault recovery key displayed by El Capitan, and store it in a safe place.**



TIP

To avoid mistakes, you can capture an image of your screen by pressing $\text{⌘}+\text{Shift}+3$. The screenshot appears as an image file on your Desktop. From there, you can open it and print a copy, or even copy the image file to a USB flash drive or another computer on your network for safekeeping.



WARNING

Personally, I love the FileVault feature. I use it on all my Macs running El Capitan. Yet a risk is involved (insert ominous chord here). To wit: **Do not forget your login and iCloud account passwords (or make *DOGGONE* sure that you or your Admin user have access to a copy of that all-important FileVault recovery key)!** OS X displays a dire warning for anyone who's considering using FileVault: If you forget these safeguards, you can't retrieve any data from your iMac's drive. Even the smartest Apple support technician will tell you that nothing can be done. As Jerry Reed used to say, "It's a gone pecan" (with *pecan* pronounced Southern style, as "puh-kahn").

- 5. If necessary, click Enable User, provide the login password for each user on your account, and then click Continue.**



REMEMBER

Each user on your iMac has to be enabled to use your iMac after FileVault has been turned on. If you don't know the login passwords for the other user accounts on your system, you have to ask each person to provide his or her password to continue. (If an account is not enabled, that person can no longer access anything on the hard drive after it has been encrypted.)

- 6. Click the Restart button on the confirmation screen.**

Your iMac automatically reboots and begins the encryption process. You can continue to use your computer normally during the encryption.

You're done!

IN THIS CHAPTER

Considering the benefits of a network

Choosing between wired and wireless networks

Sharing an Internet connection

Gathering the stuff you need to network

Making the network connection

Using your network

Protecting your iMac with a firewall

Chapter 11

Working Well with Networks

In my opinion, network access ranks right up there with air conditioning and the microwave oven. Like other “I can’t imagine life without them” kinds of technologies, it’s hard to imagine sharing data from your aluminum supercomputer with others around you without a network. I guess you could still make use of a *sneakernet* (the old-fashioned term for running back and forth between computers with a floppy disk), but these days, Apple computers don’t even *have* floppy drives. (Even with a high-capacity USB 3.0 flash drive, a sneakernet is still a hassle.)

Nope, networking is here to stay. Whether you use a network to share an Internet connection, challenge your friends to a relaxing game of World War II battlefield action, or stream your MP3 collection to other computers that use iTunes, you’ll wonder how you ever got along without one. In this chapter, I fill you in on all the details you need to know to get your iMac hooked up to a new (or existing) network.

What Exactly Is the Network Advantage?

If you have other family members with computers, or if your iMac is in an office with other computers (*including* those rascally PCs), here's just a sample of what you can do with a network connection:

- » **Share an Internet connection.** This is *the* major reason why many families and most small businesses install a network. Everyone can simultaneously use the same digital subscriber line (DSL) or cable Internet connection on every computer on the network.
- » **Share a printer.** You say your fellow employee — or, even worse, your big sister — has a great printer connected to her computer? Luckily, that printer can be shared with anyone across your network.
- » **Copy and move files of all sizes.** Need to get a Keynote presentation from one Mac to another? With a network connection, you can accomplish this task in just seconds. Otherwise, you'd have to copy that file to a USB flash drive, burn it to a DVD-R, or use an external hard drive. A network connection makes copying as simple as dragging the project folder from one Finder window to another.
- » **Share documents across your network.** Talk about a wonderful collaboration tool! You can drop a Word document or Keynote presentation file in your Public folder (or save it in your iCloud Drive), for example, and ask for comments and edits from others in your office (or around the planet).
- » **Stream music and video.** With iTunes, you can share your audio and video media collection on your iMac with other Macs and PCs (and even devices such as an Apple TV or an AirPlay speaker system) on your network. Your eyes and ears can't tell the difference! Using a network connection, you can also watch streaming TV and movies from services like Netflix and Hulu.
- » **Play multiplayer games.** Invite your friends over and tell 'em you're hosting a *LAN party* (the technonerd term for a large gathering of game players, connected through the same network, all playing the same multiplayer game). You'll see firsthand just how devious a human opponent can be. Each participant needs to buy a copy of the same game, naturally, but the fun you'll have is worth every cent you spend. Don't forget the chips!

If your iMac isn't within shouting distance of an existing network, or you don't plan on buying any additional computers, you may not need to create a network. A lone iMac hanging out in your home with no other computers around should need a network only for Internet access.



If you have just your iMac and an Internet connection through a high-speed DSL/cable modem, and you have no plans to add another computer, wireless equipment, a network printer, or a mobile device, a network probably isn't necessary.

Should You Go Wired or Wireless?

After you decide that you indeed need a network for your home or office, you have another decision to make: Should you install a *wired* network (running cables between your computers) or a *wireless* network? Heck, should you throw caution to the wind and build a combination network with both wireless and wired hardware?

Your first instinct is probably to choose a wireless network for convenience. After all, this option allows you to eliminate running cables behind furniture, in the walls, or in your office ceiling. Ah, but I must show you the advantages of a wired network as well. Table 11-1 gives you the lowdown to help you make up your mind.

TABLE 11-1 Wireless versus Wired Networks

Factor	Wireless Networks	Wired Networks
Speed	Moderate	Much faster
Security	Moderate	Better
Convenience	Much better	Worse
Compatibility	Confusing standards	Easier to understand
Cables	Few (or none)	Required

As I see it, here are the advantages of choosing a wired versus a wireless network setup:

- » **Wired:** Using a wired network offers two significant perks over a wireless network:
 - *Faster speeds:* In general, wired networks that are compatible with your iMac are many, many times faster than the fastest 802.11ac or 802.11n wireless connections.



WARNING

The performance of a wireless connection can be compromised by interference (from impeding structures, such as concrete walls, and from household appliances, such as some wireless phones and microwave ovens) and by distance. Wired networks have no such problems (as long as you keep your cables to lengths of 25 feet or less).

- *Better security:* A wired network doesn't broadcast a signal that can be picked up outside your home or office, so it's more secure.



WARNING

Hackers can attack through your Internet connection, though, even if you're using a wired network. Hence the final section of this chapter, "USE YOUR FIREWALL!"

» **Wireless:** A wireless connection really has only one advantage, but it's a big one: *convenience* (which, in this case, is another word for *mobility* for all your networked devices). Laptop owners crave this independence — a freedom that desktop computer owners can only dream about. Plus, only wireless networks allow your iOS devices to join the party, as the iPhone, iPad, and iPod touch are not equipped with Ethernet ports.

Accessing your network anywhere within your home or office — without cables — is so easy. Connecting a wireless printer is a breeze. And when you're using an AirPort Express mobile Base Station, even your home stereo can get connected to your MP3 collection on your iMac. Read more about base stations later.

GRAFTING WIRELESS ACCESS TO A WIRED NETWORK

Maybe you're caught in the middle when trying to choose between wired and wireless networking. Or perhaps you're already using a wired network but are thrilled by the idea of sitting on your deck in the sunshine, checking your email on your laptop, untethered. By combining both technologies, you can get the faster transfers of a wired network between all the computers in your office and the freedom you crave.

In my home office, I use a wireless base station that also includes a built-in wired switch, a common feature in today's wireless routers and base stations. My family gets all the convenience a wireless network offers, and everyone can connect to the Internet from anywhere in our house. On the other hand, my office computers have the faster performance and tighter security of a wired network. *Sassy indeed!*

Be a Pal: Share Your Internet!

It's time to see what's necessary to share an Internet connection. In the following sections, I cover two methods of connecting your network to the Internet. (And before you open your wallet, keep in mind that you might be able to use your iMac to share your broadband connection across your network!)

Using your iMac as a sharing device

You can use your iMac to provide a shared Internet connection across a simple wireless network, using a broadband DSL or cable connection.



WARNING

It is possible to use an El Capitan-compatible external USB dial-up modem to share a dial-up modem Internet connection, but I would consider it *only* if you have absolutely no other option. A dial-up modem connection really can't handle the data transfer speeds for more than one computer to access the Internet at one time. (In plain English, an external USB modem that you add to your iMac isn't fast enough for both you and your significant other to surf the web at the same time.) Sharing a dial-up connection just isn't practical.

Because your iMac has built-in AirPort Extreme wireless hardware, it's easy to share your cable/DSL broadband connection wirelessly with other computers in your home or office.



REMEMBER

When your iMac is functioning as an Internet-sharing device, your computer uses El Capitan's built-in Internet-connection-sharing feature to get the job done, *but your iMac must remain turned on to allow Internet sharing*. I show you how to do this in the later section "Network Internet connections."

Using a dedicated Internet-sharing device

You can also choose to use a dedicated Internet-sharing device (often called an *Internet router*) to connect to your cable or DSL modem. You do have to buy this additional hardware, but here's the advantage: Your iMac doesn't have to remain turned on just so everyone can get on the Internet.

As I mentioned, Internet routers usually include either wired or wireless network connections, and many include both.

Setting up an Internet router is usually a simple matter, but the configuration depends on the device manufacturer and usually involves several settings in System Preferences that vary according to the router model. Grab a diet cola, sit down

with the router's manual, and follow the installation instructions you find there. (In some cases, you must set up your cable or DSL modem as a bridge between your ISP and your router, which should be covered in your modem and router manuals as well.)



TIP

Most Internet routers offer a DHCP server, which automatically assigns Internet protocol (IP) addresses, and I *strongly* recommend that you turn on this feature! (You can read more about DHCP later in this chapter, in the sidebar “The little abbreviation that *definitely* could.”)

What Do I Need to Connect?

Most normal folks — whom I define as those who have never met a network system administrator and couldn't care less — think that connecting to a network probably involves all sorts of arcane chants and a mystical symbol or two. In the following sections, I provide you the shopping list you need to set up a network or connect to a network that's already running.

Wireless connections

Today's iMacs come complete with built-in AirPort Extreme wireless hardware, so if you already have an AirPort Extreme or Express Base Station, you're all set. Otherwise, hold on tight while I lead you through the hardware requirements for wireless networking.



REMEMBER

The maximum signal range — and effectiveness — of any wireless network can be impeded by intervening walls or electrical devices, such as microwave ovens and some wireless phones, all of which can generate interference.

Connecting a iMac to an existing wireless network

Connecting any Mac computer to an existing wireless network requires no extra hardware because your hardware is already built in. (Whew. That was easy!)

Using a base station to go wireless

If you decide that you want to build your own wireless network, you eschew cables, or you want to add wireless support to your existing wired network, you need a *base station*. (If you do have an existing wired network, the base station can act as a bridge between computers using wireless hardware and your wired network,

allowing both types of computers to talk to each other.) Such a wireless base station will have either

- » A port that can connect to your existing wired network's switch
- » A full built-in switch for wired connectivity (which means you can sell your old wired Ethernet switch to your sister in Tucson)

And, of course, a base station can simply act as a central switch for your wireless network (with no support for a wired network).

You can use either a cool Apple Base Station or a boring 802.11ac or 802.11n generic wireless base station; however, the Apple hardware requires less configuration and tweaking. (Sounds like a Mark's Maxim!)



AUTHOR
SAYS

If you don't want the hassle of tweaking PC hardware to accommodate your iMac, buy Apple hardware and software.

APPLE BASE STATION MODELS

As listed in the upcoming Table 11-2, your iMac can work with four Apple Base Station models for wireless networking:

- » **AirPort Extreme:** I recommend using AirPort Extreme if your network needs an enhanced antenna, which provides greater range. You can read about connectivity ranges in Table 11-2.
- » **AirPort Time Capsule:** Apple's Time Capsule unit (an external wireless backup unit) isn't just a wireless remote hard drive. It can also act as a full AirPort Extreme Base Station. In fact, the wireless specifications for a Time Capsule unit and an AirPort Extreme Base Station are almost identical.
- » **AirPort Express:** I recommend using AirPort Express if you want to
 - *Carry your wireless base station with you.* Express is much smaller than the other Apple Base Station models. (Think "party on the patio" or a LAN gaming get-together at a friend's house.)
 - *Extend the range of your existing wireless network.* If your network signal fades by the pool or potting shed, consider adding an AirPort Express at the edge of your current range to extend the reach of your wireless network.
 - *Connect your home stereo or speakers for wireless music streaming using AirPlay.* You can connect a pair of speakers to your AirPort Express and use AirPlay to play music from your iMac's iTunes library. (Heck, you're not

limited to playing the music on your iMac. You can also stream music from your iPhone, iPad, or iPod touch!)

» **AirPort (discontinued):** You might find an 802.11g AirPort Base Station on eBay or at a garage sale. Go ahead and pick it up if you want to save cash unless you're considering doing multiplayer gaming or performing high-speed file transfers over your wireless network.



REMEMBER

The latest 802.11ac standard used by the AirPort Extreme Base Station and AirPort Time Capsule delivers a connection that's several times faster than the old AirPort Base Station's 802.11b/802.11g/802.11n standards. 802.11ac is also compatible with *all* the older standards — 802.11b/a/g/n — so I highly recommend that you stick with 802.11ac in the future. It plays well with others, and at warp speed to boot!

TABLE 11-2 Apple Wireless Network Base Stations

Feature	AirPort Extreme/ AirPort Time Capsule	AirPort Express
Price	\$199/\$299/\$399	\$99
Users (maximum)	50	50
802.11ac support	Yes	No
802.11n support	Yes	Yes
802.11g support	Yes	Yes
802.11b support	Yes	Yes
LAN Ethernet jack (high-speed Internet connection)	Yes	Yes
WAN Ethernet jack (wired computer network)	Yes	Yes
Stereo mini-jack	No	Yes
USB printer port	Yes	Yes



WARNING

The names of the Apple Base Stations are irritatingly similar; Apple usually does a better job of differentiating its product names. Jot down the name of your model on a sticky note on your OS X desktop so you don't get confused.

Installing an Apple Base Station is simple. Follow these steps:

1. **If you have a DSL or cable modem, connect it to the WAN (wide-area network) port on the base station with an Ethernet cable.**



REMEMBER



TIP

2. **If you have an existing wired Ethernet computer network with a switch or router, connect it to the Ethernet LAN port on the base station with an Ethernet cable.**

Only the AirPort Extreme and AirPort Time Capsule stations have a WAN port.

3. **If you have a USB printer, connect it to the USB port on the base station.**

I cover the steps for sharing a printer in the later section “Sharing a network printer.”

4. **Connect the power cable.**
5. **Switch on your base station.**
6. **Run the installation software provided by Apple on your iMac.**

USING NON-APPLE BASE STATIONS

If any company other than Apple manufactured your wireless base station, the installation procedure is almost certainly the same. (Naturally, you should take a gander at the manufacturer’s installation guide just to make sure, but I have added many brands of these devices, and I used the same steps for each one.)

However, I should note that Apple wireless hardware uses a slightly different security encryption standard from most PC wireless hardware. This fact creates an extra hurdle when you connect to a non-Apple base station or access point with your iMac. (More on this in the next section. For now, just remember that I recommend using Apple wireless hardware with your iMac whenever possible because the installation process is easier!)

Joining a wireless network

As far as I’m concerned, the only two types of base stations are Apple and non-Apple (which includes all 802.11ac, 802.11n, and 802.11g base stations and access points). In the following two sections, I relate what you need to know to get onboard with either type of hardware.

APPLE AIRPORT BASE STATIONS

To join a wireless network that’s served by any flavor of Apple Base Station, follow these steps on each Mac with wireless support:

1. **Click the System Preferences icon on the Dock.**
2. **Click the Network icon.**
3. **In the Connection list on the left, click Wi-Fi.**

4. **Select the Show Wi-Fi Status in Menu Bar check box.**
5. **Click the Apply button.**
6. **Press ⌘+Q to quit System Preferences and save your settings.**
7. **Click the Wi-Fi status icon (which looks like a fan) on the Finder menu bar, and choose an existing network connection you'd like to join.**

The network name is the same as the network name you chose when you set up your AirPort Base Station.

8. **If you set up a secure network, enter the password you assigned to the network during setup.**

By the way, security is always A Good Thing. I strongly recommend that you enable the password encryption features of your Apple Base Station while installing it. (Luckily, the Apple Base Station setup application leads you through this very process.) In the words of an important Mark's Maxim:



AUTHOR
SAYS

Keep uninvited guests out of your network! Use your base station's security features and encrypt your data by using WPA2 encryption!

Some wireless networks might not appear in your Wi-Fi menu list. These are *closed networks*, which you can specify when you set up your AirPort Base Station. You can't join a closed network unless you know the exact network name (which is far more secure than simply broadcasting the network name). To join a closed network, follow these steps:

1. **Click the Wi-Fi status icon (which looks like a fan) on the Finder menu bar and choose Join Other Network.**
2. **Type the network's name.**
3. **If the network is secured with WPA, WPA2, WEP, or LEAP encryption — the security standards for protecting your data through encryption — click the Security pop-up menu and choose which type of encryption is being used.**

My technical editor and I heartily agree: Simply forget WEP encryption ever existed, and *never* use it! Your best bet is WPA2 encryption, which is the current standard for home wireless networks.

4. **Enter the network password if required.**

To disconnect from a Wi-Fi network, click the Wi-Fi menu and either choose Turn Wi-Fi Off or connect to another wireless network. In other words, if you choose another available wireless network from the Wi-Fi menu, your iMac automatically drops the previous connection. (You can be connected to only one wireless network at a time, which makes Good Sense.)

USING NON-APPLE BASE STATIONS

If you're using your iMac to connect to a non-Apple base station at your office, you might need to follow a specific procedure that takes care of the slightly different password functionality used by standard 802.11b/g/n/ac hardware.

El Capitan can take care of many potential wireless “language barriers” caused by security encryption. The two most common forms are WPA2 and WEP. So whether you need to massage your password to connect to your non-Apple base station depends on the specific hardware and encryption system it uses.

TRANSFERRING FILES THE EASY AIRDROP WAY

AirDrop is the local Mac-to-Mac file transfer feature built into OS X El Capitan, and it couldn't be easier to use. No setup and no passwords are involved! However, it comes with three caveats:

- AirDrop works only with Macs running Lion and later, and only with specific iMac models: those computers produced in early 2009 or later support AirDrop.
- AirDrop uses the Wi-Fi hardware built into today's Mac laptops and desktops, so don't forget to turn on Wi-Fi first. (If you're displaying the Wi-Fi status icon on your Finder menu bar, click the icon and choose Turn Wi-Fi On.)
- You have to be within Wi-Fi signal range of another Mac to use AirDrop. Note, however, that the two computers *don't* have to be using the same Wi-Fi network. (My iMac uses a wired connection to my network, but because the iMac has internal Wi-Fi hardware, I can use AirDrop to send files to my MacBook Air.) Because AirDrop uses a Wi-Fi connection, file transfers are significantly slower (and less secure) than they would be over a wired Ethernet network.

To use AirDrop to transfer files to another Mac, both users should click the AirDrop icon in any Finder window sidebar to join the AirDrop group. After a short delay, you see the account pictures for all Macs within signal range and with AirDrop open. Just drag the files you want to transfer to the person's picture. Both you and the recipient are prompted for confirmation before the transfer begins. After the transfer is complete, the files you sent are saved in the recipient's Downloads folder.

When you're done using AirDrop, just close the Finder window displaying the account pictures (or click another location in the Finder window sidebar) to exit the AirDrop group. (Don't forget that you have to reopen AirDrop if someone wants to send you files. I leave my AirDrop Finder window open and minimized to the Dock.)

To read or print the latest version of this procedure, fire up Safari, visit <http://kbase.info.apple.com/index.html>, and type **HT1126** in the search field. The article provides the details on how to convert a standard wireless encrypted password to a format your AirPort Extreme hardware can understand.

Wired connections

If you're installing a wired network, your iMac already comes with most of what you need for joining your new cabled world. You just connect the hardware and configure the connection. Don't forget that you also need cables and an inexpensive Ethernet switch. (If you're using an Internet router or other hardware sharing device, it almost certainly has a built-in four- or eight-port switch.)

Connecting an iMac to a wired network

Your Ethernet 10/100/1000 port (which looks like a slightly oversized telephone/modem jack) is located on the back of your iMac. It's ready to accept a standard Ethernet Cat5/Cat5E/Cat6 cable with RJ-45 connectors.

If you're connecting to an existing wired network, you need a standard Cat5/Cat5E/Cat6 Ethernet cable of the necessary length. I recommend a length of no more than 25 feet, because longer cables are often subject to line interference (which can slow or even cripple your connection). You also need a live Ethernet port from the network near your Mac. Plug the cable into your iMac, and then plug the other end into the network port.

Wired network hardware

If you don't know your switch from your NIC, don't worry. Here, I describe the hardware you need for your wired network.

WIRED NETWORK COMPONENTS

If you're building your own wired network, you need

» **A switch:** This gizmo's job is to provide more network ports for the other computers in your network. Switches typically come in four- and eight-port configurations.

As mentioned earlier in this chapter, most Internet routers (sometimes called *Internet-sharing devices*) include a built-in switch. So if you've already invested in an Internet router, make doggone sure it doesn't come equipped with the ports you need before you go shopping for a switch!



TIP

» **Ethernet cables:** Exactly how many cables you need is determined by how many computers and other devices (such as a network printer) you're connecting. If you're working with a Gigabit Ethernet system, you need Cat5E or Cat6 cables. Cat6 cables provide better performance but are more expensive.



TIP

Naturally, if you're using a broadband Internet connection, you also have a DSL or cable modem. These boxes always include a port for connecting to your wired Ethernet network. (If you have one of the new breed of *wireless* modems — which acts as a wireless base station — don't panic. It should also have a wired port for connecting to your existing switch.)

WIRED NETWORK CONNECTIONS

After you assemble your cables and your router or switch, connect the Ethernet cables from each of your computers to the router or switch and then turn on the device. (Most need AC power to work.) Check the manual that comes with your device to make sure that the lights you're seeing on the front indicate normal operation. (Colors vary by manufacturer, but green is usually A Good Color.)

Next, connect your cable or DSL modem's Ethernet port to the WAN port on your switch with an Ethernet cable. If your modem isn't already on, turn it on now, and check for normal operation.

When your router or switch is powered on and operating normally, you're ready to configure OS X for network operation. Just hop to the upcoming section "Connecting to the Network." (How about that? Now you can add network technician to your rapidly growing computer résumé!)

Joining a wired Ethernet network

After all the cables are connected and your central connection gizmo is plugged in and turned on, you've essentially created the hardware portion of your network. Congratulations! (Now you need a beard and suspenders.)

With the hardware in place, it's time to configure El Capitan. In this section, I assume you're connecting to a network with an Internet router or switch that includes a DHCP server. (Jump to the later sidebar "The little abbreviation that *definitely* could" for more on DHCP.)

Follow these steps on each Mac running OS X that you want to connect to the network:

1. Click the **System Preferences icon on the Dock.**
2. Click the **Network icon.**

3. From the Connection list on the left, choose Ethernet.

The entry may also be named Ethernet 1, depending on the Mac model you're configuring. (Make sure you select the Ethernet entry that does *not* carry the Wi-Fi fan symbol.)

4. Click the Configure IPv4 pop-up menu and choose Using DHCP, as shown in Figure 11-1.

5. Click the Apply button.

The Apply button is grayed out in the figure because my status (in this dialog) is Connected.

Enjoy the automatic goodness as OS X connects to the DHCP server to obtain an IP address, a subnet mask, a gateway router IP address, and a Domain Name System (DNS) address. (Without a DHCP server, you'd have to add all this stuff manually. Ugh.)

A few seconds after clicking the Apply button, you should see the information. You might also notice that the DNS Server and Search Domains fields are empty. Fear not. OS X is really using DNS server and domain information provided by the DHCP server.

6. Press ⌘+Q to quit System Preferences and save your settings.

You're on!

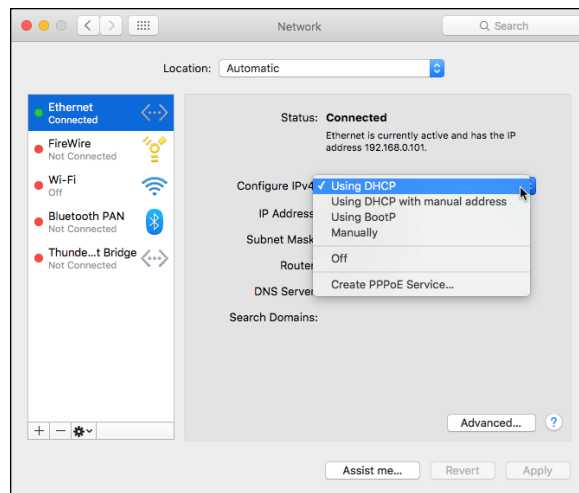


FIGURE 11-1:
All hail DHCP, the
magic networking
fairy!

Connecting to the Network

All right! The hardware is powered up, the cables (if any) are installed and connected, and you have configured El Capitan. You're ready to start (or join) the party. In the following sections, I show you how to verify that you're connected, as well as how to share data and devices with others on your network.

Verifying that the contraption works

After you have at least two computers on a wired or wireless network, test whether they're talking to each other over the network by pinging them. (No, I didn't make up the term. Honest.) Essentially, pinging another computer is like yelling "Are you there?" across a crevasse.

THE LITTLE ABBREVIATION THAT *DEFINITELY* COULD

You know, some technologies are just *peachy*. (So much for my über-tech image.) Anyway, these well-designed technologies work instantly. You don't have to fling settings around like wrapping paper on Christmas Day. And every computer can use them — Mac, Windows, Linux, and even the laptops used by funny-looking creatures from Roswell, New Mexico.

Dynamic Host Configuration Protocol, or *DHCP* for short, is about as peachy as it gets. This protocol enables a computer to automatically get all the technical information necessary to join a network. Let me hear you say "Oh, yeah!" Virtually all network devices can use DHCP these days, including Internet routers, switches, and (go figure) OS X. Today's networking hardware and operating systems provide a *DHCP server*, which flings the proper settings at every computer on the network all by itself. Your iMac just accepts the settings and relaxes in a placid networking nirvana.

In this book, you can bet the farm that I assume you want to use DHCP and that your network hardware supports it (which is a virtual certainty with today's hardware). That way, I won't spend 30 pages leading you through the twisting alleyways of manual network settings.

If you're connecting to an existing network, tell the network administrator you're taking the easy route and using DHCP. A warning, however: Adding more than one DHCP server on a single network will cause a civil war, and your system will lock up tight. Therefore, before adding hardware with a DHCP server to an existing network, ask your network administrator to ensure that you aren't making a mistake.

To ping another computer on the same network from any Mac running El Capitan, follow these steps:

1. Click the Spotlight search icon on the Finder menu bar and type **Network Utility** in the Spotlight search box.
2. Click the **Network Utility** entry in the Spotlight list to launch the application.
3. Click the **Ping** tab, as shown in Figure 11-2.

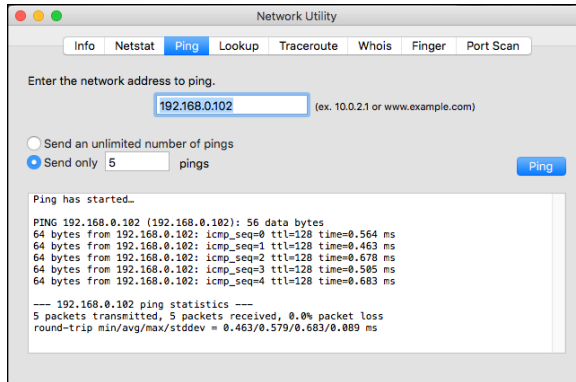


FIGURE 11-2:
Look, Ma, I'm
pinging!

4. In the **Enter the Network Address to Ping** text field, enter the IP address of the computer you want to ping.



REMEMBER

- If you're pinging another Mac running OS X, you can get that machine's IP address simply by displaying its Network pane in System Preferences, which always displays the IP address.
- If you're trying to ping a PC running Windows, and you don't know that machine's IP address, follow these steps:
 - Click **Start** and right-click **Network** (under Windows 7) and then choose **Properties**. Under Windows 8, 8.1 or 10, display the **Control Panel** and click **Network and Sharing Center**.
 - Click **Change Adapter Settings**, right-click your **Local Area Network** connection icon, and choose **Status** from the menu that appears.
 - Click the **Details** button.

The IP address of that computer is proudly displayed.

5. Select the **Send Only x Pings** radio button, and enter 5 in the text field.
6. Click the **Ping** button.



- *Yay:* If everything is working, you should see results similar to those shown in Figure 11-2, in which I'm pinging my Windows server at IP address 192.168.0.102 across my wired Ethernet network.

The address 192.168.0.xxx is a common series of local network IP addresses provided by Internet routers, hubs, and switches with DHCP servers, so don't freak if you have the same local IP address. Similarly, Apple tends to use the form 10.0.1.xxx for local networks.

- *Nay:* If you *don't* get a successful ping, check your cable connections, power cords, and OS X settings. If you're using a wireless connection, you might have to move closer to the network base station to connect successfully, especially through walls.

Sharing stuff nicely with others

It works! By golly, it works! Okay, now what do you *do* with your all-new shining chrome network connection? Ah, my friend, let me be the first to congratulate you and the first to show you around! In the following sections, I cover the most popular network perks. (The good news is that these perks work with both wired and wireless connections.)

Network Internet connections

If your DSL or cable modem plugs directly into your iMac (rather than into a dedicated Internet-sharing device or Internet router), you might ponder just how the other computers on your network can share that spiffy high-speed broadband connection. If you're running a wireless network, it comes to the rescue!

Follow these steps to share your connection wirelessly:

1. **Click the System Preferences icon on the Dock.**
2. **Click the Sharing icon.**
3. **Click the Internet Sharing entry in the Services list to the left of the pane.**
4. **From the Share Your Connection From pop-up menu, choose Ethernet.**
5. **Select the Wi-Fi check box (in the To Computers Using list).**

6. Select the On check box next to the Internet Sharing entry in the Services list.

El Capitan displays a warning dialog stating that connection sharing could affect other computers on your network. If you intend to share the Internet connection provided on an existing network at your home or office that you didn't set up, contact your network administrator first! (It's best to avoid sowing chaos and disorder.)

7. Click Start in the warning dialog to continue.

8. Click the Close button to exit System Preferences.



REMEMBER

Sharing an Internet connection (without an Internet router or dedicated hardware device) through OS X requires your computer to remain on continuously. Remind others in your office or home that your svelte iMac must remain on, or they'll lose their Internet connection!

Don't forget — you don't need to configure Internet sharing if your DSL or cable modem connects to a dedicated sharing device or router. That snazzy equipment automatically connects your entire network to the Internet.

Network file sharing

You can swap all sorts of interesting files with other Macintosh computers on your network. When you turn on file sharing, El Capitan allows all Macs on the network to connect to your iMac and share the files in your Public folder. (Note that sharing across a network is different from sharing a single computer between several people. I cover that environment in Chapter 10.)

Follow these steps to start sharing files and folders with others across your network:

- 1. Click the System Preferences icon on the Dock.**
- 2. Click the Sharing icon.**
- 3. Select the On check box next to the File Sharing service entry to enable the connections for Mac and Windows sharing.**

Other Mac users can connect to your computer by clicking Go in the Finder menu and choosing the Network menu item. The Network window appears, and your iMac is among the choices. If the other Macs are running El Capitan, your iMac's shared files and folders appear in a Finder window, and they're listed under the Shared heading in the sidebar.

Vista/Windows 7 users can use the Network window to connect to your Mac. Windows 8, 8.1 and 10 users should head to the Network panel. Those lucky Windows folks also get to print to any shared printers you've set up. (The following section covers shared printers.)

4. Click the Close button to exit System Preferences.



TIP

El Capitan conveniently reminds you of the network name for your beloved iMac at the top of the Sharing pane.

Sharing a network printer

I love describing easy procedures, and sharing a printer on a Mac network ranks high on the list! You can share a printer that's connected to your iMac (or your AirPort Extreme, AirPort Time Capsule, or AirPort Express Base Station) by following these simple steps:

1. Click the System Preferences icon on the Dock.
2. Click the Sharing icon.
3. Select the On check box next to the Printer Sharing service entry.
4. From the list at the right of the System Preferences window, select the check box next to the printer you want to share.
5. Click the Close button to exit System Preferences.

A printer you share automatically appears in the Print dialog on other computers connected to your network.

USE YOUR FIREWALL!

Yep. Those capital letters and the exclamation point tell you how important this section is.

The following Mark's Maxim, good reader, isn't a request, a strong recommendation, or even a regular Maxim. Consider it an *absolute command* (right up there with *Pay your taxes*).



AUTHOR
SAYS

Turn on your firewall now.

When you connect a network to the Internet, you open a door to the outside world. As a consultant to several businesses and organizations in my hometown, I can

tell you that the outside world is chock-full of malicious individuals who *dearly love* to inflict damage on data and would like to take control of your pristine iMac for their own purposes. Call 'em hackers, call 'em delinquents, or call 'em something I can't repeat, but *don't let them in!*

El Capitan comes to the rescue again with the built-in firewall in OS X. When you use the firewall, you essentially build a virtual brick wall between yourself and the hackers out there (both on the Internet and within your local network). Follow these steps:

- 1. Click the System Preferences icon on the Dock.**
- 2. Click the Security & Privacy icon.**
- 3. Click the Firewall tab.**
- 4. Click the Turn On Firewall button to activate your firewall.**
- 5. Click the Firewall Options button.**
- 6. Select the Automatically Allow Signed Software to Receive Incoming Connections check box.**
- 7. Select the Enable Stealth Mode check box.**

This important feature prevents hackers from trolling for your iMac on the Internet — or, in normal-speak, searching for an unprotected computer — so it's much harder for them to attack you. (Stealth mode also prevents other computers from pinging you, so don't be surprised if your iMac suddenly clams up if you try to ping it.)

- 8. Click OK.**
- 9. Click the Close button to exit System Preferences.**

El Capitan even keeps track of the Internet traffic that you *do* want to reach your iMac, such as web page requests and file sharing. When you activate one of the network features described in the section “Sharing stuff nicely with others,” El Capitan automatically opens a tiny hole (called a *port* by net types) in your firewall to allow just that type of communication with your Mac.

If you decide to turn on printer sharing, for example (as described in the preceding section), El Capitan automatically allows incoming print jobs over the network from other computers.

You can also add ports for applications that aren't on the firewall's Allow list, such as third-party instant messaging clients and multiplayer game servers. Depending on the type of connection, El Capitan often displays a dialog prompting you for confirmation before allowing certain traffic, so you probably won't need to do anything manually.

However, you *can* manually add a program to your list of allowed (or blocked) firewall ports. Follow these steps:

- 1. Click the System Preferences icon on the Dock.**
- 2. Click the Security & Privacy icon.**
- 3. Click the Firewall tab and then click the Firewall Options button.**
- 4. Click the Add button (which carries a plus sign).**
El Capitan displays a standard file-browsing sheet.
- 5. Browse to the application that requires access to the outside world — or the application that you want to block from outside communication — and click it to select it.**
- 6. Click the Add button on the File sheet.**
The application appears in the Firewall list. By default, it's set to Allow Incoming Connections.
- 7. If you want to block any communications coming into the application, click the Allow Incoming Connections pop-up menu and choose Block Incoming Connections instead.**
- 8. Click the Close button to exit System Preferences.**

Adding a printer or a scanner to your system

Using Photo Booth

Connecting with friends and family using FaceTime

Chapter 12

Hooking Up with Handy Helpers

This chapter is all about getting interesting things into — and out of — your iMac. Some of the devices I mention are common (almost mundane these days) and pretty easy to take care of, such as scanners and printers. Then I might surprise you with something new to you, like your iMac’s built-in FaceTime HD video camera, which gives you the ability to place and receive video and audio calls to friends and family on their Macs, iPhones or iPads.

Heck, I also show you how to turn your iMac into an old-fashioned photo booth, just like the expensive models at your local mall or amusement park. Think “iMac selfies” at your next party — complete with outrageous effects!

Connecting Printers

All hail the USB port! It’s the primary connection point for all sorts of goodies. In this section, I concentrate on adding a local USB printer and the basics of adding a network printer to your system. (Find more on connecting a wireless Bluetooth printer in the Bluetooth Bonus Chapter at www.dummies.com.)

USB printers

Connecting a USB printer to your iMac is duck soup. Don't you wish all things in life were this easy? You might very well be able to skip most of the steps in this section, depending on whether your printer came with an installation disc. (Virtually all printers do, of course, but you might have bought yours used, say, from eBay.)



TECHNICAL
STUFF

Your printer needs to be fully supported within OS X:

- » If the software is designed for earlier versions of OS X (say, 10.9 or 10.10), it probably works with El Capitan.
- » I always recommend visiting the manufacturer's website to download the latest printer driver and support software *before* you install your printer. That way, you know that you're up to date. (Don't forget to check the Read Me file that accompanies your new software to make sure that no new system requirements have come about!)



WARNING

Save and close open files and applications before installing your printer. You might have to restart your iMac to complete the installation.

The physical connections for your printer are pretty simple:

- » Make sure that your printer's USB cable is plugged into both your iMac and the printer itself. (Naturally, you'll use one of the iMac's USB ports on the back of the computer unless you've already added a USB hub to expand your external horizons.)
- » After the USB connection is made, plug the printer into an AC wall socket and turn it on.



REMEMBER

Don't forget to add the paper, check the ink or toner cartridge(s), and remove all the packing material from your printer!

Additional printer installation steps depend on whether you have the manufacturer's installation software for your printer.

Sure, I've got the install software

If your printer comes with its manufacturer's installation disc (and you have either an internal or external optical drive), follow these steps when everything is connected and powered on:

1. Insert the installation disc into the iMac's optical drive.



TIP

Don't have an optical drive? Download the printer's installation software from the manufacturer's website as a disk image file (ending with the extension .dmg) and simply double-click that file. OS X will display it on your Desktop just as though it were a DVD or an external hard drive. Now you can follow along with the rest of the steps in this procedure.



TIP

The disc contents usually appear in a Finder window. If they don't, double-click the installation disc icon on the Desktop to open the window.

2. Double-click the installation application to start the ball rolling.

3. Follow the onscreen instructions.

Files get copied to your hard drive.

You might have to restart your iMac.



REMEMBER

You're ready to print!

Don't forget to visit your printer manufacturer's website to check for any driver updates for your particular model.

Whoops, I've got diddly-squat (software-wise)

Didn't get an installation CD? Try installing the printer without software, or download the software from the manufacturer's website.

INSTALLING WITHOUT SOFTWARE

If you didn't get an installation CD with your printer (or you can't locate the installation software to download), you might be lucky enough that your printer's driver was included in your installation of OS X. First, press $\mathbb{G}+P$ within an application to display the Print dialog, where you can check whether the printer you connected is already recognized.

If it's not displayed, here's how to check for that pesky driver after you connect the printer and switch it on:

1. Open the System Preferences window.
2. Click the Printers & Scanners icon.
3. Click the Add button (which sports a plus sign), and choose Add Printer or Scanner from the menu that appears.

4. **Check the Printer list in the Add Printer window to see whether your printer has already been added automatically within El Capitan.**

If your printer appears here, dance a celebratory jig. You can close System Preferences and choose that printer from the Print dialog in your applications. (You can even set it as the default from the System Preferences Printers & Scanners pane. Just click the Default Printer pop-up menu to select your new printer.)

DOWNLOADING SOFTWARE

If you don't have installation software and your iMac doesn't automatically match your USB printer with a driver, it's time to check the Internet to locate an El Capitan-compatible driver for your printer.

Check the manufacturer's website for your printer's software and any additional information for operating your printer under OS X El Capitan. Look for

- » **Special software drivers that the printer might need:** Install any drivers you find *before* you run an installation application. Otherwise, the installation app might not be able to recognize or configure the printer if the driver hasn't been installed first.
- » **Technical documents or FAQs covering your printer under El Capitan:** I make it a practice to check for FAQ files for every external device I add to my iMac! Although these documents may not qualify as "riveting" reading, they often provide you with feature descriptions and troubleshooting solutions you'll find nowhere else.
- » **An installation application:** If the manufacturer offers an installation application for your printer, download the application and run it.

Network printers

Your wired or wireless Ethernet network provides a quick and easy way to share any printer that's already connected to your iMac. Follow these steps to share your printers across the network with others:

1. **Click the System Preferences icon on the Dock.**
2. **Click the Sharing icon.**
3. **Select the On check box next to the Printer Sharing service entry.**
4. **Click Close to exit System Preferences.**

In most cases, a printer that you share appears automatically in the Print dialog on other computers connected to your network. Therefore, if you want to access a printer being shared by another Mac across your network, open the Print dialog within your application and click the Printer pop-up menu to select it.

If the remote printer isn't listed automatically, you can dig a little further. To add a printer that another Mac on your network is sharing to your list of printers, follow these steps:

1. **Click System Preferences on the Dock.**
2. **Click the Printers & Scanners icon.**
3. **Click the Add button (which carries a plus sign), and choose Add Printer or Scanner from the menu that appears.**
4. **Click the Default button on the toolbar.**
El Capitan displays all the available local shared printers.
5. **Click the desired printer and then click Add.**

Depending on the built-in support within El Capitan for the printer you're accessing or sharing, you may have to install the driver on your iMac or the other Macs on your network as well.

Connecting Scanners

USB scanners practically install themselves. As long as the model is listed as OS X-compatible and supports the TWAIN device standard (as just about all scanners do), things really *are* plug-and-play. (Not sure whether a scanner is OS X-compatible? Check the system requirements on the scanner's box or on the manufacturer's website.)

If you have the scanner manufacturer's installation disc, go ahead and use it. However, most scanners don't require specialized drivers, so even that orphan model that you picked up from Uncle Milton last year should work (if it's recognized by OS X). It doesn't hurt to check the manufacturer's website to see whether any of the software has been updated since the disc was produced.



TIP

If OS X doesn't support your older scanner, a third-party application might be able to help. Get thee hence to Hamrick Software at www.hamrick.com and download a copy of the latest version of VueScan. This great scanning application supports more than 2,800 scanner models, including a number that don't work with El Capitan otherwise. At \$40, it's a world-class bargain to boot.

Ready to go? Make sure that your scanner is powered on and connected to your iMac (and that you load a page or photograph to scan). If your scanner's installation disc provided you with a proprietary scanning application, I recommend that you use that application to test your scanner. In fact, it's Mark's Maxim time!



AUTHOR
SAYS

If your printer or scanner includes bundled applications, try them!

Sure, OS X has the Printers & Scanners pane within System Preferences for printers and the Image Capture application for scanners and digital cameras, but these are bare-bones tools compared with the print manager and image acquisition software that comes bundled with your hardware. I turn to the built-in hardware-handling stuff that comes with El Capitan only when I don't have anything better.

Hey, I'm not saying that anything's wrong with Image Capture, which is in your Applications folder, in case you need to use it. However, don't expect Image Capture to support any specialized features offered by your scanner (like one-button email or web publishing). You have to use the application especially designed for your manufacturer and model to take advantage of any extras that it offers. For alternatives, many image-editing applications (like Adobe Photoshop or Photoshop Elements) might offer more scanning features than Image Capture.

Using Photo Booth

Many Apple Switchers and first-time owners quickly notice the tiny square lens and LED light at the top of the iMac's svelte frame. What gives?

Mystery solved, good reader: That's the lens of your iMac's built-in FaceTime HD camera, which allows you to capture video or snap a quick, fun series of photos via the Photo Booth application that comes with El Capitan.

What's that, you say? You've never used a computer video camera? Well then, good reader, you've come to the right place!

The FaceTime HD camera's indicator light glows green whenever you're taking a snapshot or recording video . . . which, when you think about it, is A Good Thing (especially if you prefer chatting at home in Leisure Mode).



TIP

If you need a quick picture of yourself for use on your web page, or perhaps your user account icon needs an update to show off your new haircut, use Photo Booth to capture images at 1080×720 resolution and 32-bit color. Although today's digital cameras can produce a much higher-quality photo, you can't beat the built-in convenience of Photo Booth for that quick snapshot!

To snap an image in Photo Booth, follow these steps:

1. Launch Photo Booth from the Spotlight box or from Launchpad.

To try things out in full-screen mode, choose View ⇨ Enter Full Screen.

2. Choose to take one image, four quick photos as a group, or digital video.

The three buttons at the lower-left side of the Photo Booth window allow you to switch among taking one photo, four photos in a row (arranged as a group, like an arcade photo booth), or a movie clip.

3. (Optional) Click the Effects button to choose an effect you'd like to apply to your image.

Photo Booth displays a screen of thumbnail preview images so that you can see how each effect changes the photo (see Figure 12-1). To move through the thumbnail screens, click the Previous and Next arrow buttons that appear at the bottom of the window.

You can produce some of the simple effects you might be familiar with from Photoshop, such as a black-and-white image or a fancy colored-pencil filter, but you can also play with some mind-blowing distortion effects and even very convincing faux thermal and X-ray cameras!

Of course, you can always launch your favorite image editor afterward to use a filter or effect on a photo — for example, the effects available in the Photos application — but Photo Booth can apply these effects automatically as soon as you take the picture.

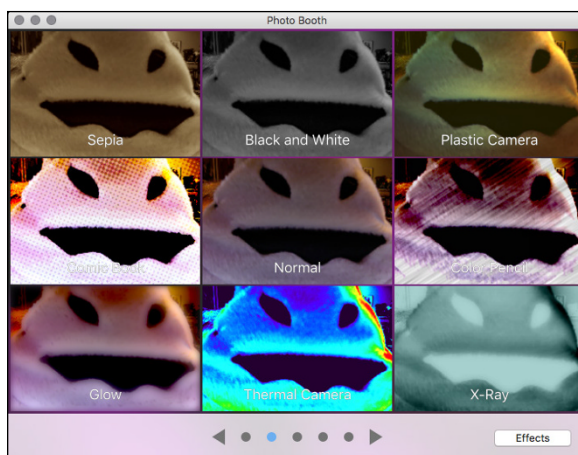


FIGURE 12-1: Photo Booth does one thing particularly well: special effects.

4. (Optional) Click a thumbnail to apply the desired effect.

When you choose an effect, Photo Booth automatically closes the Effects display.

To return the display to normal, click the Normal thumbnail, which appears in the center. (Um, that would be Paul Lynde's spot, for those of you old enough to remember *Hollywood Squares*.)



TIP

5. Click the red Camera button.

The image (or video clip) appears in the filmstrip at the bottom of the window.

Photo Booth keeps a copy of all the images and clips you take in the filmstrip so that you can use them later. After you click a photo or film clip in the filmstrip, the familiar Share button appears at the bottom-right corner of the window, inviting you take any one of a series of actions, including

- » Sending the photo in an email or as a Messages attachment
- » Saving the photo directly to Photos
- » Sharing the photo or video on Twitter, Facebook, or Flickr
- » Using the image as your El Capitan user account icon

WHO NEEDS A FANCY GREEN SCREEN?

Ever admired the animated background behind your favorite TV weather prognosticator? Believe it or not, you don't need an expensive "green screen" backdrop (and time spent in a video-editing application) to create the same effect. Instead, use Photo Booth to create those outrageous images and video clips! Photo Booth provides a surprising array of visual effects you can use.

Within Photo Booth, click the Effects button to start the ball rolling and then click the right arrow next to the Effects button until you reach the series of thumbnails with names like Hologram, Pop Art, Fish, and Rollercoaster. These are the animated backgrounds. Click a background, and Photo Booth asks you to step outside the frame for a second so that your iMac can detect the patterns behind you. When the background animation begins, step back into the frame and capture your image or video clip. (Just as you do with a real green-screen backdrop, you get the best results if you shoot your images and video in front of a blank white wall.)

You're not limited to the Apple animated backgrounds, either: Use your own image or video clip by choosing one of the eight predefined User Backdrop thumbnails.



TIP

To delete an image from the Photo Booth filmstrip, click the offending photo and then click the X button that appears in the upper-left corner of the thumbnail.

Conversing with FaceTime

With Apple's FaceTime technology, you can video chat with owners of iOS devices and Macs — and if they can run FaceTime, they're guaranteed to have the right video hardware!

As of the time of this writing, the minimum requirements for FaceTime-compatible devices include

- » Macs running OS X Lion or later
- » An iPhone 4/4s or 5/5s/5c running iOS 4.1 or later
- » A second-generation iPad (or later)
- » A fourth-generation (or later) iPod touch running iOS 4.1 or later



REMEMBER

If you're running a mobile device under iOS 6 or later, you can use either a Wi-Fi or cellular connection to use FaceTime, and your iMac requires either a wired or Wi-Fi connection.

To launch FaceTime, click the Launchpad icon on the Dock and click the jaunty-looking video camera icon. (Naturally, you can also use Spotlight to launch the application.) The first time you use the application, you have to enter your Apple ID and your email address. The folks you chat with on the other end use that same email address to call you via FaceTime. (iPhone owners can be called using their telephone numbers.)



TIP

To change the email address that other FaceTime users use to call you, choose FaceTime ⇨ Preferences and then click the Add Email button next to the heading You Can Be Reached for FaceTime At.

After you sign in, you can initiate a call with any contact by clicking the Search box near the top of the FaceTime window and typing the desired name, email address, or phone number. Click the email or telephone number that FaceTime should use, and the connection process begins.

Apple isn't satisfied with providing access to your Contacts list, however! You can use the Recent Calls list (which appears along the left side of the window) to

choose a contact that you've called or attempted to call, or has called you within the recent past. Click the Video or Audio buttons at the top of the window to further filter the Recents list, displaying only the recent video calls or audio-only calls.

When the call is accepted, you see a large video window with a smaller “picture-in-picture” display. The video from the other person fills the large window, and the video that you're sending to that person appears in the small display. Click the End icon to end the FaceTime call.



TIP

To switch FaceTime to Landscape mode and take advantage of your iMac's wide-screen display, choose Video ⇨ Use Landscape or press ⌘+R. (Why let iPhone, iPod touch, and iPad owners have all the landscape fun?)

4 **Living the Digital Life**

IN THIS PART . . .

Build the digital media library of your dreams with iTunes.

Create slideshows and photo books with Photos.

Put your moviemaking talents to work with iMovie.

Use GarageBand to compose and record your own music.

IN THIS CHAPTER

Playing music with your iMac

Arranging and organizing your music collection

Tuning into the world with Internet radio

Sharing your songs across a network

Creating eye candy with Visualizer

Buying the good stuff from the iTunes Store

Chapter 13

The Multimedia Joy of iTunes

Sometimes, words just aren't enough. iTunes is that kind of perfection.

To envision how iTunes changes your iMac, you have to paint the picture with *music* — music that's easy to play, search for, and transfer from device to device. Whether it be classical, alternative, jazz, rock, hip-hop, or folk, I *guarantee* you won't find a better application than iTunes to fill your life with music. And podcasts. And video. And TV shows. And online education. And Internet radio. (See how hard it is to pin down this wonderful application? Along with your iMac, iTunes really *does* form the hub of your digital lifestyle.)

In this chapter, I lead you through all the features of my absolute favorite Apple application. (It will be pretty doggone obvious how much I appreciate this particular piece of software.)

What Can I Play on iTunes?

Simply put, iTunes is a media player that plays audio and video files. These files can be in any of many different formats. iTunes supports these common audio formats:

- » **MP3:** The small size of MP3 files has made them popular for file trading on the Internet. You can reduce MP3 files to a ridiculously small size (albeit at the expense of audio fidelity), but a typical CD-quality, three-minute pop song in MP3 format has a size of 3–5MB.
- » **AAC:** Advanced Audio Coding is an audio format that's similar to MP3. AAC files typically offer better recording quality at the same file sizes. However, this format is less compatible with non-Apple MP3 players and software. (Luckily, you can still burn AAC tracks to an audio CD, just as you can MP3 tracks.) The tracks that you download from the iTunes Store are in AAC format.
- » **Apple Lossless:** Another format direct from Apple, *Apple Lossless* format (also known as ALAC) provides the best compromise between file size and sound quality. These tracks are encoded without loss of quality, although Apple Lossless tracks are somewhat larger than AAC. This format is generally the favorite of discerning audiophiles.
- » **AIFF:** This standard Macintosh audio format produces sound of the absolute highest quality. This high quality, however, also means that the files are pretty doggone huge. AIFF recordings typically require about 10MB per minute of audio.
- » **WAV:** Not to be outdone, Microsoft created its own audio file format (WAV) that works much like AIFF. It can reproduce sound at higher quality than MP3, but the file sizes are very large, similar in size to AIFF files.
- » **CD audio:** iTunes can play audio CDs. Because you don't usually store CD audio anywhere but on an audio CD, file size is no big whoop — but again, 10MB of space per minute of music is a good approximation.
- » **MP2:** A close cousin of the far more popular MP3 format, MP2 is the preferred format in radio broadcasting and is a standard audio format for HDV camcorders. It produces file sizes similar to MP3 format.
- » **Movies and video:** You can buy and download full-length movies, TV shows, music videos, and movie trailers from the iTunes Store . . . and with an Apple TV unit connected to your home theater system, you can watch those movies and videos from the comfort of your sofa on the other side of your living room (or even from your bedroom on the other side of your house).

- » **Podcasts:** These audio downloads (typically in MP3 format) are like radio programs for your iOS devices, but iTunes can play and organize them too. Some podcasts include video and photos to boot.
- » **iTunes U:** iTunes offers educational materials (think slideshows, presentations, and class recordings) from a wide variety of colleges and technical institutions — and virtually all free for the download.
- » **Ringtones:** iPhone owners, rejoice! iTunes automatically offers to create ringtones for your iPhone (and iPad and iPod touch) from the tracks you bought from the iTunes Store or tunes you composed. You can even use these ringtones on your iMac with the FaceTime and Messages applications.
- » **Audiobooks:** You no longer need cassettes or audio CDs to enjoy your spoken books. iTunes can play them for you, or you can send them to your iPod for listening on the go.
- » **Streaming Internet radio:** You can listen to a continuous broadcast of songs from one of tens of thousands of Internet radio stations, with quality levels ranging from what you'd expect from FM radio to the full quality of an audio CD. You can't save the music in iTunes, but streaming radio is still great fun. (I run my own station . . . more on MLC Radio later in this chapter.)

Playing an Audio CD

If you have an optical drive (either internal or external), playing an audio CD in iTunes is simple. Just insert the CD into the drive, start iTunes by clicking its icon on the Dock, and click the Play button. (Note that your iMac might be set to automatically launch iTunes when you insert an audio CD.) The iTunes interface resembles that of a traditional CD player. The main playback controls of iTunes are Play, Previous, Next, and the Volume slider, as shown in Figure 13-1.

Click the Play button to begin listening to a song. While a song is playing, the Play button toggles to a Pause button. As you might imagine, clicking that button again pauses the music. If you don't feel like messing around with a mouse or trackpad, you can always use the keyboard. The spacebar acts as the Play and Pause buttons. Press the spacebar to begin playback; press it again to stop.

Click the Next button to advance to the next song on the CD. The Previous button works like the Next button but with a slight twist: If a song is currently playing and you click the Previous button, iTunes first returns to the beginning of the current song (just like an audio CD player). To advance to the previous song, double-click the Previous button. To change the volume of your music, click and drag the volume slider.

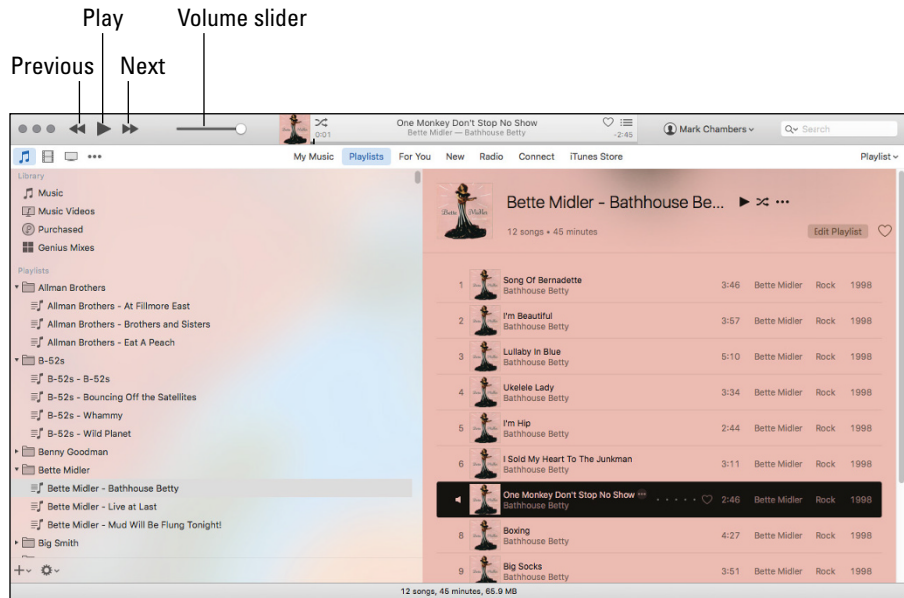


FIGURE 13-1:
The main playback controls: Play, Previous, Next, and Volume slider.

As with other Mac applications, you can control much of iTunes with the keyboard. Table 13-1 lists some of the most common iTunes keyboard shortcuts.

TABLE 13-1 Common iTunes Keyboard Shortcuts

Press This Key or Key Combination	To Do This
Spacebar	Play the currently selected song if iTunes is idle.
Spacebar	Pause a playing song.
→	Advance to the next song.
←	Go back to the beginning of a song. Press a second time to return to the previous song.
⌘+↑	Increase the volume of the music.
⌘+↓	Decrease the volume of the music.
⌘+Option+↓	Mute the audio if any is playing. Press again to play the audio.

Playing Digital Audio Files

In addition to playing audio CDs, iTunes can play the digital audio files that you download from the Internet or obtain from other sources in the WAV, AAC, Apple Lossless, AIFF, MP2, and MP3 file formats.

Enjoying a digital audio file is just slightly more complicated than playing a CD. After downloading or saving your audio files to your iMac, open Finder and navigate to wherever you stored the files. Launch iTunes and click the Music icon at the left; then click the My Music tab near the top center of the window. Now you can simply drag the music files (or an entire folder of music) from the Finder window to the My Music list. The added files appear in the Music section of your iTunes Library. You can also drag a song file from a Finder window and drop it on the iTunes icon on the Dock, which adds it to your Music Library as well.



TIP

If you click the Playlists tab, iTunes displays the sidebar at the left of the window, and you can drop the file on top of a playlist name in the list, iTunes adds it to that particular *playlist* as well as the main Library. (More about playlists in a bit.) If you drop a folder of songs on top of the Playlists header in the sidebar, iTunes creates a new playlist using the name of the folder and adds all the songs in the folder to the new playlist.

Think of the Library as a master list of your audio and video media. To view the Music Library, select the Music icon (which looks like a musical note) under the Play, Previous, and Next controls, and click the My Music tab near the top center of the iTunes player, as shown in Figure 13-2. (Go figure.) In a similar manner, you can view your movies and TV shows by clicking their icons under the Play, Previous, and Next controls. Right now, however, the focus is on music, so I discuss playing video in more depth later in this section.

To play a song, just double-click it in the Music list. Alternatively, you can use the playback controls (Play, Previous, and Next) that I discuss earlier in this chapter (refer to Figure 13-1).



REMEMBER

The iTunes window can play media from a surprising number of possible sources:

- » **Library:** The icons at the left of the screen can display Music, Movies, TV Shows, Podcasts, iTunes U, Apps (for iPhone, iPod touch, and iPad), Audiobooks, and Tones (ringtones for both mobile devices and your iMac). If you don't see all of these choices, click the ellipsis icon (which bears three dots) to display additional Library categories.
- » **Store:** I discuss this music source in the final section "Buying Digital Media the Apple Way."

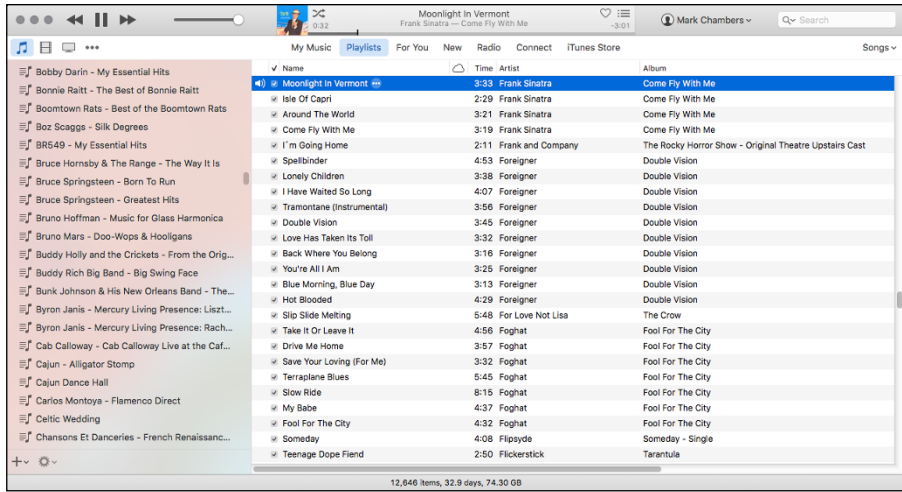


FIGURE 13-2:
The Music Library keeps track of all your audio files.

- » **Shared:** If another Mac or PC on your local network is running iTunes and is set to share part or all of its library, you can connect to the other computer for your music.
- » **Devices:** If an iPod is connected, it appears as an icon. (And yes, Virginia, other models of MP3 players from other companies also appear in the list if they are supported in iTunes.) If you connect an iPhone or iPad to your Mac, it shows up here as well.
- » **Genius:** Click Store ⇨ Turn On Genius from the iTunes menu to allow iTunes to automatically create playlists from songs in your iTunes Music Library. You can also allow Genius to recommend music, movies, and TV shows based on the titles you already have in your iTunes Library. (More on this feature later in the chapter.)
- » **Audio CD:** A standard audio CD . . . anything from the Bee Gees to Justin Timberlake shows up as an icon if you load the CD into your optical drive.
- » **Home Sharing:** You can turn on Home Sharing to share your Mac's media library across your wireless network with up to five other Mac computers, as well as iPhones, iPads, and the iPod touch. (More on Home Sharing later in this chapter.)
- » **Playlists:** Think of playlists as folders you use to organize your music. (More on playlists later in this chapter.)



If you've invested in an Apple TV, it appears in the list as well, allowing iTunes to share media with your Apple TV, which in turn sends it to your HD (high-definition) TV.

You can browse your Music Library in several ways. First, click the Music icon to display your music. By default, the application uses *Songs* view mode (active in Figure 13-2), where each song is one entry. Then click the View Options pop-up menu at the upper-right corner of the window (directly under the Search box) to display your music in different formats:

- » Browse your Library by *albums*
- » Group tracks by *artists*
- » Group tracks by *composers*
- » Browse by musical *genres*

From the Music Library, you can also view your iTunes Radio stations, visit the iTunes Store, or see your iTunes Match library in iCloud. All three modes require an Internet connection, and I cover them later in the chapter.

If you're using the Songs view mode, the Music Library may display information for each song that you add to it, including these items:

- » **Name:** The title of the song
- » **Time:** The length of the song
- » **Artist:** The artist who performs the song
- » **Album:** The album on which the song appears

If any song you're adding doesn't display anything for the title, album, or artist information, don't panic; most MP3 files have embedded data that iTunes can read. If a song doesn't include any data, you can always add the information to these fields manually. I show you how later, in the section "Setting or changing the song information manually."



TIP

Clicking any column heading in Songs view mode causes iTunes to reorder the Library according to that category. For example, clicking the Name column heading alphabetizes your Library by song title. I often click the Time heading to sort my Library according to the length of the songs. Oh, and you can drag column titles to reorder them any way you like (except for the check-box column at the far left, which remains fixed).



TIP

Another popular sorting method in iTunes is based on albums and artists. From the View Options pop-up menu, choose Album; then click the Sort By pop-up menu and click Artist. (I use this sorting method all the time for pinpointing those albums that are missing artwork, and it's also probably the most useful view for showing off your Library to your host of admirers.)

Browsing the Library

After you add a few dozen songs to iTunes, viewing the Library can become a task. Although a master list is nice for some purposes, it becomes as cumbersome as an elephant in a subway tunnel if the list is very long. To help out, iTunes can display your Library in another format, too — namely, browsing mode. To view the Library in browsing mode, click the View Options pop-up menu and select Songs view mode; then choose View ⇨ Column Browser ⇨ Show Column Browser. (Keyboard mavens can simply press the ⌘+B keyboard shortcut to switch to browsing mode.)

The Browse mode of iTunes displays your library in a compact fashion, organizing your tunes into up to five sections:

- » Genres
- » Artists
- » Albums
- » Composers
- » Groupings

WILL I TRASH MY COUNT BASIE?

Novice iTunes users, take note: iTunes watches your back when you trash tracks.

To illustrate: Suppose that you delete a song from the Library that's located only in the iTunes music folder (which you didn't copy into iTunes from another location on your hard drive). That means you're about to delete the song entirely, and there'll be no copy remaining on your iMac. Rest assured, though, that iTunes prompts you to make sure you really want to move the file to the Trash. (I get fearful email messages all the time from readers who are loath to delete anything from iTunes because they're afraid they'll trash their digital music files completely.)

Remember: If you delete a song from the Library that *also* exists elsewhere on your hard drive (outside the reach of the iTunes music folder), it isn't deleted from your hard drive. If you mistakenly remove a song that you meant to keep, just drag it back into iTunes from Finder, or even from the Trash. 'Nuff said.

Selecting an artist from the Artist list in Browse mode causes iTunes to display that artist's albums in the Album list. Select an album from the Album list, and iTunes displays that album's songs in the bottom section of the Browse window. (Those Apple software designers . . . always thinking of you and me.) You can also specify which sections you want included in Browse mode from the View⇨Column Browser menu. Click a section name to toggle the display of that section on or off. (For example, the display of the Composers and Groupings sections is toggled off by default.)

Finding songs in your Music Library

After your collection of audio files grows large, you might have trouble locating that Swedish remix version of “I’m Your Boogie Man.” To help you out, iTunes has a built-in Search function. To find a song, type some text in the Search box of the main iTunes window. While you type, iTunes tries to find a selection that matches your search text. The search is thorough, showing any matching text from the artist, album, song title, and genre fields in the results. For example, if you type **Electronic** in the field, iTunes might return results for the band named *Electronic* or other tunes that you classified as *electronic* in the Genre field. (The section “Know Your Songs,” later in this chapter, tells you how to classify your songs by genre, among other options.) Click the magnifying glass at the left side of the Search field to restrict the search even more: by Artists, Albums, Composers, and Songs.

Removing old music from the Library

After you spend some time playing songs with iTunes, you might decide that you didn't *really* want to add 40 versions of “Louie Louie” to your Library. (I prefer either the original or the cast from the movie *Animal House*.) To remove a song from the Library, click the song to select it and press the Delete key on your keyboard, or right-click the song entry and choose Delete from the menu.



TIP

You can also remove a song from the Library by dragging it to the Trash on the Dock.

Watching Video

Watching video in iTunes is similar to listening to your music. To view your video collection, click the Movies or TV Shows icons at the upper left of the iTunes window. iTunes displays your videos as thumbnails or in a list, depending on the View

Options setting. Music videos appear as a Smart Playlist within the iTunes sidebar. (Read more about these in the sidebar “Some playlists are smarter than others.”)

From your collection, you can do the following:

- » Double-click a video thumbnail or an entry in the list.
- » Drag a QuickTime-compatible video clip from the Finder window to the iTunes window. (These clips typically include video files ending in .mov, .mv4, or .mp4.)

iTunes plays video in the box below the Source list, within the iTunes window or in full-screen mode, depending on the settings you choose from the View⇨Video Playback menu. In full-screen mode, move your mouse to display a control strip at the bottom of the screen, sporting the standard slider bar that you can drag to move through the video (as well as a volume control and Fast Forward/Reverse buttons). You can also pause the video by clicking the Pause button.

Keeping Slim Whitman and Slim Shady Apart: Organizing with Playlists

As I mention earlier, the iTunes Music Library can quickly become a fearsomely huge beastie. Each Library can contain thousands upon thousands of songs: If your Library grows anywhere near that large, finding all the songs in your lifelong collection of Paul Simon albums is *not* a fun task. Furthermore, with the Library, you're stuck playing songs in the order that iTunes lists them.

To help you organize your music into groups, use the iTunes playlist feature. Typically, a *playlist* is a collection of some of your favorite songs from the Library, but playlists can also include media like movies and audiobooks. You can create as many playlists as you want, and each playlist can contain any number of items. Whereas the Music Library lists all available songs, a playlist displays only the items that you add to it. Further, any changes you make to a playlist affect only that playlist, leaving the Library untouched.

To create a playlist, you can do any of the following:

- » **Choose File⇨New⇨Playlist.**
- » **Press ⌘+N.**
- » **Choose File⇨New⇨Playlist from Selection.** This creates a new playlist and automatically adds any tracks that are currently selected.

- » **Right-click a song, and click Create Genius Playlist from the menu that appears.** iTunes builds a playlist of songs that are similar in some way (typically by matching the genre of the selection or the beats per minute, but also based on recommendations from other iTunes members). Note that your iMac needs an Internet connection to create a Genius playlist, and the larger your music library, the longer it takes iTunes to build your playlist. You also need to turn on the Genius feature by choosing Store ⇨ Turn on Genius and entering your Apple ID. (Note that Genius playlists can sometimes mix tracks containing explicit content with less objectionable material — especially in the comedy and rap genres.)
- » **Drag a folder containing audio files from a Finder window onto the Playlists heading in the sidebar.**
- » **Click the New button in the iTunes window (the plus sign button in the lower-left corner), and choose New Playlist.** You get a newly created empty playlist (the toe-tappin' *untitled playlist*).



TIP

All playlists appear in the iTunes sidebar, which you can always display in your Music Library by clicking the Playlists tab near the top of the screen.

To help organize your playlists, it's a good idea to . . . well, *name* them. (Aren't you glad now that you have this book?) Suppose that you want to plan a party for your polka-loving friends. Instead of running to your computer after each song to change the music, you could create a polka-only playlist. Select and start the playlist at the beginning of the party, and you won't have to worry about changing the music the whole night. (You can concentrate on playing the accordion.) To load a playlist, select it in the Source list; iTunes displays the songs for that playlist.



TIP

iTunes can display a playlist in three ways. By default, the application uses the List view, in which each song is one entry. If you've selected a playlist in the sidebar, you can click the View Options pop-up menu at the upper right of the iTunes window and choose to display the contents of the playlist by Album, Artists, Composers, or Genres as well.

The same items can appear in any number of playlists because the items in a playlist are simply pointers to the media in your Music Library — not the actual songs, movies, or TV shows themselves. Add and remove them at will to or from any playlist, secure in the knowledge that the items remain safe in your Library. Removing a playlist is simple: Select the playlist in the sidebar, and press Delete.



REMEMBER

Removing a playlist does not delete any songs from your Library.

SOME PLAYLISTS ARE SMARTER THAN OTHERS

You can create a Smart Playlist in the iTunes sidebar by choosing File ⇨ New Smart Playlist, or by clicking the Add button (a plus sign) at the bottom of the Source list and selecting New Smart Playlist.

The contents of a *Smart Playlist* are automatically created from a specific condition or set of conditions that you set via the Smart Playlist dialog: You can limit the track selection by mundane things, such as album, genre, or artist; or you can get funky and specify songs that were played last, or by the date you added tracks, or even by the sampling rate or total length of the song. For example, iTunes can create a playlist packed with songs that are shorter than three minutes, so you can fill your iPod shuffle with more stuff! If you want to add another criterion, click the plus sign at the right side of the dialog, and you get another condition field to refine your selection even further.

You can choose the maximum songs to add to the Smart Playlist, or limit the size of the playlist by the minutes or hours of play or the number of megabytes or gigabytes the playlist will occupy. (Again, this is great for automatically gathering as much from your KISS collection as will fit into a specific amount of space on a CD or your iPod.) Mark the Live Updating check box for the ultimate in convenience. iTunes automatically maintains the contents of the Smart Playlist to keep it current with your conditions at all times in the future. (If you remove tracks manually from a Smart Playlist, iTunes adds other tracks that match your conditions.)

Now think about what all these settings mean when combined . . . *whoa*. Here's an example yanked directly from my own iTunes library. I created a Smart Playlist that selects only those songs in the Rock genre. It's limited to 25 songs, selected by least often played, and live updating is turned on. The playlist is named Tracks I've Gotta Hear because it finds the 25 rock songs (from my collection of more than 10,000 songs) that I've heard least often! After I listen to a song from this Smart Playlist, iTunes automatically freshens it with another song, allowing me to catch up on the tracks I've been ignoring.

Know Your Songs

Besides organizing your music into Elvis and non-Elvis playlists, iTunes gives you the option to track your music at the song level. Each song you add to the Music Library has a complete set of information associated with it. iTunes displays this information (see upcoming Figure 13-3) on the Details tab:

- » **Song Name:** The name of the song
- » **Artist:** The name of the artist who performed the song
- » **Album Artist:** The name of the artist responsible for a compilation or tribute album
- » **Album:** The album where the song appears
- » **Grouping:** A group type that you assign
- » **Composer:** The name of the astute individual who *wrote* the song
- » **Comments:** A text field that can contain any comments on the song
- » **Year:** The year the artist recorded the song
- » **Track:** The position of the song on the original album
- » **Genre:** The classification of the song (such as rock, jazz, or pop)
- » **Disc Number:** The original disc number in a multi-CD set
- » **BPM:** The beats per minute (indicates the song's tempo)

You can display this information by clicking a song name and pressing ⌘+I. The fields appear on the Details tab.

Setting the song information automatically

Each song you add to the iTunes Music Library might have song information included with it. If you add music from a commercial audio CD, iTunes connects to a server on the Internet and attempts to find the information for each song on the CD. If you download a song from the Internet, it often comes with some information embedded in the file already; the amount of included information depends on what the creator supplied. (And it's often misspelled as well — think *Leonard Skeenard*.) If you don't have an Internet connection, iTunes can't access the information and displays generic titles instead.

Setting or changing the song information manually

If iTunes can't find your CD in the online database or someone gives you an MP3 with incomplete or inaccurate information, you can change the information

yourself. Believe me, you want at least the artist and song name! To view and change the information for a song, follow these steps:

1. Select the song in either the My Music list or a playlist.
2. Press **⌘+I**, or choose **File ⇨ Get Info**.
3. Click a field to edit the song's information on the Details tab, as shown in Figure 13-3.

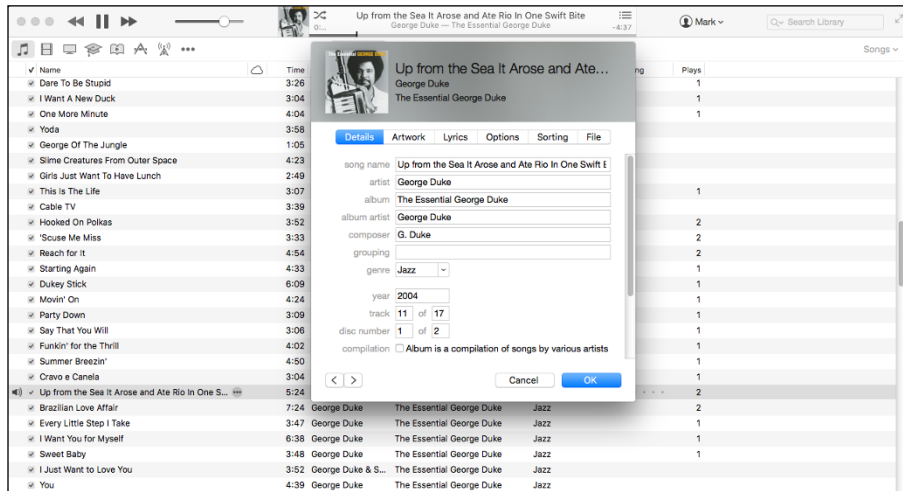


FIGURE 13-3:
View and edit
song information
here.



TIP



REMEMBER

You can move to the next or previous tracks in the Music Library list or playlist by clicking the Next or Previous buttons at the bottom left of the dialog.

The more work you put into setting the information of the songs in your Music Library, the easier it is to browse and use iTunes. Incomplete song information can make it more difficult to find your songs in a hurry. If you prefer, you don't have to change all information about a song. (It just makes life easier later if you do.) Normally, you can get away with setting only a song's title, artist, and genre. The more information you put in, however, the faster you can locate songs and the easier they are to arrange. iTunes tries to help by automatically retrieving known song information, but sometimes you have to roll up your sleeves and do a little work. (Sorry, but some things just can't be automated.)

"What about cover art, Mark?" Well, I'm overjoyed that you asked! iTunes can try to locate artwork automatically for the tracks you select. (Note that embedding large images can significantly increase the size of the song file.) To set the wheels in motion, select the desired songs from the track list and choose **File ⇨ Library ⇨ Get Album Artwork**.



TIP

You can set iTunes to automatically attempt to add album artwork every time you rip tracks from an audio CD (as described in the next section), or when you add songs without artwork to your Music Library. Choose iTunes ⇨ Preferences ⇨ Store, and select the Automatically Download Album Artwork check box. (By the way, if you buy tracks or an album from the iTunes Store, Apple includes album covers automatically!)



TIP

Want to manually add album covers to your song info? If you select just one song in the track list, display the Info dialog and click the Artwork tab. If you select multiple songs from the same album, display the Info dialog. Now launch Safari, visit Amazon.com, and do a search on the same album (or search an online artwork library, such as AllCDCovers.com). Drag the cover image from the web page right into the Info dialog, and drop it on top of the “sunken square” Artwork image well. When you click OK, the image appears in the Artwork tab of the Info dialog.

Ripping Audio Files

You don't have to rely on Internet downloads to get audio files: You can create your own MP3, AAC, Apple Lossless, AIFF, and WAV files from your audio CDs with iTunes. The process of converting audio files to different formats is *ripping*. (Audiophiles with technical teeth also call this process *digital extraction*, but they're usually ignored at parties by the popular crowd.) Depending on what hardware or software you use, each has its own unique format preferences.

The most common type of ripping is to convert CD audio to MP3 (or AAC) format. To rip MP3s from an audio CD, follow these simple steps:

- 1. Launch iTunes by clicking its icon on the Dock.**
Alternatively, you can locate iTunes in your Applications folder or in Launchpad.
- 2. Choose iTunes ⇨ Preferences.**
- 3. In the Preferences dialog that appears, click the General tab.**
- 4. Click the Import Settings button that appears at the bottom of the Preferences dialog.**
- 5. Choose MP3 Encoder from the Import Using pop-up menu.**

- 6. Choose High Quality (160 Kbps) from the Setting pop-up menu, and click OK to return to the Preferences dialog; click OK again to return to iTunes.**

This bit-rate setting provides the best compromise between quality (it gives you better than CD quality, which is 128 Kbps) and file size (tracks you rip will be significantly smaller than audiophile bit rates such as 192 Kbps or higher).

- 7. Load an audio CD into your Mac's optical drive.**

The CD title shows up in the iTunes Source list (under the Devices heading), which is on the left side of the iTunes window. The CD track listing appears on the right side of the window.



TIP

If iTunes asks whether you want to import the contents of the CD into your Music Library, you can click Yes and skip the rest of the steps; however, if you've disabled this prompt, just continue with the remaining two steps.

- 8. Clear the check box of any song you don't want to import from the CD.**

All songs on the CD have a check box next to their title by default. Unmarked songs aren't imported. The Browse button changes to Import CD.

- 9. Click the Import CD button.**

Tweaking the Audio for Your Ears

Besides the standard volume controls that I mention earlier in this chapter, iTunes offers a full equalizer. An *equalizer* permits you to alter the volume of various frequencies in your music, allowing you to boost low sounds, lower high sounds, or anything in between.

To open the Equalizer, choose Window⇨Equalizer or press ⌘+Option+2. Use the leftmost slider (Preamp) to set the overall level of the Equalizer. The remaining sliders represent various frequencies that the human ear can perceive. Setting a slider to a position in the middle of its travel causes that frequency to play back with no change. Move the slider above the midpoint to boost that frequency; conversely, move the slider below the midpoint to reduce the volume of that frequency. Continue adjusting the equalizer sliders until your music sounds the way you like it.



TIP

In case you prefer to leave frequencies to the experts, the iTunes Equalizer has several predefined settings to match most musical styles. Open the pop-up menu at the top of the Equalizer window to choose a genre. When you close the Equalizer window, iTunes remembers your settings until you change them again.

A New Kind of Radio Station

Besides playing back your favorite audio files, iTunes can tune in Internet radio stations from around the globe. You can listen to any of a large number of preset stations, seek out lesser-known stations not recognized by iTunes, or even add your favorite stations to your playlists. You can also use the iTunes Radio feature to create a custom station dedicated to just the genres and artists you prefer. This section shows you how to do it all.

Internet Radio

Although it's not a radio tuner in the strictest sense, iTunes can locate virtual radio stations all over the world that send audio over the Internet — a process usually dubbed *streaming*. iTunes can track down hundreds of Internet radio stations in a variety of styles with only a few mouse clicks.

To begin listening to Internet radio with iTunes, click the Internet Radio button located at the top of the window. The result is a list of more than 20 types of radio stations, organized by genre.

When you expand an Internet category by clicking its disclosure triangle, iTunes queries a tuning server and locates the name and address of dozens of radio stations for that category. Whether you like Elvis or not-Elvis (those passing fads, such as New Wave, classical, or alternative), something's here for everyone. The Internet also offers news, sports, and talk radio.

After iTunes fetches the names and descriptions of radio stations, double-click one that you want to hear. iTunes immediately jumps into action, loads the station, and begins to play it.

WHAT'S WITH THE NUMBERS NEXT TO THE STATION NAMES?

When choosing an Internet radio station, keep your Internet connection speed in mind. If you're using a broadband DSL or cable connection — or if you're listening at work over your company's high-speed network — you can listen to stations broadcasting at 128 Kbps (or even higher). The higher the bit rate, the better the music sounds. At 128 Kbps in AAC format, for example, you're listening to sound that's as good as an audio CD.

Tuning in your own stations

Although iTunes offers you a large list of popular radio stations on the web, it's by no means comprehensive. Eventually, you might run across a radio station that you'd like to hear, but don't find listed in iTunes. Luckily, iTunes permits you to listen to other stations, too. To listen to a radio station that iTunes doesn't list, you need the station's web address.

In iTunes, choose **File** ⇨ **Open Stream** (or press ⌘+U). In the Open Stream dialog that appears (as shown in Figure 13-4), enter the URL of your desired radio station and click **OK**. In seconds, iTunes tunes in your station.

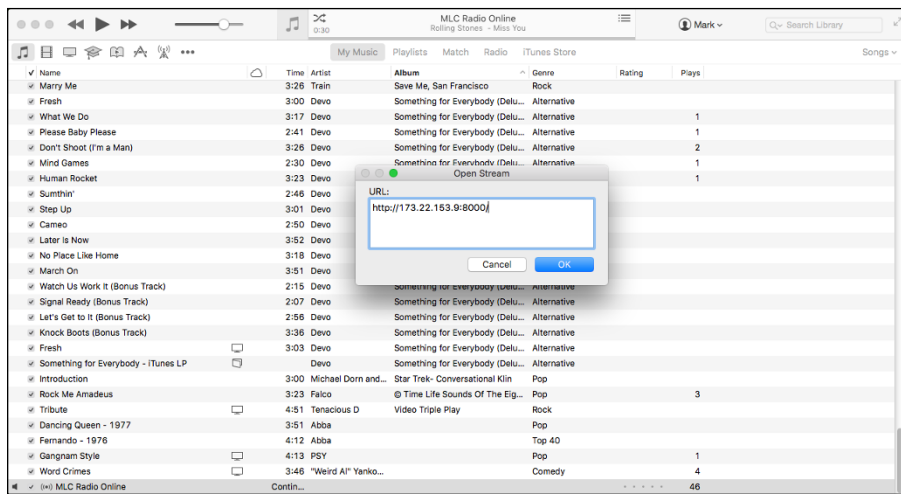


FIGURE 13-4:
Tuning into MLC
Radio, my
Internet radio
station.

HAVE AN ITCH TO HEAR “KUNG FU FIGHTING”?

This particular technology author has a preference for a certain hot jam spot: *MLC Radio*, the Internet radio station I've been running for several years now. I call my station a '70s Time Machine because it includes hundreds of classic hits from 1970–1979. You hear everything from “Rock and Roll Hoochie Koo” by Rick Derringer to “Moonlight Feels Right” by Starbuck. (Hey, I'm summing up a decade here, so be prepared for both Rush and the Captain & Tennille.) The station broadcasts at 128 Kbps (audio CD quality), so you need a broadband connection to listen. For the station's Internet address or to ask for help connecting to MLC Radio, visit my website at www.m1cbooks.com!

Radio stations in your playlists

If you find yourself visiting an online radio station more than once, you'll be glad to know that iTunes supports radio stations in its playlists. To add a radio station to a playlist from the Radio list, follow these steps:

1. **Open the category that contains the station you want to add to your playlist.**
2. **Locate the station you want to add to your playlist, and drag it from the Radio list to the desired playlist on the left.**



TIP

If you haven't created any playlists yet, see the section "Keeping Slim Whitman and Slim Shady Apart: Organizing with Playlists" earlier in this chapter to find out how.

You can also follow the same steps to add a radio station that doesn't appear in the Radio list! iTunes allows you to load a radio station URL manually by choosing File⇨Open Stream, and any station that you play using the Open Stream command is automatically added to your My Music list. Therefore, you can drag the station from the My Music list to any playlist.

Creating a custom iTunes Radio station

iTunes Radio makes it possible for you to listen to the artists, songs, and genres that you prefer in iTunes, without selecting a specific Internet radio station! To use iTunes Radio, click the Radio button at the top of the iTunes window, and type the artist name, song name, or genre you'd like to add to your station. (For the latest from a wide range of genres, click the Beats 1 Listen Now button.)

As you download new music from the iTunes Store (and add new artists and genres in iTunes Radio), the service learns more about your musical tastes and can automatically play and recommend new music, much like the Genius feature I discuss earlier in this chapter.



REMEMBER

Like Internet radio, the iTunes Store, and Apple's iTunes Match subscription service (described in the next section), iTunes Radio requires an Internet connection and an Apple ID.

Your iTunes Radio station is automatically shared among all your Macs running OS X Lion or later (as well as any devices you own running iOS 7 or later).

PLUG INTO APPLE MUSIC AND CONNECT

Apple has offered streaming content for several years now, and the latest incarnation of this iTunes feature, Apple Music, delivers streaming on-demand Apple Music stations on your iMac. One person can access the entire Apple Music library for \$9.99 a month, and not just on your iMac, but your iPhone and iPad as well. Invest in a Family Membership for \$14.99 a month, and up to six individuals will have unlimited access. You can even add songs from Apple Music to your own iTunes Library!

Connect, on the other hand, doesn't require an Apple Music membership; it's offered to anyone with an Apple ID account. Connect links members to musicians, where an artist can offer an updated news feed to fans. Feeds provide additional content like video, alternate studio tracks and photos to fans, and make it easy to stay on top of the latest developments with a specific artist. Even better, there's a social-media side to Connect, because artists can create forums for folks to leave and respond to comments.

iTunes and iCloud Together

iTunes is connected closely with the Apple iCloud service, allowing you to share music betwixt all your Macs and iOS devices. But how do you pull your audio and video out of that floating nimbus? Try this: Choose iTunes ⇨ Preferences, click the Store tab, click the Show iTunes in the Cloud Purchases check box to enable it, and click OK. Now sign in with your Apple ID for a surprise. Bam — *all* the audio and video you've purchased from the iTunes Store appears in your Library! Note, however, that those items don't exist on your local drive. Consider those entries placeholders for the stuff you can download, allowing you to see (and search for) what's available through iCloud. (And if you've purchased as much from the iTunes Store as I have, you'll save many gigabytes of storage space on your iMac's drive by downloading only certain songs.)

To download a local copy of any iCloud item, simply click the iCloud icon next to the item. After the local copy has been saved to your Mac's drive, the iCloud icon disappears, and you're ready to listen or watch your purchase.



TIP

To hide the iCloud placeholder entries from your Library and display just the stuff you've got on your Mac's drive, choose View ⇨ Hide Music in the Cloud.

Apple's iTunes Match subscription service builds on this same functionality, allowing you to store *all* your music in iCloud (including the songs you've ripped from audio CDs and downloaded from other sources) and listen to it on any of your

Macs, PCs, or iOS devices! When you join iTunes Match, all the songs that aren't available from the iTunes Store are automatically uploaded to iCloud.

At the time of this writing, the service is \$25 a year and is limited to a maximum of 10 devices and 25,000 songs. (Note that purchases you make from the iTunes Store don't count toward that 25,000-song limit.)

To subscribe to iTunes Match or manage your Match storage, click the Match button at the top of the iTunes window.

iSending iStuff to iPod, iPhone, and iPad

If you're cool enough to own an iPod, you'll be happy to know that iTunes has features for your personal audio and video jukebox as well. *iPods*, Apple's multi-media players, comprise an entire family of portable devices ranging from \$49 to about \$400. They can hold anywhere from several hundred to thousands of songs, as well as podcasts, photos, and video. This great gadget and those like it have become known worldwide as *the* preferred portable digital media players.

If you own an iPhone or iPad, you probably already know that these devices can act as your music player as well. You can buy all sorts of applications for these devices at the iTunes Store. iTunes even keeps track of these applications as part of your iTunes Library.



REMEMBER

To sync correctly, both your computer and the device *must* use the same Apple ID!

You connect your device to any Mac or Windows PC that has USB 2.0 ports, using the included cable. After the device is connected, you can synchronize it with iTunes. By default, this process is automatic: Your iPod, iPhone or iPad and the iTunes software communicate with each other and figure out what items are in your iTunes Library (as compared to the device's Library). If they discover songs, podcasts, and video in your iTunes Library that are missing from your device, the items automatically transfer to the iPod, iPhone or iPad. Conversely, if the device contains stuff that's no longer in iTunes, the iPod, iPhone or iPad automatically removes those files from its drive.



WARNING

Go back and reread that last sentence about how your device *automatically removes* files from its drive. (I'll wait.) Apple added this feature in an effort to be responsive to copyright concerns. The reasoning is that if you connect your iPhone to your friend's computer, you can't transfer songs from the iPhone to that computer. Of course, you could always look at it from the marketing perspective as a feature that makes sure your iMac and iOS devices are always in total sync.

Whatever the case, pay close attention and read all warning dialogs when connecting to a computer other than your own, or you might wipe out your iPod, iPhone, or iPad music library.

You can change your settings on the device's Summary pane so iTunes autosyncs only selected playlists (click on the device icon at the upper left of the window to display the Summary pane). Or, if you're really nervous, you can choose to manually manage the contents of your iPod with iTunes from the Summary pane.

Sharing Your Media across Your Network

Ready to share your music, podcasts, and video — *legally*, mind you — with other folks on your local network? You can offer your digital media to other iTunes users across your home or office. Follow these steps:

1. **Choose iTunes ⇨ Preferences to open the Preferences dialog.**
2. **Click Sharing.**
3. **Select the Share My Library on My Local Network check box.**
4. **Specify whether you want to share your entire library or only selected playlists and files.**

Sharing selected playlists is a good idea for those Meatmen and Sex Pistols fans who work at a cubicle farm in a big corporation.

5. **If you want to restrict access to just a few people, select the Require Password check box; then type a password in the text box.**
6. **Click OK.**

Your shared folder appears in the sidebar for all iTunes users who enable the Shared Libraries check box on the General pane of their iTunes Preferences dialog. Note that the music you share with others can't be imported or copied, so everything stays legal.



TIP

Want to change that frumpy default name for your shared media library to something more exotic, like Dan's Techno Beat Palace? No problem. Display the Preferences dialog again, click the General tab, and click the Library Name text box. Edit your network entertainment persona to your heart's content.

SENDING MUSIC ELSEWHERE WITH AIRPLAY

If you're using an AirPort Express portable wireless Base Station, you can ship your songs right to your Base Station from iTunes and from there to your home stereo or boombox! Pick up an AirPlay-enabled sound system, and you can eliminate the stereo or boombox and the AirPort Express device entirely. (I get into some serious discussion of AirPort Express in Chapter 11.)

After your AirPort Express Base Station is plugged in and you connect your home stereo (or a boombox or a pair of powered stereo speakers) to the stereo minijack on the Base Station, you see a Speakers pop-up list button at the bottom of the iTunes window.

Click the Speakers button, and you can choose to broadcast the music you're playing in iTunes across your wireless network. Ain't technology truly *grand*?

You can also share your media library by using *Home Sharing*, which allows others join in the fun — including up to five Mac computers and iOS devices (your iPad, iPhone, and iPod touch, running iOS 4.3 or later). Home Sharing requires a network connection for all your devices, and you have to enter the same Apple ID information on each device. To turn on Home Sharing in iTunes, choose iTunes ⇨ File ⇨ Home Sharing, and select Turn On Home Sharing. (Don't forget to repeat this setup on each computer and iOS device.) After Home Sharing is enabled, a Shared Libraries pop-up menu appears next to the Music icon. Click the menu to switch between libraries.

Burning Music to Shiny Plastic Circles

Besides being a great audio player, iTunes is adept at creating CDs. (Of course, your iMac must have either an internal SuperDrive or an external optical drive to record them.) iTunes makes the process of recording songs to a CD as simple as a few mouse clicks. Making the modern version of a compilation (or *mix*) tape is easier than getting a kid to eat ice cream. If you have an internal or external optical drive, iTunes lets you burn CDs in one of three formats:

- » **Audio CD:** This format is the typical kind of commercial music CD you buy at a store. Most typical music audio CDs store up to 800MB of data, which translates to about 80 minutes of music.

- » **Data CD or DVD:** A standard computer CD-ROM or DVD-ROM is recorded with the audio files. This disc can't be played in any standard audio CD player (even if it supports MP3 CDs, which I discuss next). Therefore, you can listen to these songs only by using your Mac and an audio player, such as iTunes or a PC running Windows.
- » **MP3 CD:** As does the ordinary computer CD-ROM that I describe, an MP3 CD holds MP3 files in data format. However, the files are arranged in such a way that they can be recognized by audio CD players that support the MP3 CD format (especially boomboxes, DVD players, personal CD players, and car stereos). Because MP3 files are so much smaller than the digital audio tracks found on traditional audio CDs, you can fit as many as 160 typical four-minute songs on one disc. These discs can also be played on your Mac via iTunes.



WARNING

Keep in mind that MP3 CDs aren't the same as the standard audio CDs you buy at the store, and you can't play them in older audio CD players that don't support the MP3 CD format. Rather, this is the kind of archival disc that you burn at home for your own collection or for use in a CD/DVD player or car audio system that supports MP3 discs.

To begin the process, build a playlist (or select an existing playlist that you want to record). If necessary, create a new playlist and add to it whatever songs you would like to have on the CD. (See the earlier section “Keeping Slim Whitman and Slim Shady Apart: Organizing with Playlists” if you need a refresher.) With the songs in the correct order, right-click the playlist and choose Burn Playlist to Disc to commence the disc-burning process. Click the desired recording format (again, usually Audio CD) in the Burn Settings dialog that appears.



TIP

To save yourself from sonic shock, I always recommend that you enable the Sound Check check box before you burn. iTunes adjusts the volume on all the songs on your audio CD so they play at the same volume level.

Ready to go? Click Burn, and load the blank disc. iTunes lets you know when the recording is complete.

Feasting on iTunes Visuals

By now, you know that iTunes is a feast for the ears, but did you know that it can provide you eye candy as well? With just a click or two, you can view mind-bending graphics that stretch, move, and pulse with your music.

To begin viewing iTunes visuals, choose View⇨Show Visualizer (or press ⌘+T). Immediately, most of your iTunes interface disappears and begins displaying groovy lava lamp–style animations (like, *sassy, man*). To stop the visuals, choose View⇨Hide Visualizer (or press ⌘+T again). The usual sunny aluminum face of iTunes returns.

You can also change the viewing size of the iTunes visuals in the View menu. Select View⇨Enter Full Screen (or press ⌘+Control+F). To escape from the Full Screen Visuals mode, press Esc, or simply press ⌘+Control+F again.



TIP

You can still control iTunes with the keyboard while the visuals are zooming around your screen. See Table 13-1 earlier in this chapter for a rundown on common keyboard shortcuts.

Exercising Parental Authority

Do young children use your Mac? I'll be honest here: A large amount of content in the iTunes Store, including audio, movies, and even apps, is stuff I don't consider suitable for kids. And what about the media that others in the family may decide to share? Such is the world we live in today, and the good folks at Apple recognize that you may not want to inadvertently allow your kids to have access to explicit content.

Luckily, you can use the Restrictions settings in iTunes to build a secure fence around content that's for grownups only. Heck, you can even banish items from the Source list entirely. Figure 13-5 illustrates the Restrictions pane in the iTunes Preferences dialog.



REMEMBER

You must log in with an Administrator account to change these settings, just like with the Parental Controls in the System Preferences dialog. If the settings are *locked* — the padlock icon at the bottom of the dialog is closed — click the padlock and supply your administrator password to unlock them. (Read more about Parental Controls in Chapter 10.)

To enable restrictions, follow these steps:

1. Choose iTunes⇨Preferences.
2. Click the Restrictions tab.

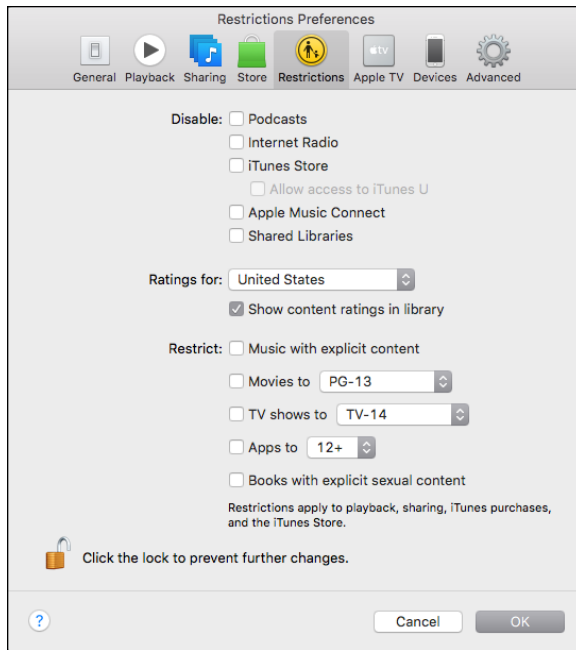


FIGURE 13-5: Protect your kids from explicit content.



REMEMBER

3. Select any of the Disable check boxes to prevent access to those features.

Disabling features in iTunes applies to *all* user accounts — no matter who is logged in! Notice that any features you disable disappear completely from the Source list at the left side of the iTunes window after you click OK at the end of these steps.

4. Click the Ratings For pop-up menu, and choose your country.

Because Apple maintains separate iTunes Stores for different nations, you can choose which country's iTunes Store to monitor. If you like, you can disable the display of content ratings in your iTunes library by deselecting the Show Content Ratings in Library check box.

5. To restrict specific content in the iTunes Store, select the check box next to the source, and make choices from the corresponding pop-up menu to choose the restriction level.

Note that these restrictions apply only to content in the iTunes Store, content that can be downloaded through iCloud, and media shared with your Mac. Content in your iTunes library is never restricted.

6. Click the padlock icon at the bottom of the dialog to close it and prevent any changes.

7. Click OK.

Buying Digital Media the Apple Way

The hottest spot on the Internet for buying music and video is the iTunes Store, which you can reach from the cozy confines of iTunes (that is, as long as you have an Internet connection; if you don't, it's time to turn to a different chapter).

Click the iTunes Store tab near the top of the window, and after a few moments, you're presented the latest offerings. Click a link in the store list to browse according to media type, or click the Power Search link to search by song title, artist, album, or composer. The Back and Forward buttons at the top of the iTunes Store window operate much the same as those in Safari, moving you backward or forward in sequence through pages you've already seen. Clicking the Home button (which, through no great coincidence, looks like a miniature house) takes you back to the Store's main page.

To display the details on a specific album, track, video, podcast, or audiobook (whew), just click it. If you're interested in buying just certain tracks (for that perfect road-warrior mix), you get to listen to 90 seconds of any track — for free, no less, and at full sound quality. When you're ready to buy, click the Buy Now button. At the time of this writing, tracks are usually 99 cents a pop, and an entire album is typically \$9.99 . . . what a bargain!

The iTunes Store uses your Apple ID to identify you, and it keeps secure track of your payment information for future purchases. After you use the iTunes Store once, you rarely have to log in or retype your credit card information again.

The tracks and files that you download are saved to a separate playlist called Purchased. After the download is finished, you can play them, copy them to other playlists, burn them to CD or DVD, share 'em over your network, or ship them to your iOS devices by using iCloud, just as you can any other item in your iTunes Library.



TIP

iTunes can automatically download the media you purchase on another iCloud device (including another Mac and your iPhone, iPad, or iPod touch). To set up automatic downloading, choose iTunes ⇨ Preferences to open the Preferences dialog, and click the Store tab. After you're signed in at the iTunes Store, you can choose to download music or app purchases, and you have the option to check for new downloads automatically. Click OK to save your changes.

Importing pictures from your hard drive or digital camera

Organizing images with Photos

Tweaking the appearance of photographs

Sharing photos with your friends

Chapter 14

Focusing on Photos

For decades now, the Mac has been the choice of professional photographers for working with digital images — not surprising, considering the Mac’s graphical nature. Apple continues this tradition with *Photos*, its photography tool for the home user that can help you organize, edit, and even publish your photographs. (It sports more features than a handful of Swiss Army knives. Experienced Mac owners will recognize Photos as the descendent of the venerable iPhoto.) After you shoot your photos with a digital camera, you can import them into Photo, edit them, and publish them. You’re not limited to photos that you take yourself, either; you can edit, share, and organize all kinds of digital image files, as well as video clips. You can even create a photo album and use the Photos interface to order a handsome soft-bound or hard-bound copy shipped to you, or create a slideshow that you can upload to YouTube.

In this chapter, I walk you through an overview of what Photos can do. After that, I give you a brief tour of the controls in Photos so that you can see what features are available to you, including those for managing, printing, and publishing your photos.

Delving into Photos

Figure 14-1 shows most of the major controls Photos offers. (Other controls appear automatically when you enter different modes; I cover them in upcoming sections.)

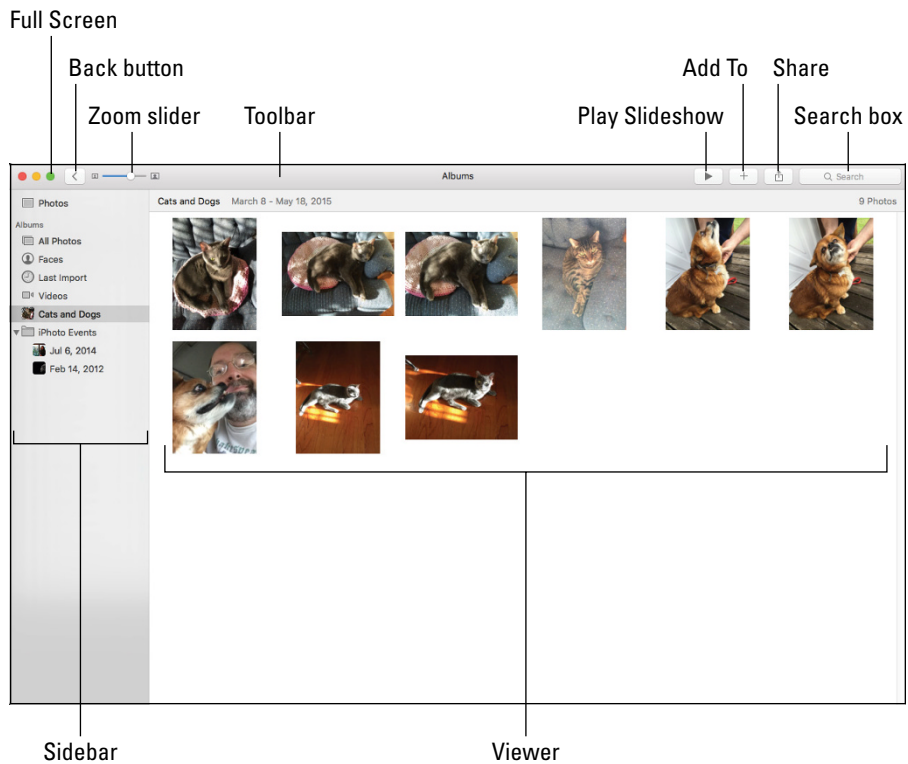


FIGURE 14-1: Photos greets you with an attractive window.

These controls and sections of the window are covered in more detail in the following sections. For now, here's a quick rundown of what you see when you launch Photos and click the Photos mode button at the top center of the screen:

- » **Toolbar:** This group of controls determines how many images the Photos Viewer will display, and allows you to perform a number of actions with selected photos.

 - You can click the Back and Forward buttons to display photos by *moment* (photos taken around the same time and at the same location), *collection* (a group of related moments, like each day of a family reunion), or *year* (the year the photos were taken). As you click the Back button, you see more images at once. To zoom in on a specific photo, just click the desired thumbnail.
 - You can create new albums, slideshows, and print projects (like books, calendars, and cards) using your photos. These new thumbnails appear when you click the Albums and Projects mode buttons on the Toolbar, which makes it much easier to organize your photos.

- You can share selected photos in a slew of ways, including Apple Mail, Messages, and AirDrop networking, as well as popular online sites like Facebook, Twitter, and Flickr. If you've enabled iCloud Photo Sharing, you can also share photos to your other Macs and iOS devices.
- You can search for specific images. Just click in the box and start typing to search by description and title, or even Faces and keywords (which I cover later in the chapter).



TIP

» **Viewer:** This pane displays the images from your Photos Library.

You can click and drag or ⌘+click to select photos in the Viewer for further tricks, such as assigning keywords and image editing.

» **Split View:** If you're displaying a single image from your Library, you can click the Split View button in the toolbar (or press Option+S) to open and close the Split View pane. The Split View pane allows you to quickly switch to another image by clicking the desired thumbnail. I find Split View very helpful when I'm editing several images taken at around the same time.

» **Full Screen:** Click the Full Screen/Maximize button at the upper-left corner of the window to switch to a full-screen display of your photos. In full screen mode, you can double-click a thumbnail to view the image using your Mac's entire screen real estate. (The toolbar is still available at any time; just move your pointer to the top of the screen to display it.) Press Esc to return to windowed mode.



TIP

Click View ⇨ Always Show Toolbar in Full Screen to prevent the toolbar from disappearing in full screen mode.

» **Zoom:** Drag this slider to the left to reduce the size of the thumbnails in the Viewer. This allows you to see more thumbnails at one time, which is convenient for quick visual searches. Drag the slider to the right to expand the size of the thumbnails, making it easier to differentiate details between similar photos in the Viewer. You can also use the Zoom slider when a single image is displayed in the Viewer.

» **Play Slideshow:** Select an album or project (or select multiple images) in the Viewer and click the Play button (which bears the familiar triangle Play icon) to start a full-screen slideshow.

» **Add to Favorites:** This toolbar button (which bears a heart icon) appears on the toolbar only while you're viewing or editing a single image. Click the Add to Favorites button to add the item that's currently displayed in the Viewer as a Favorite. (When viewing your Library as moments or collections, you can also hover your pointer over an item and click the heart symbol that appears at the top-left corner of the photo.) You can search for Favorite photos using keywords, which I discuss later in the chapter.

- » **Info:** Again, you see this button on the toolbar only while you're viewing or editing a single item. Click this button to display information on the item that's currently displayed in the Viewer.
- » **Add To:** Click this button to add the selected photos to an existing album, slideshow, or printing project.
- » **Share:** Click this button to share the selected photos on Flickr, Twitter, or Facebook. Choose iCloud Photo Sharing to send the selected photos to your iPhone, iPad, or iPod touch (they appear in the Photo Stream albums on those devices), or to another Mac. If you use Apple's Aperture application to edit or organize photos, you can add the selected photos to your Aperture library. You can also order prints, attach the photos to a text message, or email them. (Heck, if you have a printer connected to your Mac, you can even produce your own glossies.)
- » **Edit:** Here's another button that's displayed on the toolbar only when you view a single image. Click this button to switch to the editing controls within Photos and make changes to the current image. (I cover editing in depth later in the chapter.)
- » **Search:** Click within the familiar confines of the Search box to filter the photos displayed in the Viewer by keyword, description, filename, or date.



TIP

If you've been using iPhoto for years (as I have), and you miss the familiar sidebar list of albums and projects, click **View ⇨ Show Sidebar** to toggle your old friend on and off as needed. Note that the **Photos**, **Shared**, **Albums**, and **Projects** buttons disappear from the toolbar when the sidebar is displayed.

Working with Images in Photos

Even a superbly designed image display and editing application such as Photos would look overwhelming if everything were jammed into one window. Thus, Apple's developers provide different operational modes (such as editing and book creation) that you can use in the one Photos window. Each mode allows you to perform different tasks.

In this section, I discuss three of these modes — import, organize, and edit — and what you can do when you're in them.

Import images 101

In *import* mode, you're ready to download images and video clips directly from your digital camera — and you're not limited to cameras, of course. You can

download directly from your iOS devices, and you can also import items from a folder on your hard drive, a memory card reader (such as the SDXC card slot sported by many current Mac models) or even a Kodak PhotoCD.

Follow these steps to import images directly from your camera:

1. Connect your digital camera to your Mac.

Plug one end of a USB cable into your camera and the other end into your computer's USB port, and prepare your camera to download images.

2. Prepare your camera to download files.

The procedure for downloading images and video varies by camera, but the process usually involves turning on the camera and choosing a download or PC mode. Check your camera's user guide for more details.

3. Launch Photos.

Your Mac probably launches Photos automatically when your camera is detected, but you can always launch Photos manually by clicking the Photos icon on the Dock (or clicking the Photos icon within Launchpad).

4. Click the Import button on the Photos toolbar.

Photos displays all the images and video clips currently stored on your camera in the Viewer.

5. (Optional) To have Photos automatically separate images into different Events based on the date they were taken, select the Split Events check box.

6. Click the Import All New Photos button to import all new files from the camera.



TIP

To select specific images to import, hold down the ⌘ key and click each desired photo; then click Import Selected instead of Import All New Photos.

The images and clips initially appear within the Last Import album in your Photos Library, where you can organize them as you want.

7. Specify whether the images and clips you're importing should be deleted from the camera afterward.

If you don't expect to download these items again to another computer or another device, you can choose to delete the files from your camera automatically. This saves you a step, frees space for new photos and video, and helps eliminate the guilt that can crop up when you nix your pix. (Sorry; I couldn't resist.)

IMPORTING IMAGES FROM YOUR HARD DRIVE TO PHOTOS

Adding items stored on your hard drive, a CD, a DVD, an external drive, or a USB flash drive is easy. If the images and clips are in a folder, just drag that folder from a Finder window and drop it into the Viewer. (Heck, you can even drag items directly to the Photos icon on the Dock!) Photos automatically creates a new album using the folder name, and you can sit back while the images are imported into that new album.

If you have individual images, you can drag them as well. Select the images in a Finder window, and drag them into the desired album in the Albums display. To add them to the album currently displayed in the Viewer, drag the selected photos and drop them in the Viewer instead.

If you'd rather import images by using a standard Mac Open dialog, choose File ⇨ Import. Simplicity strikes again!

Note that Photos automatically groups imported images and video into moments and collections (using the date, time and location where the files were created, if your camera stores this information with each file). For example, if you want to see photos from your son's graduation, they'll appear as a separate moment. Think about that. It's pretty tough to arrange old-fashioned film prints by the moment in time they document, but Photos makes it easy for you to see which photos are part of the same group.



TIP

Don't be surprised if Photos automatically appears when you connect your iPhone or iPad to your iMac! This gives you a convenient opportunity to import photos with a single click.

Organize mode: Organizing and sorting your images

In the days of film prints, you could always stuff another shoebox with your latest photos or buy another sticky album to expand your library. Your digital camera, though, stores images as files instead, and many folks don't print their digital photographs. Instead, you can keep your entire collection of digital photographs and scanned images well ordered and easily retrieved within your Photos Library; then you can display them in a slideshow, email them, print them, use them as Desktop backgrounds, or burn them to an archive disc.



REMEMBER

It's important to note that your Photos Library is a separate location from the Pictures folder within your user account Home folder, and they can contain different images. (Personally, I use the Pictures folder in my Home folder to hold all of my desktop background images, while the photos that are important to me are stored in my Photos Library.)

A new kind of photo album

The most familiar method of organizing images in Photos is the *album*. Each album can represent any designation you like, be it your pets, a vacation, your daughter, or your daughter's ex-boyfriends. Follow these steps:

1. Create a new album.

You can choose File ⇨ New Album, press ⌘+N, or click the Add button (which bears a plus sign) on the toolbar. If you've selected any item thumbnails in the Viewer, they're added to the new album automatically.

2. Type the name of your new photo album in the Album Name text box (see Figure 14-2).

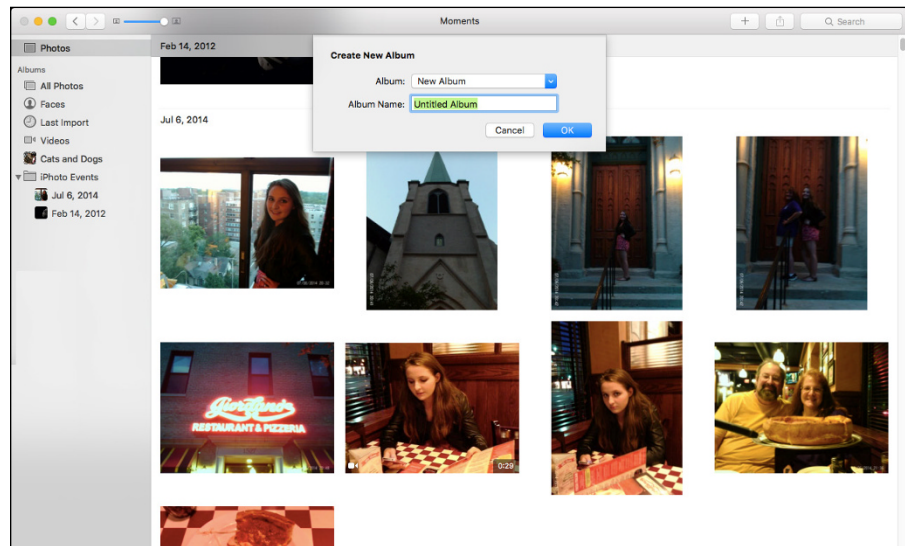


FIGURE 14-2:
Adding a new album in Photos.



TIP

Note that you can also choose to add the items to an existing album (or an existing Event you created using iPhoto). Click the Album drop-down list box and click either an album name or the desired iPhoto Event. The Album Name text box disappears if you choose an existing album or Event.

3. Press Return.

Photos also offers a special type of album called a Smart Album, which you can create from the File menu. (For even faster action, press Option+⌘+N.) If you're familiar with the Smart Folders you can use within the Finder and the Smart Playlists within iTunes (see Chapter 13), you've figured out this one already. A *Smart Album* contains only photos that match certain criteria you choose, including the keywords you assign your images. Other criteria include text in the photo file-names, the dates the images were added to Photos, a specific Face you've identified, and any description you might have added (as well as camera-specific data, such as ISO and shutter speed). Now, here's the really nifty angle: Photos *automatically* builds and maintains Smart Albums for you. It adds new photos that match the criteria and deletes those you remove from your Photos Library (and also removes the photos that no longer match the Smart Album's criteria)! Smart Album icons carry a gear symbol in the Photos sidebar.



TIP

You can display (or edit) information about the currently selected item; just right-click the item and choose Get Info from the menu that appears. Click the Add a Title heading in the dialog to display a text edit box, and you can simply type a new value. You can also type a short note or description in the Add a Description box that appears in the Info dialog, or click Add a Keyword to use keywords to help organize your photos.

You can copy selected items from the Viewer into any album you choose. Select the desired items and then click the Add button that appears at the right side of the Photos window (which works the same as the Add button on the toolbar). If the sidebar is displayed, you can copy selected items to an album by dragging them from the Viewer to the desired album in the sidebar.

To remove a photo or video clip that has fallen out of favor, follow these steps:

- 1. Click the Albums button on the toolbar and then click the desired album to display it.**
From the sidebar, click the desired album.
- 2. In the Viewer, click the item you want to remove to select it.**
- 3. Press Delete.**



REMEMBER

When you remove a photo or clip from an album, you *don't* remove the actual file from your collection (represented by Photos button on the toolbar or the Photos entry at the top of the sidebar). An album is actually just a group of links to the images in your collection, just as a playlist in iTunes is a group of links to songs in your Music Library. If you want to completely remove an offending photo from Photos, click the Photos button in the toolbar (or the Photos entry at the top of the sidebar) to display your entire collection of photos and clips and delete the item there. The item disappears from all albums with which it is associated.

HEY, WHAT HAPPENED TO MY EVENTS?

In iPhoto (the predecessor of Photos), an *Event* was a group of images you shot or downloaded at the same time (much like a collection in Photos). Now that iPhoto has bit the dust, you may be mourning the loss of your Events. Don't worry; they're still available! You'll find that Photos includes a special album named iPhoto Events (which is available from both the Albums display in the Viewer and as an entry in the sidebar list). Double-click this album thumbnail in the Viewer (or click the iPhoto Events entry in the sidebar), and your existing Events appear like magic!

Note that you can no longer create Events within Photos, as collections now handle the same chore.!

To remove an entire album, click the Albums button on the toolbar to display your album thumbnails in the Viewer, right-click the doomed thumbnail, and choose Delete Album from the contextual menu. (As I mention earlier, if you're using the sidebar, the Albums button doesn't appear on the toolbar; instead, right-click the offending album name in the sidebar and choose Delete Album from the contextual menu.)

To rename an album from the Viewer, click the album name under the desired thumbnail and type the new name in the text box that appears; then press Return. To rename an album from the sidebar, click the entry under the Albums heading in the list to select it, and click again to display a text box. Type the new album name, and press Return.



TIP

Change your mind? Photos comes complete with a handy-dandy Undo feature. Just press ⌘+Z, and it's as though your last action never happened (a great trick for those moments when you realize that you just deleted your only image of your first car from your Library). For an extra level of backup protection, you can invest in an external hard drive and use the awesome Yosemite Time Machine backup feature.



TIP

You can quickly jump to the Albums display in the Viewer by pressing the ⌘+3 keyboard shortcut.

Working with Faces

Photos includes a powerful organizational tool called Faces, which appears as a separate item within the sidebar.

Faces is a sophisticated recognition system that automatically recognizes human faces within the photos you add to your Photos Library. (I don't know whether it

works well with pets, but you can try.) Naturally, you have to identify — tag — faces before Photos can recognize them.

To tag a face, follow these steps:

1. In the Viewer, double-click the photo with a person you want to tag.
2. Click the Info button on the Photos toolbar at the top of the window.
Photos displays the Info pane.
3. Click the Add Faces link (or, if faces have already been tagged in the photo, the plus sign next to the existing faces).

Note that Photos indicates each person's face in the photo with a label. If a face has already been tagged, the label matches the person's face.

To set Photos to always show labels — so that you don't have to click the Add Faces link — click View ⇨ Show Face Names.



TIP

4. Click the *unnamed* label under the person's face to open a text box, as shown in Figure 14-3.

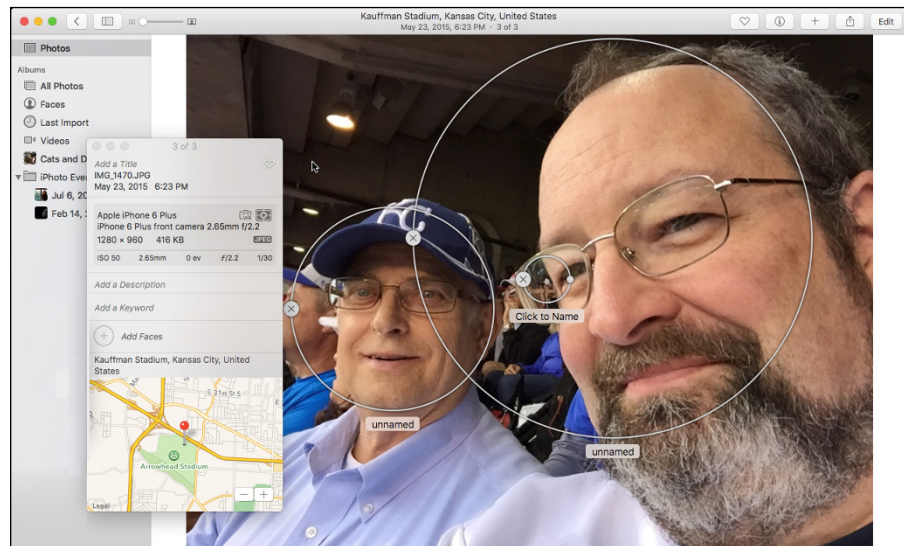


FIGURE 14-3: Adding another mug to my collection of Faces. (That doesn't sound right.)

5. Type the person's name and press Return.

If the name appears on a Contacts contact card — or is recognized as an existing Faces name, or as one of your Facebook friends — you can click the matching entry that appears to confirm the identity. Wowzers!



TIP

To delete an unnecessary Face recognition outline, click the X button that appears at the left side of the circle.

Photos might not recognize the face if the person is turned at an angle to the camera or is in a darker area of the photo. If so, display the Info pane and click the Add Faces link to display a floating outline; then click the outline and drag the circle over the person's face. If necessary, you can resize the box using the handle that appears at the right side of the circle. Now you can click the Click to Name label and type the person's name.

After you tag an image, it appears in your Faces collection, which you can view by clicking the Faces entry in the sidebar. You can double-click a portrait in your Faces collection to see all the images that contain that person.

Organizing with keywords

“Okay, Mark, albums and Faces are great ideas, but there has to be a way to search my Library by category!” Never fear, good Mac owner. You can also assign descriptive *keywords* to items to help organize your Library and locate certain pictures and video clips fast. Photos comes with several standard keywords, and you can create your own as well.

To illustrate, suppose that you'd like to identify your images according to special events in your family. Birthday photos should have their own keyword, and anniversaries deserve another. By assigning keywords, you can search for Elsie's birthdays or your silver wedding anniversary (no matter what collection or album they're in), and all related photos with those keywords appear like magic!

TIME TO GO SHOPPING FOR FACES!

Notice the Suggested Faces thumbnail strip across the bottom of the Photos window? Double-click a thumbnail that you recognize, and Photos prompts you to enter the person's name. (You also see a pop-up list of folks that have already been identified, as well as names with matching characters from Facebook and Contacts list. If you see the person's name in the list, just click it.)

Click Continue, and Photos displays other photos with faces that contain that person. If Photos makes a mistake in identifying a face in an image, just click the image to deselect it, and the blue check mark in the lower-right corner of the thumbnail disappears. When all the thumbnails correctly identify the person, click Add and Continue, and pow — those photos get added to your Faces collection.

As you might expect, the more photos you add for a specific person, the better Photos gets at recognizing that person!

Photos includes a number of keywords that are already available:

- »» Favorite
- »» Family
- »» Kids
- »» Vacation
- »» Birthday
- »» RAW
- »» Photo Booth
- »» Photo Stream
- »» Movie
- »» Check mark



TIP

What's the check mark all about, you ask? It's a special case. The check mark keyword comes in handy for temporarily identifying specific items, because you can search for just your check-marked photos and clips.

To assign keywords to images (or to remove keywords that have already been assigned), select one or more photos in the Viewer. Choose Window⇨Manage My Keywords or press ⌘+K to display the Keyword Manager window, shown in Figure 14-4.

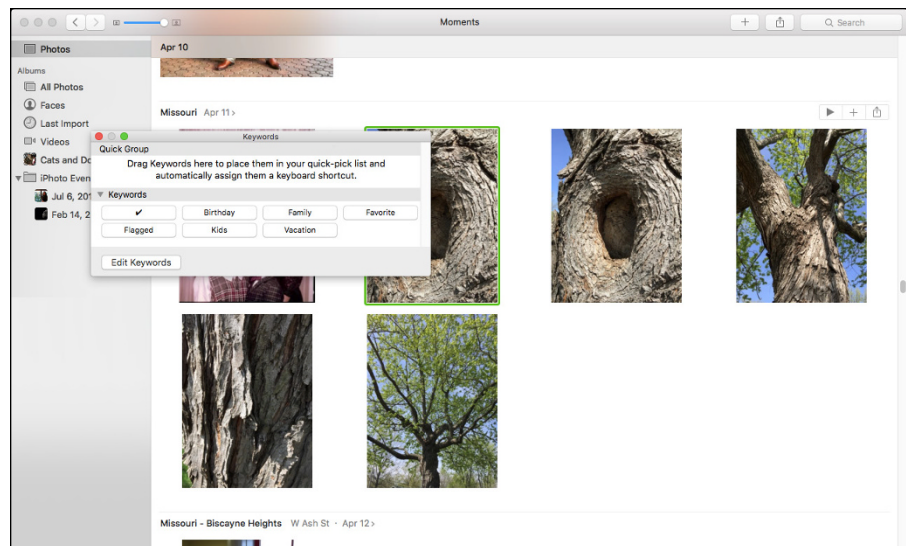


FIGURE 14-4:
Add keywords to
these selected
images.

YOU NEED YOUR OWN KEYWORDS

I bet you take photos and video clips of things other than just kids and vacations. That's why Photos allows you to create your own keywords. Display the Photos Keyword Manager window by pressing ⌘+K, click the Edit Keywords button, and then click Add (the button with the plus sign). Photos adds a new unnamed keyword to the list as an edit box, ready for you to type its name.

You can rename an existing keyword from this same window, too. Click a keyword to select it and then click Rename. Remember, however, that renaming a keyword affects *all the images that were tagged with that keyword*. That might be confusing when, for example, photos originally tagged as Family suddenly appear with the keyword Foodstuffs. (I recommend applying a new keyword and deleting the old one if this problem crops up.)

To change the keyboard shortcut assigned to a keyword, click the Shortcut button. To remove an existing keyword from the list, click the keyword to select it and then click the Delete button, which bears a minus sign. When your keywords are picture-perfect (pun grudgingly intended), click OK to save them.



TIP

Drag the keyword buttons that you use most to the Quick Group section of the Keyword Manager window, and Photos automatically creates a keyboard shortcut for each keyword in the Quick Group. Now you don't even need to display the Keywords window to get business done!

Click the buttons for the keywords you want to attach to the selected images to mark them. Or click the highlighted buttons for the keywords you want to remove from the selected items.

Digging through your library with keywords

Behold the power of keywords! To sift through your entire collection of images by using keywords, click the Search button on the toolbar at the top right of the Photos window and type one or more keywords. To see all the items you've flagged as Favorites that include kids, for example, type **Favorite Kids**.



REMEMBER

The images that remain in the Viewer after a search must have *all* the keywords you specified. If an image is identified by only three of four keywords you chose, it isn't a match and doesn't appear in the Viewer. (You can create a Smart Album with specific keywords to get around this limitation.)



TIP

To search for a photo by words in its description, just click the Search box and start typing. You can click that same magnifying glass by the Search box to search through your images by date and rating as well.

Searching by locations where photos were taken

Photos can also track the location where photos were taken automatically, but this feature requires a digital camera that includes GPS tracking information in the image metadata for Photos to do so without your help. (Older camera models are unlikely to support GPS tracking. Naturally, newer iPhones and iPads support this feature.) You don't have to turn anything on to view photos by location.

When you're viewing photos by moments and collections, you'll notice that Photos includes the location name to identify where the photos were taken. To search for all images taken at a specific location, type the location name in the Search field.



TIP

If you right-click a specific photo (that includes location information) to select it and then choose Get Info from the contextual menu, you see a close-up map of the location where the photo was taken.

Edit mode: Removing and fixing stuff the right way

Not every digital image is perfect. Just look at my collection if you need proof. For shots that need a pixel massage, Photos includes editing tools that you can use to correct common problems.

The first step in any editing job is to select the image you want to fix. (Double-click a Moments thumbnail, and it should fill the Viewer.) Then click the Edit button on the Photos toolbar (or simply press Return) to display the Edit mode controls at the right side of the window, as shown in Figure 14-5. Now you're ready to fix problems, using the tools I discuss in the rest of this section.



REMEMBER

If you display a video clip in the Viewer, you can play it by hovering your pointer over the clip and clicking the Play button that appears. You can edit only photographs, so the Edit button is disabled when you're viewing a video clip.

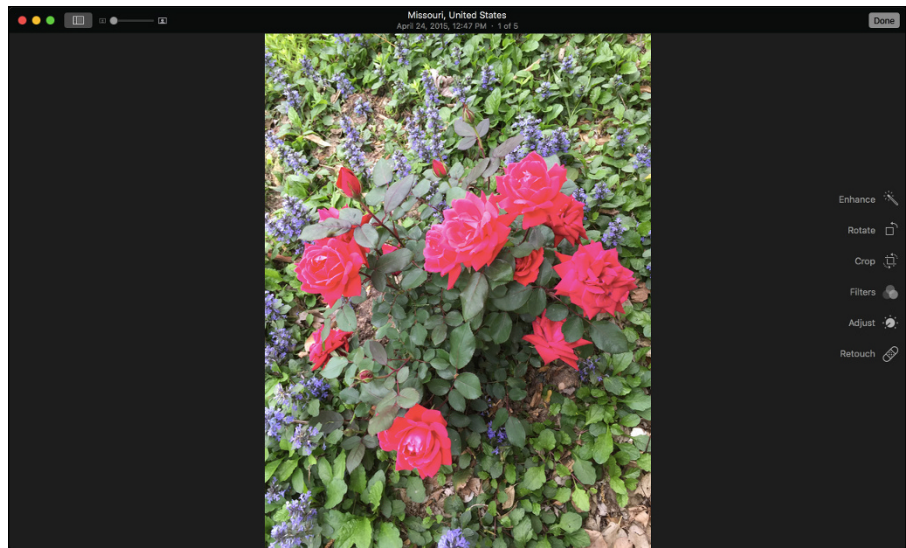
While you're editing, you can press the left and right arrow keys to move to the next image (or back to the previous image). This trick works whether you were browsing the Library or displaying the contents of an album. You can also display the Split View pane in Editing mode.



TIP

If you prefer to edit images while using more of your screen real estate, click the Full Screen/Maximize button at the upper-left corner of the Photos window. To switch back to the standard window arrangement, simply press the Esc key.

FIGURE 14-5:
Photos is now in
edit mode. Watch
out, image
problems!



When you're finished with Edit mode, click the (wait for it) Done button again to return to the Viewer.

Rotating tipped-over shots

If an image is in the wrong orientation and needs to be turned to display correctly, click the Rotate button to turn it once in a counterclockwise direction. Hold down the Option key while you click the Rotate button to rotate in a clockwise direction.

Crop 'til you drop (and a whole lot more)

Does that photo have an intruder hovering around the edges of the subject? You can remove some of the border by *cropping* an image, just as folks once did with film prints and a pair of scissors. (We've come a long way.) With Photos, you can remove unwanted portions from the edges of an image; it's a great way to get Uncle Milton's stray head (complete with toupee) out of an otherwise perfect holiday snapshot.

While you're in Editing mode, follow these steps to crop, flip, and straighten an image:

1. **Click the Crop button.**
2. **Select the portion of the image you want to keep.**

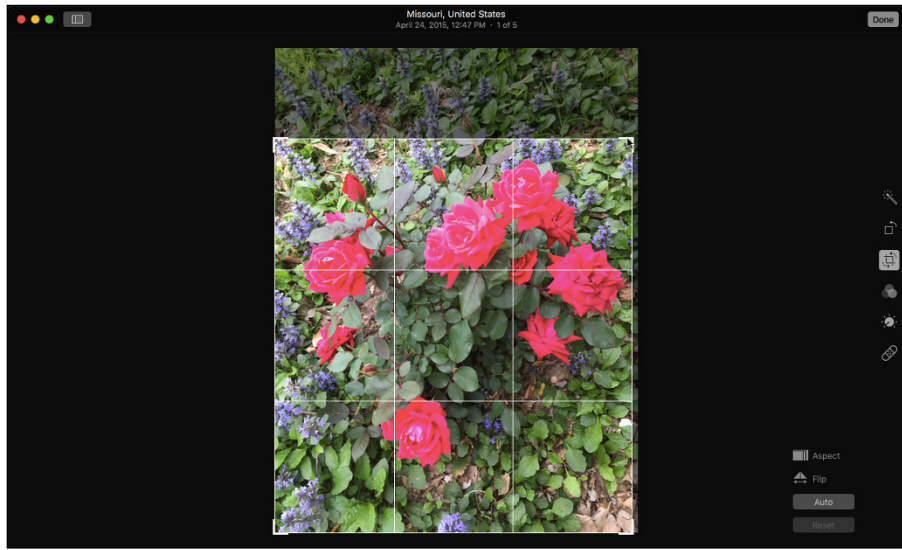
In the Viewer, click and drag the handles in the corners of the rectangle to outline the part of the image you want. Whatever is outside this rectangle disappears after the crop is completed.



TIP

When you drag a corner or edge of the outline, a semiopaque grid (familiar to amateur and professional photographers as the nine rectangles from the Rule of Thirds) appears to help you visualize what you're claiming. (Check it out in Figure 14-6.)

FIGURE 14-6: Select the stuff you want to keep in your photo.



You can expand the outline to the image's full dimensions at any time by clicking the Reset button.

See that attractive-looking Auto button that appears at the lower right-hand corner of the Photos window when you're in crop mode? Click the Auto button, and Photos takes its best shot at producing the ideal cropping and straightening job for you! If you don't like the results, just use Photos's Undo feature ($\text{⌘}+\text{Z}$) to return the photo to its previous appearance.



REMEMBER

Photos features multiple Undo levels, so you can press $\text{⌘}+\text{Z}$ several times to travel back through your last several changes. Alternatively, you can always return the image to its original form (before you did any editing at all) by clicking the Revert to Original button that appears at the top right of the Photos window.

3. (Optional) Choose a preset aspect ratio.

You may want to force your cropped selection to a specific aspect ratio, such as 4×3 or 16×9 for a widescreen desktop background or 4×6 or 5×7 to match the dimensions of photo paper. If so, click the Aspect link and select that ratio from the pop-up menu that appears. (Pick the Square menu item for the perfect Facebook profile image and Freeform to allow any aspect ratio after your cropping is done.)

4. (Optional) Flip your photo horizontally.

A click of the Flip link gives you the mirror image of your original photo.

5. (Optional) Straighten what's crooked.

Was your camera slightly tilted when you took the perfect shot? Never fear! Click the circular angle control at the right edge of the image and then drag in the desired direction. (Besides straightening the subject, you can do some truly wild camera angles this way, just like in the '60s *Batman* TV series!)

6. Click the Done button.

Enhancing images to add pizzazz

If a photo looks washed out, click the Enhance button to increase (or decrease) the color saturation and improve the contrast. Enhance is automatic, so you don't have to set anything — but be prepared to use Undo if you're dissatisfied with the changes.

Removing rampant red-eye

Unfortunately, today's digital cameras can still produce the same “zombies with red eyeballs” as traditional film cameras. *Red-eye* is caused by a camera's flash reflecting off the eyes' interior surface, and it can occur with both humans and animals. (I'm told that pets get *green-eye* or *blue-eye*, but Photos can handle them, too!)

Photos can remove that red-eye and green-eye and turn frightening zombies back into your family and friends. In Editing mode, click the Red-Eye button and then click the Auto button at the lower-right corner of the window, and Photos automatically attempts to remove any red-eye effect it detects in the photo. (If you don't see the Red-Eye button, press E to display it.)

If Photos can't fix a demonized eyeball automatically, hover your pointer over the photo to display the circular red-eye tool. (You can change the size of the tool by dragging the Size slider to adjust the dimensions.) Once the red-eye tool is the right size, simply move the circle to the center of the eyeball and click. To complete the process, click the Done button.

Retouching like the pros

The Photos Retouch feature is perfect for removing minor flecks or lines in an image (especially those you've scanned from prints). Click Retouch and hover your pointer over the photo to display the circular retouch tool. As with the red-eye tool, you can drag the Size slider to change the size of the retouch tool. Drag the pointer across the imperfection and click Done when you're finished touching up. Don't forget to take a moment to marvel at your editing skill!

Using filters and adjustments to add a mood

Wondering whether a particular photo in your Library would look better as a black-and-white (*grayscale*) print? Click the Filters button to display a strip of different effects that you can apply to the photo, including black-and-white effects, enhanced color levels, and subtle shading. Click any thumbnail in the strip to apply the filter.

If you'd like more precise manual control of your image attributes — including sharpness, color levels, shadows, and white balance — click the Adjust button. You can click one of the preset thumbnails to apply a set of attributes, or click Add to display additional controls that you can use to create a different look.

Producing Your Own Coffee-Table Masterpiece

Projects mode unleashes what I think is probably the coolest feature of Photos: the chance to design and print a high-quality bound photo book. First, you complete an album by editing all the images just the way you want and placing in the album all the photos you want to include in your book. Photos can send your images as data over the Internet to a company that prints and binds your finished book. (No, they don't publish *For Dummies* titles, but then again, I don't get high-resolution color plates in most of my books, either.)

At this writing, you can order many sizes and bindings. The largest size is a 114-by-10-inch hardcover book (complete with a dust jacket) with 20 double-sided pages for about \$50; extra pages cost \$1.50 each. Smaller sizes include a 10-by-10-inch hardcover book with 20 double-sided pages for about \$40 and a softcover 8-by-8-inch album with 20 double-sided pages for about \$15. Extra pages can be added at \$1.00 and 80 cents a pop, respectively.

Photos can also produce and automatically order calendars and cards (both the postal and greeting varieties) using a process similar to the one I describe in this section for producing a book. Who needs that stationery store in the mall, anymore? (You can even order old-fashioned photo prints from the Share toolbar menu.)



TIP

If you decide to create a photo book, make sure the images have the highest quality and highest resolution. The higher the resolution, the better the photos look in the finished book. I always try to use images of more than 1,200 pixels in the shortest dimension. You should also make sure you've added enough images to the album you'll be using, because you need to populate the entire book. (You can add extra pages later, but each book requires a minimum number of pages.) Don't forget to include a good mix of landscape and portrait shots.

To create a photo book, follow these steps:

1. **Click the Album button on the toolbar, and click the desired album thumbnail to select it.**

Make sure that no individual photos are selected in the Viewer. This way, Photos uses all the images in the chosen location.

2. **Click the Add To toolbar button, and choose Book from the pop-up menu.**
3. **Select the type of book (Square, Classic, or Softcover).**

Your choice determines the number of pages and the size of the book.

4. **Click a theme thumbnail.**

The theme you choose determines both the layout scheme and the background graphics for each page.

5. **Click Create Book.**

If you've displayed the sidebar, Photos adds your new book project under the Projects heading (using the name of the album or Event where the photos were located), and you see the layout and controls shown in Figure 14-7.

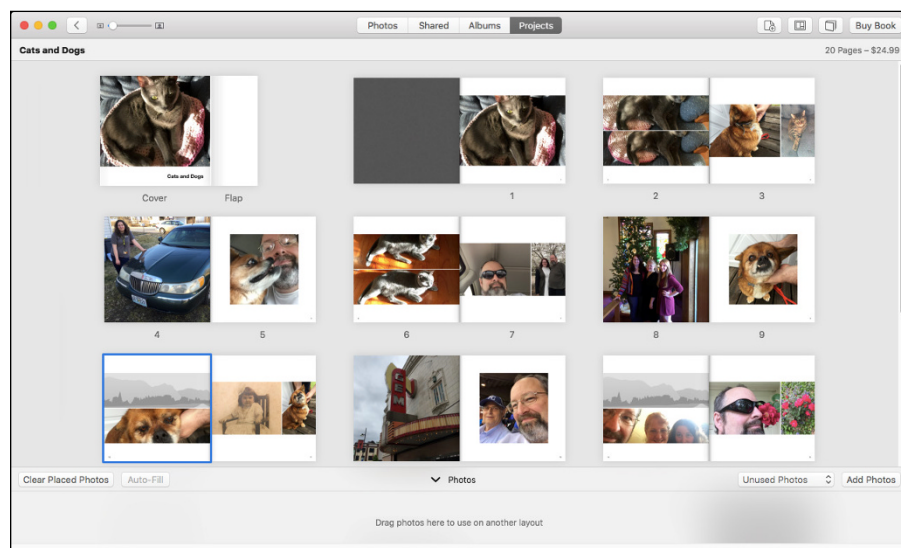


FIGURE 14-7: Preparing to publish my own coffee-table masterpiece.

In Book mode, the Viewer displays a collection of thumbnail images, each of which represents a portion of your book — the front cover, internal pages, or back cover. Photos automatically fills as many pages as it can with images that best fit your layout; any extra images appear in the photo strip along the

bottom of the window. You can drag any image thumbnail into one of the photo placeholders to add it (or replace the existing photo).



TIP

It's easy to switch to another theme at any time. Click the Change Settings button on the toolbar (which bears a book icon); then click the Change Theme button that appears.

6. (Optional) Rearrange the page order to suit you by dragging the thumbnail of any page from one location to another.

If you prefer a book without page numbers, click the Change Settings button and click Show Page Numbers to toggle it off.



TIP

7. (Optional) To change the look of the selected cover or page, click the Layout Options button on the toolbar to change the color and design layout for that element.

Clicking a design thumbnail automatically updates the page display.

8. Double-click a page to edit captions and short descriptions.

Click any of the text boxes in the page display, and begin typing to add text to that page. (Note that some themes don't have caption or description text boxes.)

When you finish editing, click the Back button at the top of the window to return to your full spread.

9. (Optional) To add pages to your book, click the Add Page button on the toolbar.

As mentioned earlier, the price of additional pages varies according to the size and type of binding you choose.

10. To view the book at any time, right-click any open spot in the Photos Viewer and choose Preview Book from the contextual menu.

After a short wait, the OS X Preview application opens, and you can scroll through the contents of your book (or even print a quick copy). To close the Preview window, choose Preview ⇨ Quit Preview.

11. When you're ready to publish your book, click the Buy Book button at the upper-right corner of the window.

In a series of dialogs, Photos guides you through the final steps to order a bound book. Note that you are asked for credit card information, so have that plastic ready.



TIP

Why limit yourself to paper copies of your publishing success? You can also right-click any open spot in the Viewer and choose Save Book As PDF from the contextual menu to create a snazzy electronic version of your book.

I REALLY NEED A SLIDESHOW

You can use Photos to create slideshows by following these steps:

1. **Click the Album button on the toolbar.**
2. **Click the desired thumbnail (or click the album you want to use in the sidebar).**
3. **Click the Add To button on the toolbar (which bears a plus sign) and choose Slideshow.**
4. **Click the Sideshow pop-up menu and choose New Slideshow.**
5. **Type the name of the slideshow in the text box, and press Return.**

Photos adds a slideshow thumbnail in Projects view and adds a new entry under Slideshows in the sidebar. A scrolling thumbnail strip appears at the bottom of the Viewer, displaying the images in the album.

6. **Click and drag the thumbnails into the desired order.**

After creating your slide show, you can customize it with the controls that appear at the right side of the Photos window:

- **Themes:** Click the Theme Picker button to choose the theme for your slideshow. The theme you choose controls the animation, transition type, and screen layout that Photos uses — everything from the classic Ken Burns “moving photo” animation to a nifty Sliding Panels layout.
- **Music:** Click the Music button to display Apple’s theme music as well as the tracks from your iTunes Library. To choose a standard theme, open the Source pop-up menu and choose Theme Songs; click that perfect song to select it. To choose songs from your iTunes Library, open the Source pop-up menu and click iTunes; then click the songs you want in the order you want them.
- **Duration:** Click the Duration Settings button, and you can choose to fit the display of images to the length of the music you’ve chosen, or you can set individual timings for the slide thumbnails you’ve selected. If you want your slideshow to loop after it finishes, click the Loop icon that appears at the lower-right corner of the Viewer to toggle it on (the icon turns blue).
- **Preview:** To display a quick preview of your slideshow without leaving the Photos window, click the Preview button at the lower-left corner of the Viewer; this is a handy way of determining whether the theme and music you’ve selected are really what you want. When you’re ready to play your slideshow, click the Play button that appears under the Viewer, and Photos switches to full-screen mode. To create a movie file from your completed slideshow, click Export on the Photos toolbar.

Introducing iCloud Photo Library

Yes, Apple has decided that everything except the kitchen sink should be stored online in iCloud. First, it was your iTunes music library; then your Pages, Numbers, and Keynote documents; and now it's your photographs and video clips! To turn the iCloud Photo Library feature on, choose Photos ⇨ Preferences, click the iCloud tab, and click the iCloud Photo Library check box to enable it.

With iCloud Photo Library, your entire Photos Library is actually stored online, and everything in your Library is also accessible from other Macs and iOS devices like your iPad and iPhone. (Think “central storage house for everything visual that you can reach from anywhere with an Internet connection.”) If you take a photo with your iPhone, for example, you see it appear automatically within Photos, and if you've recently cropped and edited a photo to perfection with Photos, you'll be able to retrieve that photo on any of your iOS devices or another Mac.

From the same iCloud pane in the Preferences dialog, you can choose to

- » Store copies of the full-size images and full-resolution videos on your iMac's local hard drive (allowing you to edit or view the originals even when you're not connected to the Internet)
- » Store smaller images and lower-resolution videos on your iMac, with the ability to retrieve the originals from the iCloud at any time (if you're connected to the Internet)

Naturally, if you're a photographer who needs constant, instant access to your original images, the first option is preferable. (Choose the Download Originals to this Mac option in the iCloud pane.) If your iMac's drive is nearly full and you'd like to conserve space, however, the second option is very attractive. (Choose the Optimize Mac Storage option in the iCloud pane.)

All this goodness is handled automatically, but there's a catch: Your *entire* Photos Library needs to fit within your free 5GB of iCloud storage, or you'll have to pay a monthly subscription to get additional elbow room! (At the time of this writing, storage subscriptions range from 99 cents a month for 50GB of space to \$9.99 a month for a whopping 1TB of space.) If you have only 3GB of photos, you may be able to use iCloud Photo Library without spending anything extra, but because my Photos Library is nearing 10GB, I'd probably need to subscribe to take full advantage of the feature. The choice is yours, dear reader. If you decide not to use the iCloud Photo Library, rest assured that Photo Stream will still work as it did in iPhoto.

Putting My Photo Stream and Shared Albums to Work

Like iPhoto before it, Photos includes the *My Photo Stream* feature that automatically shares the photos you take among your Macs, your PCs, and any Apple device running iOS 5.0 or later. Unlike with iCloud Photo Library, however, your images and videos are stored on your Mac's local hard drive and *not* in your iCloud storage. (The images and videos are also always full-size and full-resolution.)

To turn on My Photo Stream, choose Photos⇨Preferences and click the iCloud toolbar button; then select the My Photo Stream check box. When the feature is turned on, Photos should automatically import My Photo Stream photos taken with iOS devices and other Mac computers to your Photos Library.

When the My Photo Stream feature is turned on, it's a cinch to share images and videos across your Apple computers and devices; simply copy the items into the My Photo Stream album! Photos automatically sends the selected images to all compatible devices over your Wi-Fi connection. (Note that all devices using My Photo Stream must be configured using the same Apple ID.)

You can also choose to share specific photos by using iCloud Photo Sharing, which can be turned on from the Photos Preferences dialog. (Yes, I agree, Apple *seriously* needs to work on choosing more discrete names for these features.) Choose Photos⇨Preferences, click the iCloud tab on the toolbar, and select the iCloud Photo Sharing check box.

To subscribe to a shared album invitation from another person, click the Shared button on the toolbar (or the Shared entry in the sidebar); then click the Activity album. Click the desired shared album, and click Accept.

To create your own shared album, select the images you want to share, click the Share button on the toolbar, click the iCloud Photo Sharing item, and then click New Shared Album. Photos prompts you for the album name and the email addresses of the folks you want to invite to your shared album. After you enter each email address, click the Create button in the dialog to start the ball rolling. You can also add items to or delete items from your shared album the same way that you would with a regular Photos album.

IS THAT FACEBOOK, TWITTER, AND FLICKR I SPY?

Indeed it is! Photos includes direct connections to both your Facebook and Twitter social networking accounts (www.facebook.com and www.twitter.com) and your Flickr online gallery account (www.flickr.com). You can simply select one or more photos and send them automatically to any of these services. Click the Share button on the toolbar to select the type of account.

The first time you select photos in the Viewer (or an album) and choose either option, Photos prompts you for permission to set up your connection. (Of course, this requires you to enter your Facebook, Twitter, and Flickr account information — hence the confirmation request.) Click Set Up, and provide the data each site requires.

After you set up your accounts, simply select your photos or albums, click the Share toolbar button, and choose the menu item for the desired service. Apple, you absolutely *rock!*

IN THIS CHAPTER

Taking stock of the iMovie window

Importing and adding media content

Using transitions in your movie

Putting text titles to work

Adding animated maps

Creating a movie trailer

Sharing your movie with others

Chapter 15

Making Film History with iMovie

Remember those home movies you used to make in high school? They were entertaining and fun to create, and your friends were impressed. In fact, some kids were so downright inspired that you're not surprised when you discover at your high school reunion that they turned out to be graphic artists or got involved in video or TV production.

iMovie, part of Apple's digital lifestyle suite, makes moviemaking as easy as those homemade movies. Apple simplifies all the technical stuff, such as importing video and adding audio, leaving you free to concentrate on your creative ideas. In fact, you won't find techy terms such as *codecs* and *keyframes* in this chapter. I guarantee you'll understand what's going on at all times. (How often do you get a promise like that with video-editing software?)

With iMovie, your digital video device, and the other applications that Apple provides, you can soon produce and share professional-looking movies, with some of the same creative transitions and titles used by Those Hollywood Types every single day, all on your iMac, all by yourself.

If you turn out to be a world-famous Hollywood-Type Director in a decade or so, don't forget the little people — like computer-book authors — along the way!

Shaking Hands with the iMovie Window

If you've ever tried using a professional-level video-editing application, you probably felt as though you were suddenly dropped into the cockpit of a jumbo jet. In iMovie, though, all the controls you need are easy to use and logically placed.

To launch iMovie, click the iMovie icon on the Dock or within Launchpad. (It looks like a star on the Hollywood Walk of Fame. Very fitting!) You can also click the Applications folder in any Finder window Sidebar and then double-click the iMovie icon.

To follow the examples I show you here, take these strenuous steps and create a new movie project:

1. Choose File ⇨ New Movie (or press ⌘+N).

Alternatively, you can click the New button on the iMovie toolbar and choose the Movie entry from the pop-up menu. No matter how you get there, iMovie displays the window shown in Figure 15-1.



TIP

You can also create movie *trailers* (short previews or teasers) within iMovie, as I demonstrate later in this chapter. Generally, however, you should create your trailer project *after* your movie is completed (unless, of course, you're specifically creating just a trailer). Why? For the same reason that studios create trailers after the filming is finished: After you complete your movie, all the clips will be imported already, and you'll have a better idea of what you want to include while “teasing” your audience!

2. Click a Theme thumbnail to select a theme to apply to your finished movie.



TIP

To preview the appearance of a theme, hover your cursor over the thumbnail and click the Play button that appears.

iMovie automatically adds the transitions and titles that correspond to that theme.

Normally, this is what you want to do. However, you can add transitions and titles manually, as I show you later in this chapter. So if you decide not to use a theme out of the gate, click the No Theme thumbnail.

FIGURE 15-1:
Creating a new
movie project
within iMovie.



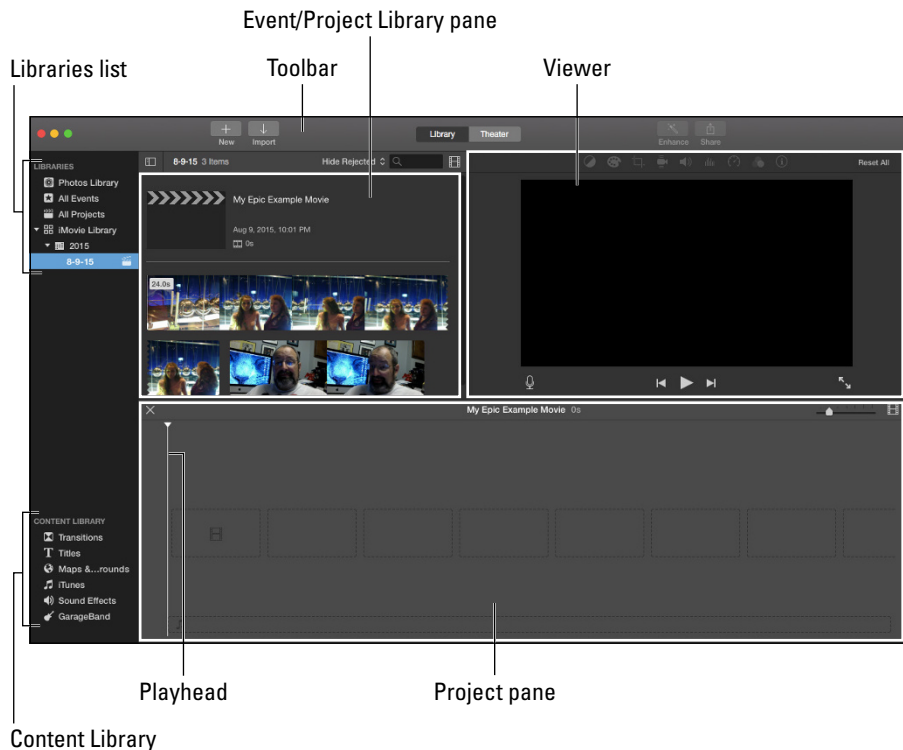
3. Click the **Create** button.
4. Type a name for your project.
5. Click **OK**.

iMovie adds the new project to the thumbnail list in the Project Library pane, and you're on your way! Check out Figure 15-2: This is the whole enchilada, in one window.

You'll use these controls and displays most often:

- » **Viewer:** Think of this as being just like your TV or computer monitor. Your video clips, still images, and finished movie play here. You also crop and rotate your video within the Viewer.
- » **Content Library:** This row of buttons allows you to add effects such as transitions, titles, music, and sound effects.
- » **Libraries list:** This list allows you to display your photos (from your Photos, iPhoto, and Aperture libraries), as well as all the video clips you can add to your project from events you've imported. You can also select an existing iMovie project from the iMovie Library. To hide the Libraries list and make more room for the Event/Project Library pane, click the Hide button that appears near the top-left corner of the iMovie window. (To display the Libraries list again, click the same button, which now reads Show.)

FIGURE 15-2:
iMovie is a
lean, mean,
video-producing
machine.



REMEMBER

» **Event/Project Library pane:** If you select an event from the All Events entry in the Libraries list, iMovie displays a thumbnail of that event’s content in the *Event* pane. (Move the mouse over the Event thumbnail to see previews of the clips.) If you decide you want to include a clip, double-click the Event to display the clips and add the desired clip to your project. This pane also acts as the *Project Library* pane, where you can display your iMovie projects; click the All Projects entry in the Libraries list to display your projects as thumbnails. To load a project, just double-click the thumbnail, and it appears in the Project pane.

The Event/Project Library pane displays different content, depending on the entry you select in the Library list.

» **Project pane:** This pane is where most of your work gets done within iMovie, displaying the elements you added to that specific project (such as video clips, still photos, and audio clips). Your movie appears as a linear strip of thumbnails, making it easy to select, insert, and delete elements.

» **Playhead:** The white vertical line you see in the Event and Project panes is the *playhead*, which indicates the current editing point while you’re browsing your clips or creating your movie. When you’re playing your movie, the playhead turns orange and moves to follow your progress through the movie.

» **Toolbar:** This strip of buttons allows you to import video, share your completed movies, enhance and adjust video clips, and switch between the iMovie Library and iMovie Theater. (More on iMovie Theater later in the chapter.)

Those are the major highlights of the iMovie window. A director's chair and megaphone are optional, of course, but they do add to the mood.

A Bird's-Eye View of Moviemaking

I don't want to box in your creative skills. After all, you can attack the moviemaking process from a number of angles. (Pun, unfortunately, intended.) However, I've found that my movies turn out best when I follow a linear process. So before I dive into specifics, allow me to give you an overview of moviemaking with iMovie.

Here's my take on the process, reduced to seven basic steps:

1. Import your video clips from your video device, your iMac's FaceTime HD camera, your Photos Library, or your hard drive.
2. Drag your new selection of clips from the Event pane to the Project pane, and arrange them in the desired order.
3. Import or record audio clips (from iTunes, GarageBand, or external sources, such as audio CDs or audio files you've recorded yourself), and add them to your movie.
4. Import your photos (directly from Photos, iPhoto, Aperture, or your hard drive), and place them where needed in your movie.
5. Add professional niceties, such as voiceovers, transitions, effects, and text, to the project.
6. Preview your film, and edit it further if necessary.
7. Share your finished film with others through the web, email, your Apple TV, or an iOS device (an iPhone, iPad, or iPod touch), or within iMovie Theater.

If you have an iMac with an optical drive — or an external USB optical drive — you can also use a DVD recording application to create a DVD movie disc using your exported movie. I use (and recommend) Toast 14 from Roxio, at www.roxio.com.



TIP

Wondering how you save your project in iMovie — especially when the File menu has no Save item? iMovie automatically saves your project as you work, leaving you free to concentrate on your moviemaking art.

Importing the Building Blocks

Sure, you need video clips to create a movie of your own, but don't panic if you have a small supply. You can certainly turn to Apple's other digital media applications for additional raw material. (See, I told you that whole "integration" thing would come in handy.)

Along with video clips you import from your digital video device, your iMac's trusty built-in FaceTime HD camera (or an external webcam), and your hard drive, you can call on Photos, iPhoto, and Aperture for still images (think credits) and iTunes and GarageBand for background audio and effects. In this section, I show you how.

Pulling in video clips

Your iMac comes equipped with extras that come in handy for video editing — a large hard drive and ports to connect stuff. Depending on the iMac model you're using and your external devices, you may use a USB, Thunderbolt, or FireWire connection. Virtually all of today's mass-storage camcorders, tablets, and smartphones use a USB connection to transfer clips. I cover both older tape-based camcorders and USB/Thunderbolt mass-storage devices in this section.

Oh, and don't forget that your iMac has a FaceTime HD camera on board, ready to record clips. Heck, you're a self-contained movie studio!

Here's the drill if your clips are on your FireWire mini-DV camcorder or mass-storage USB video device:

- 1. Plug the proper cable into your iMac.**
- 2. Set the camcorder to VTR (or VCR) mode.**
Some camcorders and digital cameras call this *Play mode*.
- 3. Click the Import button on the toolbar (refer to Figure 15-2).**
iMovie opens the Import window.
- 4. Open the Import To pop-up menu at the top of the Import window, and choose the destination for your new video clips.**



TIP

To create a new event for the imported clips, choose New Event. Alternatively, you can import into an existing Event or iMovie project. If your family reunion spanned more than one day, you can create a new Event for each day. (How do they think up these things?)

5. Click the desired video source in the Source list at the right of the Import window.

If you're using a tape-based camcorder, playback controls appear under the Camera Import window, mirroring the controls on your camcorder. This allows you to control the unit from iMovie. *Keen!* If you're using a mass-storage camcorder connected by USB, you instead get an Import All button beneath the thumbnails of available clips. (Note that this button changes to Import Selected if you select one or more of the clips.)

If you choose your FaceTime HD camera from the list, you see a real-time preview and a big red Record button. Click the Record button to start and stop recording. (You can skip the rest of the steps in this section, which deal only with USB and FireWire camcorders.)

6. To import selected clips from your FireWire DV camcorder, advance the video to a couple of seconds before the point where you want to start your capture; then click Import.

7. Click OK, and admire your handiwork.

iMovie begins transferring the footage to your drive and automatically adds the imported clips to the specified destination.



TIP

If your clips are already on your drive, rest assured that iMovie can import them, including those in high-definition video (HDV) format. iMovie also recognizes several other video formats, as shown in Table 15-1.

TABLE 15-1

Video Formats Supported by iMovie

File Type	Description
DV	Standard 4:3 digital video
DV widescreen	Widescreen 16:9 digital video
MOV	QuickTime movies
HDV and AVCHD	High-definition (popularly called <i>widescreen</i>) digital video, in 720p and 1080i
MPEG-2	Digital video format used for DVD movies
MPEG-4	A popular format for streaming Internet and wireless digital video, as well as handheld iOS devices such as the iPad, iPhone, and iPod touch

To import a movie file, follow this bouncing ball:

1. **Click the Import button on the toolbar.**
2. **Click the drive that stores your clips on the Sidebar, and navigate to their location.**
3. **Select the desired clips in the list.**
4. **From the Import To pop-up menu at the top of the Import window, choose the destination within iMovie.**
5. **Click Import.**

Alternatively, you can drag a video clip from a Finder window and drop it in the Project pane.

Making use of still images

Still images come in handy as impressive-looking titles or as ending credits to your movie. (To be truly professional, make sure you list a gaffer and a best boy.) However, you also can use still images to introduce scenes, close scenes, and separate clips. I use stills when delineating the days of a vacation within a movie or different Christmas celebrations over time, for example.

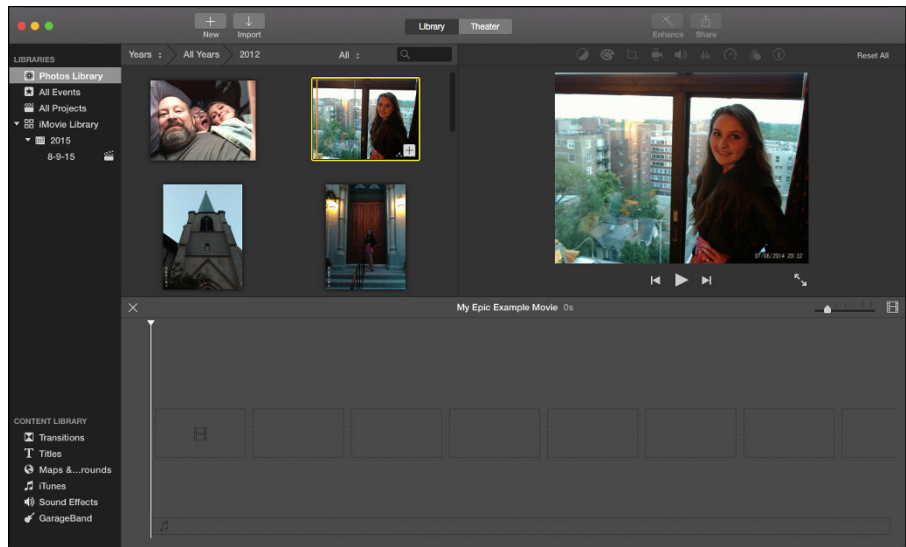
Here are two methods of adding stills to your movie:

- » **Adding images and video clips from Photos, iPhoto, or Aperture:** Click the Photos, iPhoto, or Aperture Library entries in the Libraries list to access your images, right from iMovie (as shown in Figure 15-3). When you find the image you want to add, just drag it to the right spot in the Project pane.
- » **Importing images from your hard drive:** If you're a member of the International Drag-and-Drop Society, you can drag TIFF, JPEG, GIF, PICT, PNG, and PSD images directly from a Finder window and drop them into the Project pane.

Importing and adding audio from all sorts of places

You can pull in everything from Wagner to Weezer as both background music and sound effects for your movie. In this section, I focus on how to get those notes into iMovie and then how to add them to your movie by dragging them to the Project pane.

FIGURE 15-3:
Pulling still
images from
Photos is child's
play.



You can add audio from several sources:

» **Adding songs from iTunes and GarageBand:** Click the iTunes button in the Content Library (or press ⌘+4) to display the contents of your iTunes Library. Click the desired song in the scrolling list (which displays all your music). To display a playlist or Smart Playlist, click the Music drop-down list above the waveform display. Figure 15-4 illustrates the dynamite wedding ceremony playlist I selected for this project. You can add a track to your movie by dragging any song entry from the list to the desired spot in the Project pane.

You're not limited to iTunes for ear candy, however. If you exported any original music you've composed in GarageBand to your iTunes Library, you can use those songs in your movie. Click the GarageBand button in the Content Library to view your GarageBand music and then drag and drop to your heart's content.

» **Adding sound effects:** If you need the sound of a horse galloping for your Rocky Mountains vacation clips, click Sound Effects in the Content Library. iMovie includes top-shelf audio effects you can use in the sound effects audio track in the Project pane. This way, you can add sound effects even when you've already added a background song. Again, to add a sound effect, drag it to the perfect spot in the Project pane.



TIP

If you have several gigabytes of music in your iTunes Library, it might be more of a challenge to locate Janis Joplin's rendition of "Me and Bobby McGee," especially if she's included in a compilation. Let your supercomputer do the digging for you! Click in the Search box above the track list, and begin

typing a song name. iMovie narrows down the song titles displayed to those that match the characters you type. To reset the search box and display all your songs in the Library or selected playlist, click the X icon that appears to the right of the box.

» **Recording directly from a microphone:** Yep, if you're thinking voiceover narration, you've hit the nail on the head. Check out the nearby sidebar for the scoop.

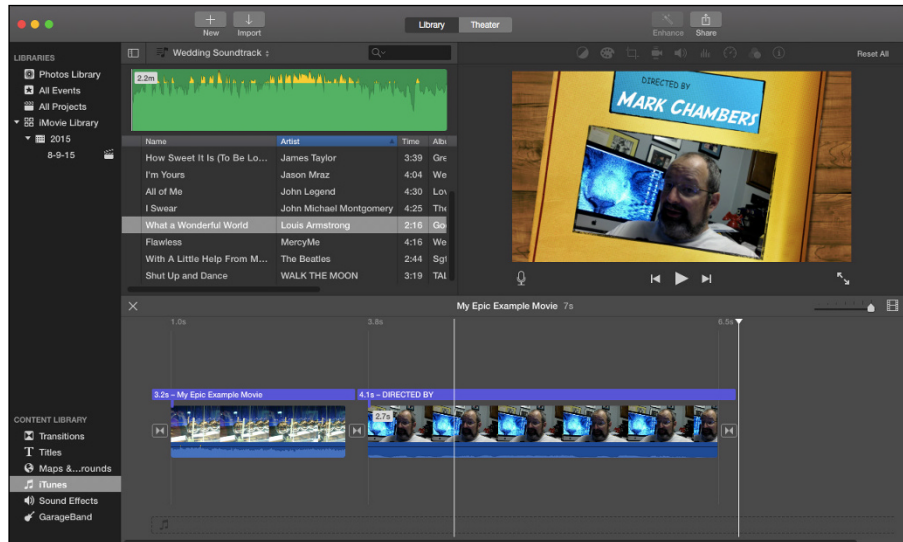


FIGURE 15-4: Calling on my iTunes Library to add Satchmo to my iMovie.



TIP

You can fine-tune both the audio within a video clip or an audio clip you add to your project. With the desired audio or video selected in the Event pane, click the Adjust button at the top of the window and then click one of the buttons that appear above the Viewer. These buttons provide audio controls that allow you to change the volume of the selected clip. You can even add effects to your audio, such as Shortwave Radio or Cathedral, and you can use iMovie's built-in Equalizer to fine-tune the audio. When you're finished tweaking, click the Adjust toolbar button again. (Oh, and don't forget that you can always return the clip to its original settings. Just click the Reset Clip button at the far right side of the Adjust toolbar; it looks like an arrow curving to the left.)

NARRATION THE EASY WAY

Ready to create that award-winning nature documentary? You can add voiceover narration to your iMovie project that would make Jacques Cousteau proud. In fact, you can record your voice while you watch your movie playing, allowing perfect synchronization with the action! To add narration, follow these steps:

1. Press V to display the Voiceover controls under the Viewer.

2. Click the Voiceover Options button, and select the input device.

Today's iMac models sport a pair of decent internal microphones, but you can always add a USB microphone to your system for higher-quality sound.

3. Drag the input volume slider to a comfortable level.

4. To mute the audio from your movie (which may make it easier to concentrate on your narration), select the Mute Project check box.

5. Click in the desired spot within your movie in the Project pane where the narration should begin.

6. Click the Start Recording button.

iMovie prompts you with three tones before the playhead reaches the selected spot in your movie, so make sure you begin speaking after the third tone.

7. Watch the video while you narrate so you can coordinate your narration track with the action.

8. Click the red Stop Recording button to stop recording.

iMovie adds an icon to the Project pane under the video with the voiceover.

9. Click the Close button in the Voiceover controls.

Building the Cinematic Basics

It's time to dive in and add the building blocks to create your movie. Along with the video clips, audio tracks, and still images you've imported, you can add Hollywood-quality transitions, optical effects, and animated text titles. In this section, I demonstrate how to elevate your collection of video clips into a real-life, honest-to-goodness movie.

Adding clips to your movie

You can add clips to your movie via the Project pane and Event/Project Library pane (refer to Figure 15-2). The Dynamic Duo works like this:

- » **Project pane:** This displays the media you've added to your project so far, allowing you to rearrange the clips, titles, transitions, and still images in your movie.
- » **Event/Project Library pane:** This pane acts as the source repository for all your clips, displaying them arranged by Event (the date they were shot or imported) or by Project (media you've added to existing iMovie projects).

Typically, you add a clip to your movie from an Event. Follow these steps:

1. **Click the All Events entry in the Libraries list.**
2. **Move the cursor across clips in the Event pane to watch a preview of the video.**
3. **When you've decided what to add to your project, add the entire clip or a selection:**
 - *To select an entire clip:* Right-click the clip's thumbnail and choose Select Entire Clip from the menu that appears.
 - *To select a portion of a clip:* Click and hold, and then drag the cursor across the thumbnail. A yellow frame appears around your selection. To change the length of the selected video, hover the cursor over either end of the clip and drag the handle that appears on either side. If you make a mistake while selecting video, just click any empty space within the Event pane to remove the selection frame and try again.
4. **Drag the selection from the Event pane to the spot where it belongs in the Project pane.**

Alternatively, you can press the E key.



**AUTHOR
SAYS**

Mark's Maxim: Preview your work — and do it often.

iMovie includes a Play Full Screen button, which appears when you move the cursor to the Viewer. (Alternatively, press ⌘+Shift+F or choose View ⇨ Play Full Screen to watch the selection.) Press the spacebar to pause, and press Esc to return to iMovie. Of course, you can also move the cursor across the filmstrip in the Edit pane to quickly browse your project.

To play a selection from the beginning, press \ (backslash). If you've ever watched a director at work on a movie set, you may have noticed that he or she constantly watches a monitor to see what things will look like for the audience. You have the same option in iMovie!

Marking clips

While you're watching video in the Event/Project Library pane, you may decide that a certain clip has a favorite scene or that another clip has material you don't want, such as Uncle Ed's shadow puppets. (Shudder.) iMovie features *Favorite* and *Rejected* frames, allowing you to view and use your best camera work (and ignore the worst stuff).

To mark a great video clip as a Favorite, select and right-click a range of frames or the entire clip in the Event/Project Library pane, and then select the Favorite menu item (or press F). To mark clips that are subpar, select the offending clip in the Event/Project Library pane and press Delete (or right-click and choose Reject). Clips marked as Favorites have a green line on top of the clip, and clips marked as Rejected have a red line.



TIP

You can use the Search Filter option to specify which types of marked clips are shown: Click the pop-up menu next to the Search field at the top of the Event/Project Library pane. Your options include displaying all clips, displaying only Favorite clips, hiding Rejected clips, or displaying only Rejected clips.

If you decide that a Rejected clip isn't so bad after all or that a Favorite really isn't your best work, no problem. Unmark any selected Favorite or Rejected scene in the Event/Project Library pane by choosing Mark↔Unrate (or just press U).

Removing clips from your movie

Don't like a clip? Bah. To banish a clip from your movie, follow these steps:

- 1. Click the offending clip in the Project pane to select it.**

Alternatively, you can select a portion of a clip by holding down the mouse button and then dragging the selection box that appears.

- 2. Press Delete.**

This deletes the clip from the Project pane, but the clip is still available if you choose All Events or the iMovie Library from the Libraries list.



TIP

If you remove the wrong clip, don't panic. Instead, use iMovie's Undo feature (press ⌘+Z) to restore it.

Reordering clips in your movie

If Day One of your vacation appears after Day Two, you can easily reorder your clips and stills by dragging them to the proper space in the Project pane. When you take your finger off the mouse (or trackpad), iMovie automatically moves aside the rest of your movie with a minimum of fuss and bother.

Editing clips in iMovie

If a clip has extra seconds of footage at the beginning or end (as it should, to ensure you get all the action), you don't want that superfluous stuff in your masterpiece. Our favorite video editor gives you the following functions:

- » **Crop:** Removes unwanted material from a video clip or still image
- » **Rotate:** Rotates a clip or image on its center axis
- » **Trim:** Trims frames from a video clip

Before you can edit, however, you have to select a section of a clip:

1. **Click a clip or image in either the Project pane (where changes you make are specific to this project) or the Event pane (where edits you make are reflected in any project using that footage).**
iMovie displays the clip or image in the monitor.
2. **To select the entire clip or image, simply click it.**
3. **Drag the cursor across the thumbnail to select the section of the media you want to edit.**

Some editing functions, such as Crop and Rotate, automatically apply to the entire clip.

The selected region is surrounded by a yellow frame. You're ready to edit that selected part of the clip.



TIP

When you move the cursor to the beginning or end of the selection, handles appear. You can make precise changes to the beginning and end of the selected section by dragging the handles.

After you've selected the perfect portion of the clip to edit, you can perform the following actions:

- » **To crop:** Click the Adjust button at the top of the screen to display the editing controls in the Viewer and then click the Crop button. Drag the edges of the frame using the handles to select the section you want to keep. To preview your selection, click the Play button that appears when you move the cursor into the Viewer pane. When you're ready, click the Done button (which bears a check mark), and everything but the selected region is removed.
- » **To rotate:** Click the Adjust button and then click the Crop button. Now you can click one of the two rotation buttons that appear at the right side of the Viewer (both of which carry a box and curved arrow icon). Each click rotates the media 90 degrees in the indicated direction. Click the Done button (with the check mark) when the clip or image is properly oriented.
- » **To trim:** Right-click the selection and choose Trim to Playhead from the contextual menu. iMovie removes the frames up to the playhead position from the selected video.



TIP

Edits you make to one clip or still image can actually be copied to multiple items. Select the edited clip and choose Edit⇨Copy from the iMovie menu. Now you can select one or more clips and choose Edit⇨Paste Adjustments to apply Video, Audio, or Crop edits. (To apply all three types of edits, just choose All.)

Transitions for the masses

Many iMovie owners approach transitions as visual bookends: They merely act as placeholders that appear between video clips. Nothing could be further from the truth, though, because judicious use of transitions can make or break a scene. Which would you prefer after a wedding ceremony — an abrupt, jarring cut to the reception or a gradual fadeout to the reception?



REMEMBER

Because today's audiences are sensitive to transitions between scenes, you should try not to overuse the same transition. Pick two or three that match the mood of your film and the scenes between which you're transitioning. Also carefully weigh the visual impact of a transition. You might even decide that having no transition is the most effective. (Directors call this deliberate lack of a transition a *jump cut*.)

iMovie includes a surprising array of transitions, including old favorites (such as Fade In and Dissolve) and some nifty stuff that you might not be familiar with (such as Cube and Page Curl). To display your transitions collection (see Figure 15-5), click the Transitions entry in the Content Library (or press ⌘+1).



FIGURE 15-5:
Add transitions
for flow between
clips in iMovie.

To see what a particular transition looks like, move the cursor over the thumbnail to display the transition in miniature.

Adding a transition couldn't be easier: Drag the transition from the thumbnail list, and drop it between clips or between a clip and a still image in the Project pane. In iMovie, transitions are applied in real time.

Even *Gone with the Wind* had titles

The next stop on the iMovie Hollywood Features Tour is the Titles list, shown in Figure 15-6. You find it by clicking the Titles entry in the Content Library or by pressing ⌘+2. You can add a title with a still image, but iMovie also includes everything you need to add basic animated text to your movie.

Most of the controls you can adjust are the same for each animation style. You can change the font, the size of the text, and the color of the text. To add a title manually, follow these steps:

1. **Select a Title animation thumbnail from the Titles list, and drag it to the desired spot in the Project pane.**
Note that the title is displayed in the Viewer as well as in the Project pane.
2. **Select the Title, and click the Adjust button at the top of the window.**
3. **Click the Title Settings button (which bears a capital T symbol) to make any changes to the fonts or text attributes.**

4. Click in the text box within the Viewer to delete the default text and type your own titles.
5. Click the Done button to save your changes.
6. Click the Play button in the Viewer to preview your title.

iMovie displays a preview of the effect in the monitor with the settings you choose.



FIGURE 15-6:
Add titles for your next silent film.

Adding maps and backgrounds

iMovie includes easy-to-use animated maps — think Indiana Jones traveling by airplane from place to place — and static backgrounds that can be used with your titles. To display them, click the Maps & Backgrounds entry in the Content Library (or press ⌘+3).

To use an animated map, follow these steps:

1. Drag one of the globe or map thumbnails to the Project pane.
2. After the globe or map is created, select it and click the Adjust button to display the controls above the Viewer.

HAVE A SEAT IN THE IMOVIE THEATER

After you produce a great movie, what's the easiest way to watch it? Or how can you quickly and easily share that movie with your other iOS devices and your Apple TV? The answer is iMovie *Theater mode*, where you can add completed movies, trailers, and individual video clips — and everything is shared automatically using iCloud! (Any Mac or iOS device with iMovie installed also includes its own iMovie Theater, and the stuff you add appears there.)

Suppose you just want to present your content on your own iMac — or on a projector or external monitor you've connected to your computer. One click of the Theater button at the top of the iMovie window displays thumbnails of the content you've shared to the Theater. You don't have to load a finished movie project in Library mode. Double-click any thumbnail to view that item. To switch back to Library mode and work on your current iMovie project, click the Library button at the top of the window.

To add a movie, trailer, or video clip in the Event/Project Library pane, click the item to select it, click the Share button on the toolbar at the top of the iMovie window, and click the Theater button.

- 3. Click the Map Settings button (which bears a globe icon) and then click the Start Location button (and, optionally, the End Location button) to enter the start and stop points for the animation.**

Type a city or place name to see your choices. (Heck, you can even type an airport code or decimal coordinates to specify the spot.)

- 4. Click Done, and watch as iMovie animates your location (or your trip) in seconds!**

To add a static background from the browser, drag it to the desired spot within the Project pane.

Creating an Honest-to-Goodness Movie Trailer

Yes, friends, you read that correctly: iMovie includes a Trailer feature that can turn your film clips into a Hollywood-class preview, complete with genre transitions and background music.

To create a trailer project, follow these steps:

1. **Click the New button on the iMovie toolbar, and choose Trailer from the pop-up menu.**
2. **Click a Movie Trailer thumbnail to select it.**

If you hover the cursor over the thumbnail and click the Play icon that appears, iMovie displays a nifty preview of the trailer style you selected. You can click different thumbnails to preview their look before you decide. Naturally, you want to choose a trailer style that most closely matches the mood you want to project with your movie.

Note that each trailer has a suggested number of cast members. This number reflects the number of people who will appear in the clip placeholders during the editing process. (More on this in a moment.)

3. **Click Create.**
4. **Type a name for your project, and click OK.**

iMovie replaces the Project pane with the Trailer pane, as shown in Figure 15-7. You can fine-tune your trailer with the Outline, Storyboard, and Shot List tabs:

- » **Outline:** On the Outline tab, you can edit the titles used in the trailer, as well as pop-up lists of information, such as the gender of the star(s) and the logo style you want for your “studio” at the beginning of the trailer. To change a text field, click in it and type the new text. You see the changes you make in the Trailer display appear in the monitor in real time.
- » **Storyboard:** After you complete your edits to the titles, click the Storyboard tab. Now you can edit the text for each transition: Simply click the text to display the edit box, and type. You can also drag clips from the Event pane (or from a Finder window) to fill the storyboard’s placeholders for video clips. To delete a clip from the storyboard, click it to select it, and press Delete.



TIP

To preserve the look and feel of the trailer storyboard, try to match your clips with the description and suggested activity indicated by the placeholder. (In other words, don’t stick a wide-angle video clip of the family dog cavorting in the yard into a placeholder marked Closeup. You get the idea.)



TIP

The Storyboard tab may not look like an editing timeline, but you can move the cursor anywhere within the storyboard to preview your trailer. The play-head indicator appears wherever the cursor appears, allowing you to watch the clip or transition it’s resting on. You’ll soon be sweeping the mouse to the left or right to move through each section of your trailer.

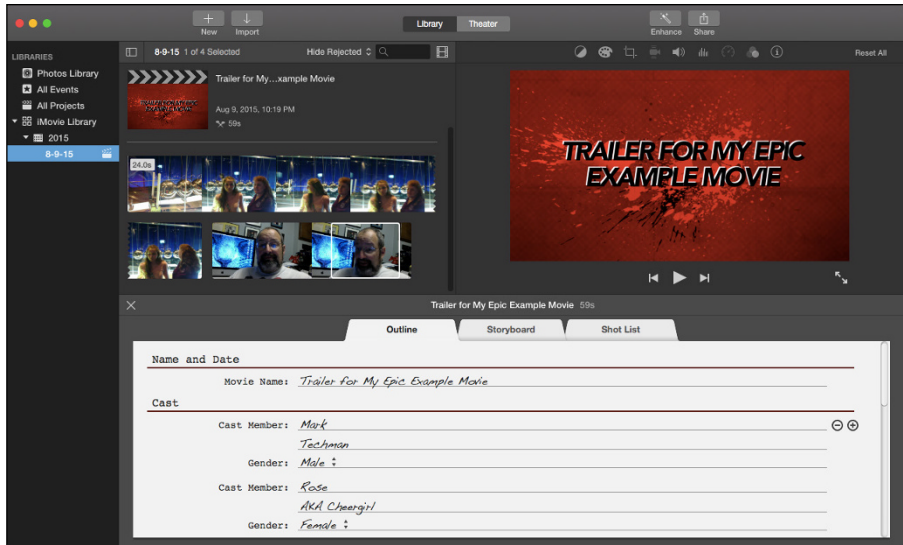


FIGURE 15-7: Build your movie trailer from the Trailer pane.

» **Shot List:** For an overall listing of each clip required for the full trailer, click the Shot List tab. On this tab, clips are organized by type. All the action clips appear in one section, for example, and all the landscape and close-up clips are grouped as well. If necessary, you can also add, delete, or swap video clips from the Shot List.

To preview your trailer in its entirety, move the cursor inside the Viewer and click the Play button (or the Play Full-Screen button at the far right of the Viewer controls). Naturally, any storyboard placeholder you haven't filled with a clip displays just the placeholder.

Note that iMovie displays your trailer when you click the Updated Projects entry in the Libraries list, and it now appears in the Event/Project Library pane.

I bet all those hard-working Hollywood video editors are fuming at how easy it is to create a trailer in iMovie!

Sharing Your Finished Classic with Others

Your movie is complete, and iMovie has saved it automatically to your drive. Now you're wondering where to go from here. Select your movie in the Event/Project Library pane, and click Share on the toolbar at the top of the window. iMovie can

unleash your movie on your unsuspecting family and friends (and even the entire world) in several ways:

- » **iTunes:** Send your movie to your iTunes Library as a movie.
- » **Theater:** Add your movie to the iMovie Theater on your iMac.
- » **YouTube/Facebook/Vimeo/CNN iReport:** Why, certainly you can send your iMovie directly to any of these websites! Can it get any more convenient than that? (I think not.)
- » **File:** Create a copy of your movie on your hard drive in one of four resolutions (from Standard Definition to High Definition).
- » **Email:** Send your movie as an email message attachment.

When you choose a sharing option, iMovie displays the video quality for the option and makes automatic changes to the movie attributes. (Choosing Email, for example, reduces the finished movie as far as possible in file size.)



REMEMBER

If you're worried about permanently reducing the quality of your project by sharing it in a smaller size, fear not! When you choose a sharing option to export your movie, your original project remains on your hard drive, unchanged, so you can share a better-quality version at any time in the future.

IN THIS CHAPTER

Navigating the GarageBand window

Adding tracks and loops to your song

Repeating loops and extending your song

Building arrangements

Adding effects to instruments

Exporting your work across the globe

Burning your song to an audio CD

Chapter 16

Recording Your Hits with GarageBand

Do you dream of making music? I've always wanted to join a band, but I never devoted the time to learning to play the guitar. You know the drill: Rock stars struggle for years to master an instrument, practice for untold hours, and memorize chords. Wait a second; I almost forgot. You don't need to do *any* of that now!

Apple's GarageBand lets a musical wannabe (like yours truly) make music with an iMac — complete with a driving bass line, funky horns, and perfect drums that never miss a beat. In fact, the thousands of prerecorded loops on tap in this awesome application allow you to design your music to match that melody running through your head, from techno to jazz to alternative rock.

This chapter explains everything you need to know to create your first song. I also show you how to import your hit recording into iTunes so that you can listen to it on your iPhone with a big silly grin on your face (as I do) or add it to your next iMovie project or Photos slideshow.

Don't be too smug when you think of all that practicing and hard work you missed out on. What a shame!

Shaking Hands with Your Band

As you can see in Figure 16-1, the GarageBand window isn't complex, and that's a good design. In this section, I list the most important controls so you know your Play button from your Loop Browser button.

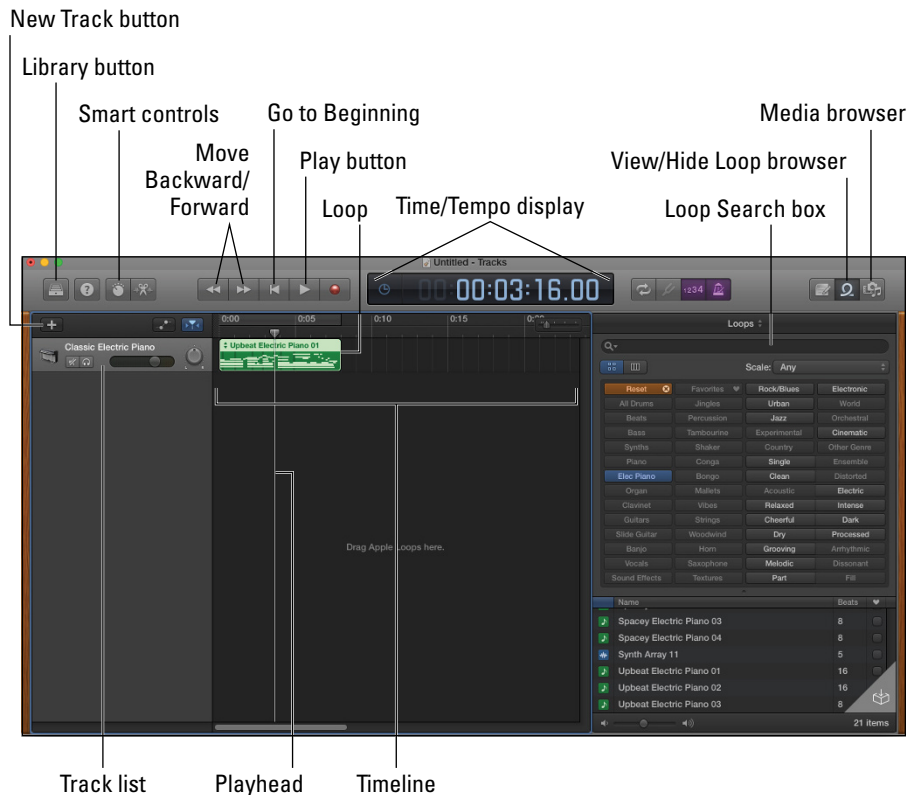


FIGURE 16-1: The GarageBand window, edged in woodgrain, no less.

Your music-making machine includes

- » **Track list:** In GarageBand, a *track* is a discrete instrument you set up to play one part of your song. For example, a classical piece for string quartet would have four tracks — one each for violin, viola, cello, and bass. The Track list contains all the tracks in your song, arranged so you can easily see and modify

them, like the rows in a spreadsheet. A track begins in the list, stretching out to the right all the way to the end of the song. You can record software instrument tracks without really playing an instrument, or record your voice or play an instrument using real instrument tracks. (More on these and other types of tracks later in the chapter.) In the upper left of Figure 16-1, I already have one track defined: a Classic Electric Piano.

- » **Timeline:** This scrolling area holds the loops (see the next bullet) you add, compose, or record, allowing you to move and edit them easily. When a song plays, the Timeline scrolls to give you a visual look at your music. (Bear with me; you'll understand that cryptic statement in a page or two.)
- » **Loop:** *Loops* — prerecorded clips of an instrument being played in a specific style and tempo — are the building blocks of your song. Most are five seconds in length, and others are even shorter. You can drag loops from the Loop Browser to a track and literally build a bass line or guitar solo. (It's a little like adding video clips in iMovie to build a film.) Loops can also be repeated within a track, which I discuss further in a page or two.
- » **Playhead:** This vertical line is a moving indicator that shows you the current position in your song while it scrolls in the Timeline. You can drag the playhead to a new location at any time. The playhead also acts like the insertion cursor in a word processing application: If you insert a section of a song or a loop from the Clipboard, it appears at the playhead's current location. (More on copying and inserting loops later, so don't panic.)
- » **New Track button:** Click this button to add a new track to your song.
- » **View/Hide Loop Browser button:** Click the button with the loop icon to display the Loop Browser at the right side of the window (as shown in Figure 16-1); click it again to close it. You can see more of your tracks' contents at one time without scrolling by closing the Loop Browser.
- » **View/Hide Media Browser button:** Click this button (which bears icons of a filmstrip, camera, and musical note) to display the Media Browser at the right side of the window; click it again to close it (and see more of your tracks). Use the Media Browser to add media (in this case, digital song files or movies) to your GarageBand project for use as ringtones.
- » **Go to Beginning button:** Clicking this button returns the playhead to the beginning of the Timeline. (Note that this button appears only when you're not playing a song.)
- » **Move Back/Forward One Measure buttons:** To move quickly through your song by jumping to the previous or next measure, click the corresponding button.
- » **Play button:** Hey, old friend! At last, a control you've probably used countless times before — and it works just like the same control within iTunes or on

your audio CD player. Click Play, and GarageBand begins playing your entire song. Notice that the Play button turns green. To pause the music, click Play again; the button loses that sexy green sheen, and the playhead stops.

» **Time/Tempo display:** This cool-looking LCD display shows you the current playhead position in seconds.

You can click the clock icon at the left of the display to choose Beats & Project mode, which includes these features:

- *Measures:* Displays the current measure and marks the beat
- *Chord:* Displays note and chord names
- *Project:* Shows or changes the song's key, tempo, and signature

» **Volume slider:** Here's another familiar face. Just drag the slider to raise or lower the volume.



TIP

Of course, more controls are scattered around the GarageBand window, but these are the main controls used to compose a song — which is the next stop!

Composing Made Easy

In this section, I cover the basics of composition in GarageBand, working from the very beginning. Follow along with this running example:

1. Click the GarageBand icon on the Dock.

It looks like an electric guitar with a classic amplifier.

2. If GarageBand opens a window for a previous project, close it by clicking the Close button in each window.

GarageBand displays the top-level New Project window, as shown in Figure 16-2.

3. Click New Project in the list at the left.

Click the Details item at the bottom of the New Project window to display or change the advanced settings for your new song, including Tempo, Key and Time Signatures and Audio Input/Output.



TIP

4. Click the Empty Project icon, and click the Choose button.

GarageBand displays the Source dialog.

FIGURE 16-2:
Start creating
your new song
here.



5. Click the Software Instrument icon.

In this chapter, I focus on using software instrument tracks, which are the easiest for a nonmusician to use (and don't require you to actually play any notes on an instrument).

6. Click the Create button.

You see the window shown in Figure 16-1 earlier in this chapter. Now you're ready to add tracks.

Adding tracks

Although I'm not a musician, I am a music lover. I know that many classical composers approached a new work in the same way you approach a new song in GarageBand — by envisioning the instruments they wanted to hear. (I imagine Mozart and Beethoven would've been thrilled to use GarageBand, but I think they did a decent job with pen and paper.)

If you've followed along to this point, you've noticed these things:

» **A Musical Typing keyboard in your GarageBand window:** You can record the contents of a software instrument track by playing the Musical Typing keyboard layout. (As you might imagine, this isn't the best solution.) If you're a musician, the best method of recording your own notes is with a MIDI instrument, which I discuss later in the chapter. You can display the Musical Typing keyboard window at any time by pressing $\text{⌘}+\text{K}$. If the keyboard window is onscreen and you don't need it, banish it by pressing $\text{⌘}+\text{K}$ or by clicking the Close button in the keyboard window.

» **The example song with only one empty track:** If you want to write the next classical masterpiece for Classic Electric Piano, that's fine. (I'm a big fan of this instrument, so I'll use this track later in the example.) Note that you can always delete a track completely, however. Click the offending track to select it, and choose Track ⇨ Delete Track from the GarageBand menu bar.

You can use five kinds of tracks in GarageBand:

- » **Software instrument tracks:** These tracks aren't audio recordings. Rather, they're mathematically precise algorithms that your iMac *renders* (builds) to fit your needs. If you have a MIDI instrument connected to your iMac, you can create your own software instrument tracks. (More on MIDI instruments later in this chapter.)
- » **Real instrument tracks:** These tracks are actual audio recordings, such as your voice or a physical instrument without a MIDI connection. (Think microphone.)
- » **Electric Guitar and Bass tracks:** GarageBand includes a real instrument track especially made for either an electric guitar or bass. This allows you to use a number of different amplifiers and *stompboxes* (those effect pedals that electric guitarists are always poking with their feet to change the sound of their instruments).
- » **Drummer track:** I call this feature "Ringo in a Box" — a drum track that's automatic yet *very* configurable and easy to customize. You have presets galore, so you can quickly jump into different drum sets and playing styles.
- » **Video tracks:** The video sound track appears if you're *scoring* (adding music to) an iMovie movie. Along with the video sound track, you get a cool companion video track that shows the clips in your movie. (More on this in the "Look, I'm John Williams!" sidebar later in this chapter.)

It's time to add a software instrument track of your very own:

1. **Press ⌘+Option+N (or click the New Track button).**
GarageBand displays the New Track sheet.
2. **Click the Software Instrument icon and then click Create.**
3. **From the Library pane on the far left, choose the general instrument category you want.**

I chose Guitar, which prompts a second list of choices to the right, still in the Library pane.

4. From the second list, choose your specific style of weapon, such as Classic Clean for a simple playing style.

Figure 16-3 shows the new track that appears in your list when you follow these steps. Now you're ready to rock with both the original electric piano and an electric guitar! If you like, you can hide the Library by clicking the Show/Hide Library button at the upper-left corner of the window.

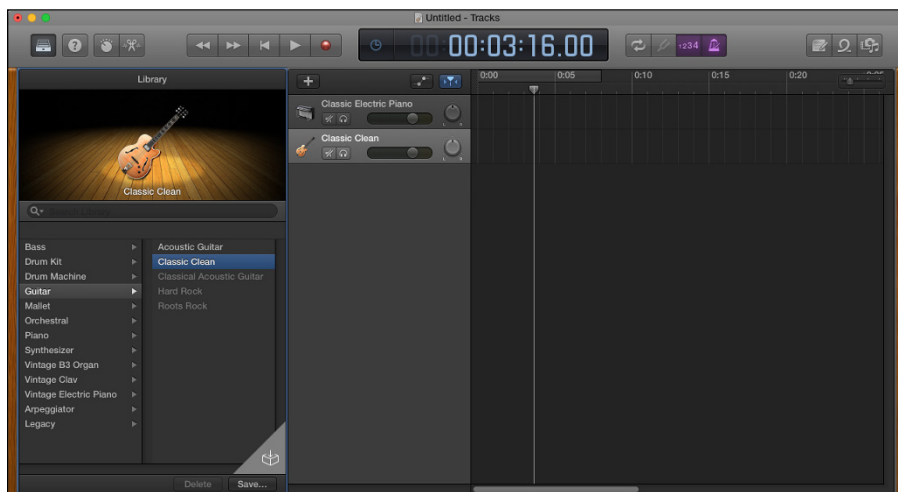


FIGURE 16-3:
The new track appears, ready to rock.



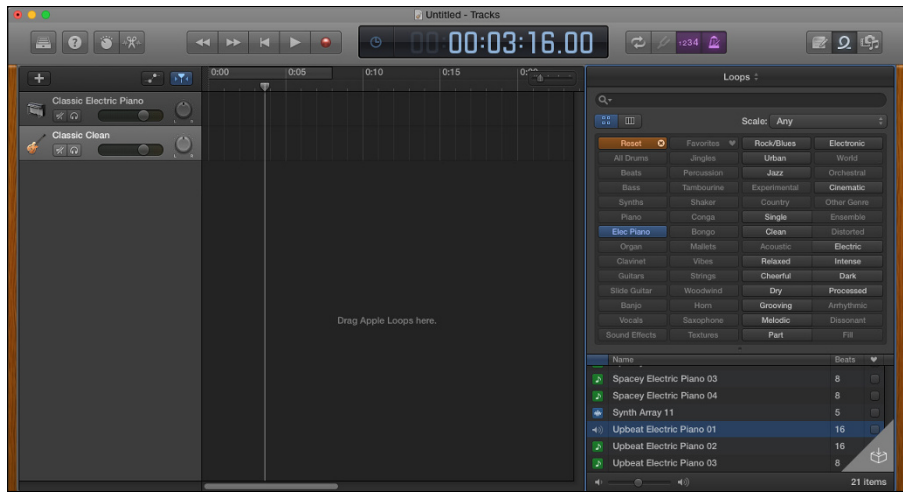
TIP

GarageBand includes a Songwriter project (also available from the top-level New Project window; refer to Figure 16-2 earlier in this chapter). When you choose a Songwriter project, GarageBand presents a full set of instrument tracks, plus a real instrument track for your voice. You're instantly ready to start adding loops and recording your own voice!

Choosing loops

After you have a new, empty track, you can add loops to build your song from the Loop Browser. Apple gives you thousands of loops to choose among, in mind-boggling variety. Click the Loop Browser button (which bears a loop symbol, somewhat like a roller coaster; refer to Figure 16-1) to display your collection, as shown in Figure 16-4.

FIGURE 16-4:
The Loop Browser is a great hangout for any musician.



Looking for just the right loop

The running project includes two tracks but no loops yet (refer to Figure 16-3). Just for grins, add a Classic Electric Piano loop. Follow these steps to search the loop library for just the right rhythm:

- 1. In the Loop Browser, click the button that corresponds to the instrument you're using.**

I chose the Elec Piano button.

A list of different beats appears in the pane at the bottom of the Loop Browser window (refer to Figure 16-4).

- 2. Click one of the loops that has a green musical-note icon.**

Go ahead; this is where things get fun! GarageBand begins playing the loop nonstop, allowing you to get a feel for how that particular loop sounds.



REMEMBER

The examples I chose for this chapter are software instruments, which are identified by a green musical-note icon. (If you have a band at home, have at it with real instruments. Real audio loops are identified with a purple audio wave icon.)

- 3. Click another entry in the list, and the application switches to that loop.**

Now you're beginning to understand why GarageBand is so cool for both musicians and the note-impaired. It's like having your own band with members who never get tired, never miss a beat, and play whatever you want while you're composing. (Mozart would've *loved* this.)



TIP

If you want to search for a particular instrument, click the Search box at the top of the Loop Browser and type the text you want to match. GarageBand returns the search results in the list.

4. **Scroll down the list, and continue to sample the different loops until you find one that fits like a glove.**

For this reporter, it's Upbeat Electric Piano 01 (refer to Figure 16-4).

5. **Drag the entry to your Classic Electric Piano track, and drop it at the very beginning of the Timeline (as indicated by the playhead).**

Your window looks like Figure 16-5.

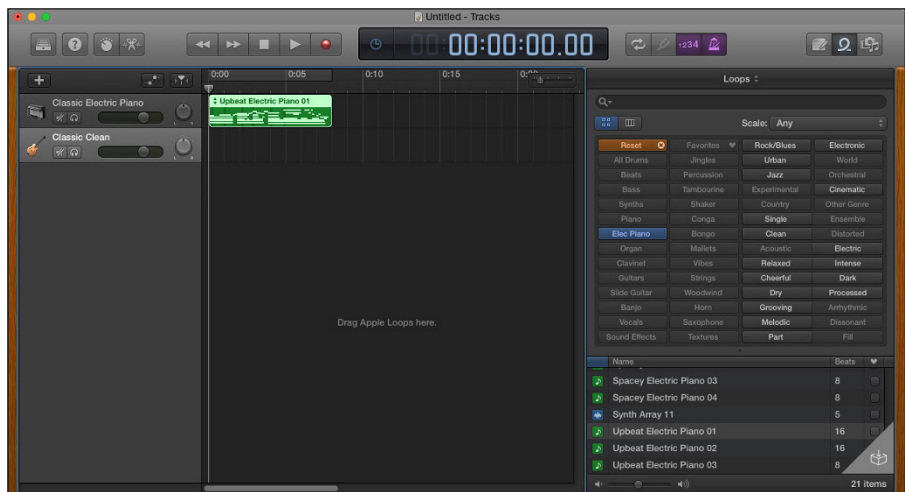


FIGURE 16-5:
A track with a loop added.



TIP

If you want that same beat throughout the song, you don't need to add any more loops to that track. (More on extending that beat in the next section.) However, if you want the piano's beat to change later in the song, you add a second loop after the first one in the *same* track. For now, leave this track as is.



REMEMBER

Whoops! Did you do something you regret? Don't forget that you can undo most actions in GarageBand by pressing the old standby $\text{⌘}+\text{Z}$ immediately afterward.

Second verse, same as the first

When you compose, you can add tracks for each instrument you want in your song:

- » Each track can have more than one loop.
- » Loops *don't* have to start at the beginning; you can drop a loop anywhere in the Timeline.

LOOK, I'M JOHN WILLIAMS!

You too can be a famous composer of soundtracks . . . well, perhaps not quite as famous as Mr. Williams, but even he had to start somewhere. To add a GarageBand score to an iMovie, choose Track ⇨ Show Movie Track from the GarageBand menu bar to display the Movie track. Now choose File ⇨ Open Movie, select the movie, and click Open.

At this point, you add and modify instrument tracks and loops just as you would with any other GarageBand project. The existing sound for the iMovie project appears in the Movie Sound track. A Video Preview thumbnail appears within the Movie track. When you click the Play button, the video is shown as well so that you can check your work and tweak settings (as described later in the chapter).

After you finish composing, choose File ⇨ Movie ⇨ Export Audio to Movie. You can select the quality of the movie file. Note that you can't edit your finished movie file using iMovie again, so scoring should always be the last step in your filmmaking process.

For example, you might prefer to start a song with just your drum kit, with your bass line beginning some time later (for a funkier opening).



TECHNICAL
STUFF

You put loops on separate tracks so they can play simultaneously on different instruments. If all your loops in a song are added on the same track, you hear only one loop at a time, and all the loops use the same software instrument. By creating multiple tracks, you give yourself the elbow room to bring in the entire band at the same time. It's über-convenient to compose your song when you can see each instrument's loops and where they fall in the song.



TIP

Click the Reset button in the Loop Browser (refer to Figure 16-4) to choose another instrument or genre category.

Resizing, repeating, and moving loops

If you haven't already tried listening to your entire song, try it now. You can click Play at any time without wreaking havoc on your carefully created tracks. Sounds pretty good, doesn't it?



But wait: I bet the song stopped after about five seconds, right? (You can watch the passing seconds using either the Time/Tempo display or the second rule that appears at the very top of the Timeline.) I'm sure you want your song to last more than five seconds! After the playhead moves past the end of the last loop, your song is over. Click Play again to pause the playback; then click the Go to Beginning button (shown in the margin and labeled in Figure 16-1) to move the playhead back to the beginning of the song.

The music stops so soon because your loops are only so long. As mentioned earlier, most loops are five seconds in length, and others are even shorter. To keep the groove going, you must do one of three things:

- » **Resize the loop.** Hover the cursor over either the left or right edge of most loops, and an interesting thing happens: The cursor changes to an icon representing the left or right edge of the loop, with an arrow pointing away from the loop. That's your cue to click and drag — and as you drag, some loops expand to fill the space you're making, repeating the beats in perfect time. By resizing a loop, you can literally drag the loop's edge as long as you like.
- » **Repeat the loop.** Depending on which loop you chose, you might find that resizing it doesn't repeat the measure. Instead, the new part of the loop is simply dead air. In fact, the length of many loops is limited to anywhere from one to five seconds. However, if you move the cursor over the *corner* of a loop you want to extend, it turns into a vertical line with a circular arrow, which tells you that you can click and *repeat* the loop. GarageBand actually adds multiple copies of the same loop automatically for as far as you drag the loop. In Figure 16-6, you can see how I repeated the Upbeat Electric Piano 01 loop.

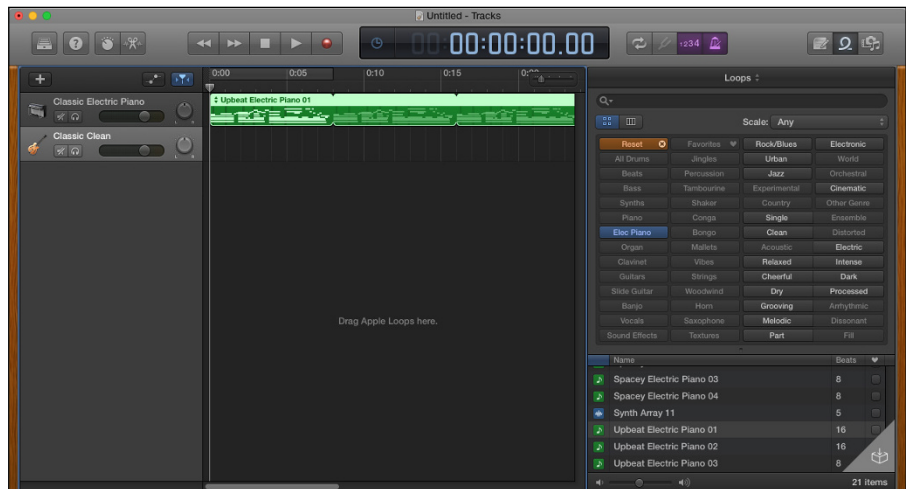


FIGURE 16-6: By repeating a loop, you can keep the notes flowing.

» **Add a new loop.** You can switch to a different loop to change the music's flow. Naturally, the instrument stays the same, but there's no reason you can't use a horn-riff loop in your violin track (as long as it sounds good played by a violin)! To GarageBand, a software instrument track is compatible with *any* software instrument loop you add from the Loop Browser, as long as that loop is marked with your old friend, the green musical note.



TIP

You can also use the familiar Cut (⌘+X), Copy (⌘+C), and Paste (⌘+V) editing keyboard shortcuts to cut, copy, and paste loops both on the Timeline and from track to track. And you can click a loop and drag it anywhere.



REMEMBER

A track doesn't have to be filled for every second with one loop or another. Most of my songs have a number of repeating loops with empty space between them as different instruments perform solo.

Each track can be adjusted so you can listen to the interplay between two or more tracks or hear how your song sounds without a specific track:

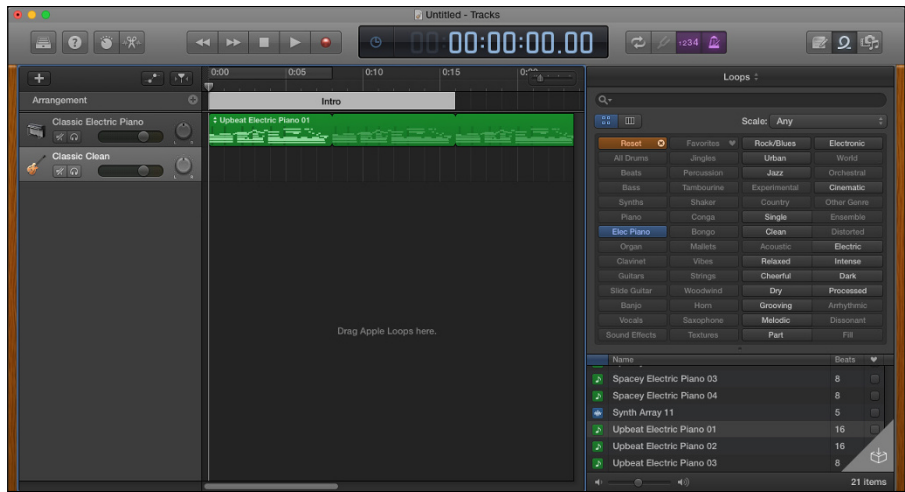
- » **Mute a track.** Click the tiny speaker button below the track name in the list, and the button turns blue to indicate that the track is muted. To turn off the mute, click the speaker icon again.
- » **Change the volume or balance of a track.** Use the mixer that appears next to the track name. This comes in handy if you want an instrument to sound louder or confine that instrument to the left or right speaker.

Using the Arrangement track

GarageBand includes another method you can use to monkey with your music: Use the *Arrangement track* to define (or *mark*) specific sections of a song and then reorganize things by selecting, moving, and copying entire sections. You're probably familiar with a song's chorus (or refrain) and how often it appears during the course of the tune. With the Arrangement track, you can reposition the entire chorus within your song, carrying all the loops and settings within the chorus along with it. If you need another chorus, just copy that arrangement.

To use the Arrangement track, display it by choosing Track ⇨ Show Arrangement Track from the GarageBand menu bar. The Arrangement track appears as a thin strip at the top of the Track list. Click the Add Marker button (the circular button bearing a plus sign) at the right side of the Arrangement track, and you see a new marker, as shown in Figure 16-7. You can drag the right side of the Arrangement marker to the left or right to resize it, or drag it to move it anywhere in the song.

FIGURE 16-7:
I just added a
new marker in
my song's
Arrangement
track.



TIP

To rename an Arrangement marker, click the current name to display the menu of existing marker names, click Rename, type a new name for the marker in the text box, and press Return. In Figure 16-7, you can see that the first marker is named *Intro*.

Now, here's where Arrangement markers get *cool*:

- » **To move an entire Arrangement marker:** Click anywhere in the marker's title bar (except the title itself), and drag it anywhere you like in the song. (You can hold down Shift while clicking multiple contiguous markers to select more than one.)
- » **To copy an Arrangement marker:** Hold down the Option key, and drag the desired marker's title to the spot where you want the copy to appear.
- » **To empty the regions in an Arrangement marker:** Select it, and press Delete. To completely delete the marker, press Delete a second time.

Tweaking the settings for a track

You don't think that bands like Rush and U2 just "play and walk away," do you? No, they spend hours after their recording sessions are over tweaking their music in the studio and on the mixing board until every note sounds just as it should. You can adjust the settings for a track, too. The tweaks you can perform include adding effects (pull a Hendrix by adding echo and reverb to your electric guitar track) and kicking in an equalizer (for fine-tuning the sound of your background horns).

To make adjustments to a track, follow these steps:

1. Click the desired track in the Track list to select it.
2. Click the Smart Controls button at the top left of the GarageBand window (labeled in Figure 16-1).

You can also press B to hide or display the Smart Controls pane.

3. Click the Controls tab to show the settings shown in Figure 16-8.

Note that the settings you see vary according to the type of instrument track you've selected.

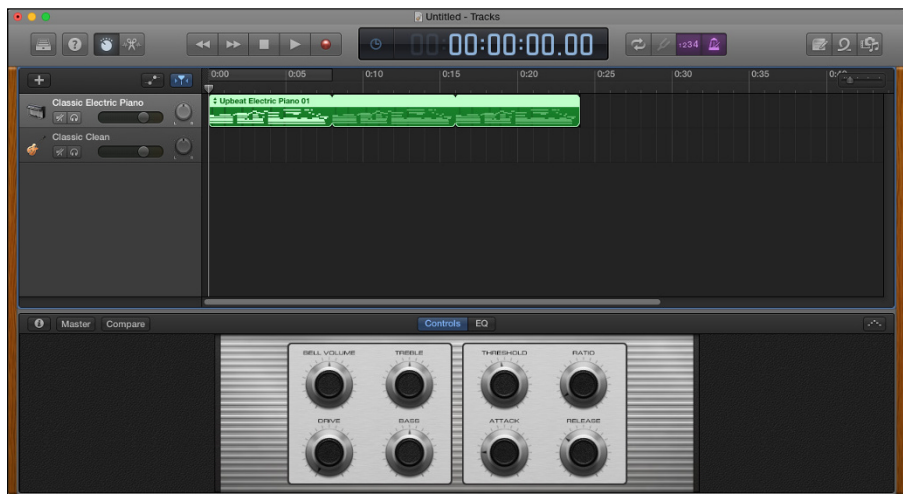


FIGURE 16-8: Finesse your tune by tweaking the sound of a specific track.



TIP

4. Click the knob control or slider for a specific effect to change the sound.

GarageBand offers a Visual Equalizer window you can use to create a custom equalizer setting for each track. On the Smart Controls pane, click the EQ button. To change the Bass, Low Mid, High Mid, or Treble setting for a track, click and drag the equalizer waveform in the desired direction. And yep, you can do this while your song is playing, so you can use both your eyes *and* ears to define the perfect settings!

5. Click the Smart Controls button (or press B) to return to GarageBand.

Time for a Mark's Maxim:



AUTHOR
SAYS

Save your work often in GarageBand, just as you do in iMovie. One power blackout, and you'll never forgive yourself. When you're pleased with the progress you've made in your project, press ⌘+S and enjoy the peace of mind (and use Time Machine with an external backup drive for good measure).

JOIN IN AND JAM . . . OR TALK!

GarageBand is even more fun if you happen to play an instrument! (And yes, I'm envious, no matter how much I enjoy the techno and jazz music I create. After all, take away my iMac, and I'm back to playing the kazoo — at least until I absorb all the Learn to Play lessons for the guitar. More on Learn to Play in the next sidebar.)

Most musicians use MIDI instruments called *controllers* to play music on the computer. That pleasant-sounding acronym stands for *Musical Instrument Digital Interface*. A wide variety of MIDI controllers is available these days, from traditional MIDI keyboards to more exotic fun, such as MIDI saxophones. For example, Apple sells a 49-key MIDI keyboard from Line 6 for around \$150. Alternatively, the highly recommended Casio CTX-3000 offers 61 keys, and it's available online for about \$130. (Both keyboards connect to your trusty iMac via a USB cable.) Other MIDI controllers include drum pads and guitars.

If you have an older instrument with traditional round MIDI ports — you'll never confuse them with USB connectors — you need a USB-to-MIDI converter. You can find this type of converter for around \$40 on websites catering to musicians. You can also buy MIDI controllers that include audio input jacks for traditional audio microphones and electric guitars, offering you the best of both worlds.

After your instrument is connected, you can record tracks using any software instrument. Create a new software instrument track as I demonstrate in this chapter, select it, and play a few notes. Suddenly, you're playing the instrument you chose! If nothing happens, check the MIDI status light — which appears in the Time display (refer to Figure 16-1) — to see whether it blinks with each note you play. If not, check the installation of your MIDI connection, and make sure you've loaded any required drivers, as well as your MIDI settings within QuickTime and the input settings on the System Preferences Sound pane.

Drag the playhead to a beat or two before the spot in the Timeline where you want your recording to start. This gives you time to match the beat. Then click the big red Record button and start jamming! When you're finished, click the Play button to stop recording.

Sharing Your Songs

After you finish your song, you can play it whenever you like through GarageBand. But then again, that isn't really what you want, is it? You want to share your music with others on an audio CD or download it to your iPhone or iPod so that you can enjoy it yourself while walking through the mall.

iTunes to the rescue! As with the other digital lifestyle applications I cover in this book, GarageBand can share the music you make through the digital hub that is your iMac. (You become an iTunes power user in Chapter 13.)

HEY, GARAGEBAND, TEACH ME HOW TO PLAY!

In the early days of GarageBand, you were limited to creating music. And if you were a nonmusician like yours truly, GarageBand had no practical use as a tool for teaching yourself how to actually *play* an instrument.

Ah, but Apple's addition of Learn to Play actually turns GarageBand into your private video tutor for basic piano and guitar! In the New Project window (refer to Figure 16-2), click the Learn to Play entry in the list on the left to display your guitar and piano lessons. Right out of the box, you have a solid introduction to both instruments. You can also download more lessons — which cover more advanced topics such as fingering and chords — for each instrument from the Lesson Store (available from the New Project window). Your onscreen instructor can even record what you play.

In fact, GarageBand includes the How Did I Play feature, which can pinpoint the portions of a lesson you played correctly and which spots in the song you need to work on. (I'm told that musicians call such trouble spots *flubs*. Because I have no musical talent whatsoever, anything I attempted to play would be one giant flub.) To try How Did I Play, open your favorite lesson, click the Record button (with the red dot in the center), and begin playing. To stop recording, click the Play button. Now you can see the portions of the song you played correctly (where the notation area is green) and spots where you, um, flubbed (the notation area turns red). Oh, and make sure your instrument is in tune, because even correct notes played on an instrument that's out of tune produce errors for How Did I Play!

If you find the free Learn to Play lessons valuable, you can move up to the Artist lessons, which are taught by famous musicians (including favorites of mine such as Alex Lifeson, John Fogerty, and Sting, who actually teaches you how to play "Roxanne")!

Creating song files and ringtones in iTunes

You can create an AAC song file (or even a ringtone) from any project in just a few simple steps:

1. **Open the project you want to share.**
2. **Choose Share ⇨ Song to iTunes from the GarageBand menu bar.**

GarageBand displays the settings you see in Figure 16-9.

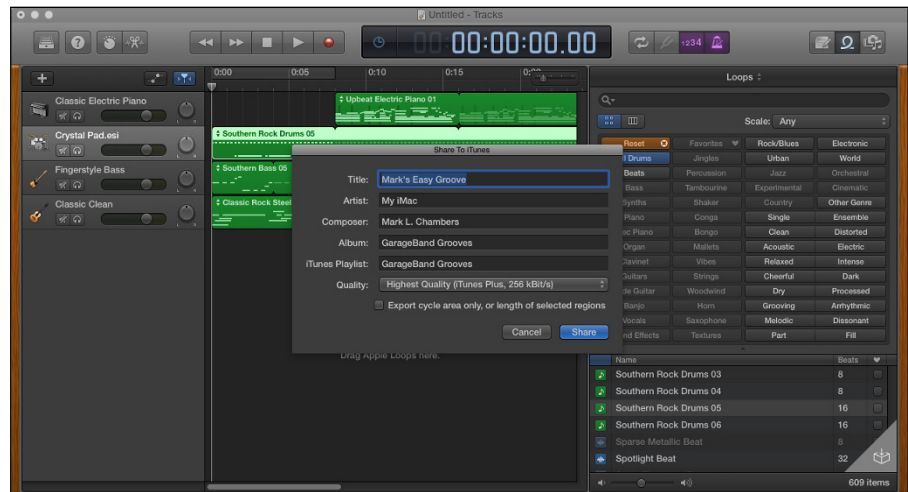


FIGURE 16-9:
Twinking settings
for iTunes audio
files.



TIP

To create a ringtone and send it to iTunes, choose Share ⇨ Ringtones to iTunes from the GarageBand menu bar.

3. **Click each of the text boxes to type the title, artist name, composer name, album name, and iTunes playlist for the tracks you create.**

You can leave the defaults as they are if you prefer. Each track you export is named after the song's name in GarageBand.

4. **From the Quality pop-up menu, choose the proper audio quality for the finished file.**

The higher the quality, the larger the file.



REMEMBER

5. **Click the Share button.**

After a second or two of hard work, your iMac opens the iTunes window and highlights the new (or existing) playlist that contains your new audio, whether it be a song or ringtone.

Exporting a project

Sometimes, you'd like to create an audio file from a GarageBand project, but you'd rather not automatically add that song or ringtone to your iTunes Music Library. (Perhaps you now have audio proof that a family member does indeed snore.) In that case, you can always export a song straight to your hard drive by following these steps:

1. **Open the project you want to export.**
2. **Choose Share ⇨ Export Song to Disk.**
3. **Type a name for the audio file.**

Click the button next to the Save As text box to select a specific location where the file should be created, or choose a preset from the Where pop-up menu.

4. **From the Quality pop-up menu, choose the desired audio quality.**

As with sharing a song to iTunes, the higher the quality, the larger the file.

5. **Click Export.**

Burning an audio CD

Ready to create a demo CD with your latest GarageBand creation? If your iMac has an internal or external optical drive, follow these steps to burn an audio disc from within GarageBand:

1. **Open the song you want to record to disc.**
2. **Load a blank disc into your optical drive.**

If you see a dialog requesting that you choose an action, click the Ignore button.

3. **Choose Share ⇨ Burn Song to CD.**

Note that the CD you create has only one track. To include more tracks on the CD, share the song to your iTunes Library (as described earlier), create a playlist containing the desired songs, and burn that playlist within iTunes.

5 Getting Productive with Your iMac

IN THIS PART . . .

Use Pages to produce professional posters, flyers, and letters.

Build spreadsheets quickly and easily by using Numbers.

Create superb-looking presentations for business or school with Keynote.

IN THIS CHAPTER

Creating a Pages document

Entering, editing, and formatting text

Inserting tables and graphics

Resizing objects

Checking your spelling

Printing Pages documents

Sharing your work

Chapter 17

Desktop Publishing with Pages

What's the difference between word processing and desktop publishing? In a nutshell, it's in how you *design* your document. Most folks use a word processor like an old-fashioned typewriter, much like I'm using Microsoft Word right now. (Yawn.)

A *desktop publishing application* allows far more creativity in choosing where to place text, how to align graphics, and how to edit formats. I think desktop publishing is more visual and intuitive, allowing your imagination a free hand at creating a document.

In this chapter, I show you how to set your inner designer free from the tedious constraints of word processing! Whether you need a simple letter, a stunning brochure, or a multipage newsletter, Pages can handle the job with ease — and you'll be surprised at how simple it is to use. The templates and sample documents that Apple provides will knock your socks off. Also, Pages is a free download for any

iMac of recent vintage (and free Apple software is always A Good Thing). Oh, and don't forget that Pages is also available for your iOS devices — now you're creating and editing on your iPad or iPhone as well!

Creating a New Pages Document

To create a new Pages document, follow these steps:

1. Click the Pages icon on the Dock.

If the Pages icon doesn't appear on your Dock, click the Launchpad icon and then click the Pages icon (which looks like a document and pen). If you haven't yet installed Apple's three productivity applications — Pages, Numbers, and Keynote — click the App Store icon on your Dock and download them directly!

2. Click the New Document button at the lower-left corner of the Open dialog.

Pages displays the Template Chooser window, shown in Figure 17-1.

You can also create a new Pages document at any time from the File menu. Just choose File ⇨ New to display the Template Chooser window.

3. In the list to the left, click the type of document you want to create.

The thumbnails on the right are updated with templates that match your choice.



TIP

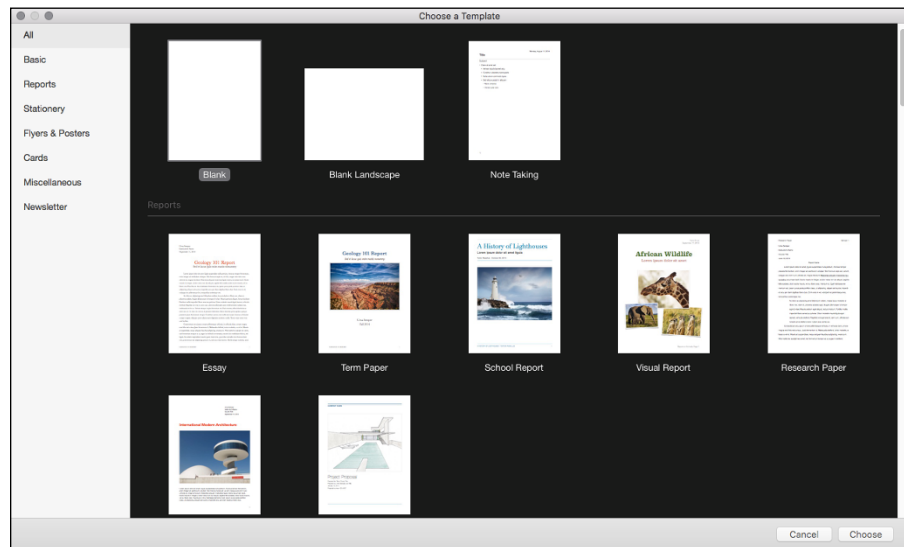


FIGURE 17-1: Select a template from the Template Chooser window.

4. Click the template that most closely matches your needs.
5. Click the Choose button to open a new document in the template you selected.

Open an Existing Pages Document

Of course, you can always open a Pages document from a Finder window. Just double-click the document icon. (The All My Files location in the Finder window sidebar makes it easy to track down a document.) You can also open a Pages document from within the program. Follow these steps:

1. Launch Pages as described in the preceding section.
2. Press **⌘+O** to display the Open dialog.

The Open dialog operates much the same as a Finder window in Icon, List, or Column view mode. To open a document you've already saved in your iCloud Drive, click the Pages item under the iCloud heading in the sidebar at the left of the dialog and double-click the desired document thumbnail in the thumbnail display at the right side of the dialog. To open a document on your internal drive or network, click the desired location in the Open dialog sidebar. (If you're into convenience like I am, click one of the locations under the Favorites heading to jump immediately to common folders like Music, Pictures, or Downloads!)

3. Click the desired drive in the Devices list at the left of the dialog and then click folders and subfolders until you locate the Pages document.

You can also click the Search box at the top of the Open dialog and type in a portion of the document name or its contents.



TIP

If you're using Icon view mode (or you're displaying the Preview column in Column view mode), you can hover the cursor over a document thumbnail and quickly flip through the pages by clicking the left and right arrows that appear. This "find" feature can help you identify a particular Pages document without even opening it.

4. Double-click the thumbnail (or filename) to load it.



TIP

If you want to open a Pages document you've edited in the recent past, things get even easier. Just choose **File ⇨ Open Recent**, and you can open the document with a single click from the submenu that appears.



REMEMBER

Pages can open, edit, and save documents created with the Macintosh version of Microsoft Word.

Saving Your Work

Pages fully supports El Capitan’s auto-save feature, but you may feel the need to manually save your work after you finish a significant edit (or if you need to take a break while designing). If you’re editing a document that has already been saved at least once, a new version of the document is saved to its current location — and you can continue with your work.

However, if you’re working on a *new* document that hasn’t previously been saved, follow these steps to save it:

1. **With the Pages document open, press ⌘+S.**
2. **Type a filename for your new document.**
3. **Open the Where pop-up menu, and choose a location in which to save the document.**

Note that Pages defaults to your iCloud Drive as the target location. This way, you can open and edit your Pages document on any Mac or iOS device that shares the same Apple ID. (Remember, Pages is also available for both the iPhone and the iPad.) Alternatively, click the button sporting the down arrow to expand the Save As sheet. This allows you to navigate to a different location on your hard drive or network, or to create a new folder to store this Pages project.

4. **Click Save.**



REMEMBER

You can create a version of a Pages document by choosing File ⇨ Save. To revert the current document to an older version, choose File ⇨ Revert To. Pages gives you the option of reverting to the last saved version, or you can click Browse All Versions to choose among multiple versions of the document.

Touring the Pages Window

Before you dive into any real work, let me show you around the Pages window. You’ll find the following major components and controls, as shown in Figure 17-2:

- » **Pages list:** This thumbnail list displays all the pages you’ve created within your document. (For a single-page document, of course, the Page list contains only a single thumbnail.) You can switch instantly between different pages in your document by clicking the desired thumbnail in the list. If the list isn’t visible, click the View button at the left side of the Pages toolbar and click Show Page Thumbnails.

- » **Layout pane:** This section takes up most of the Pages window. It's where you design and edit each page in your document.
- » **Toolbar:** Yep, Pages has its own toolbar. It keeps all the most common application controls within easy, one-click reach.
- » **Inspector:** This window extension allows you to quickly switch the appearance of selected paragraphs, characters, and lists. You can hide and display the Inspector from the View menu or by clicking the Format or Document button on the toolbar.

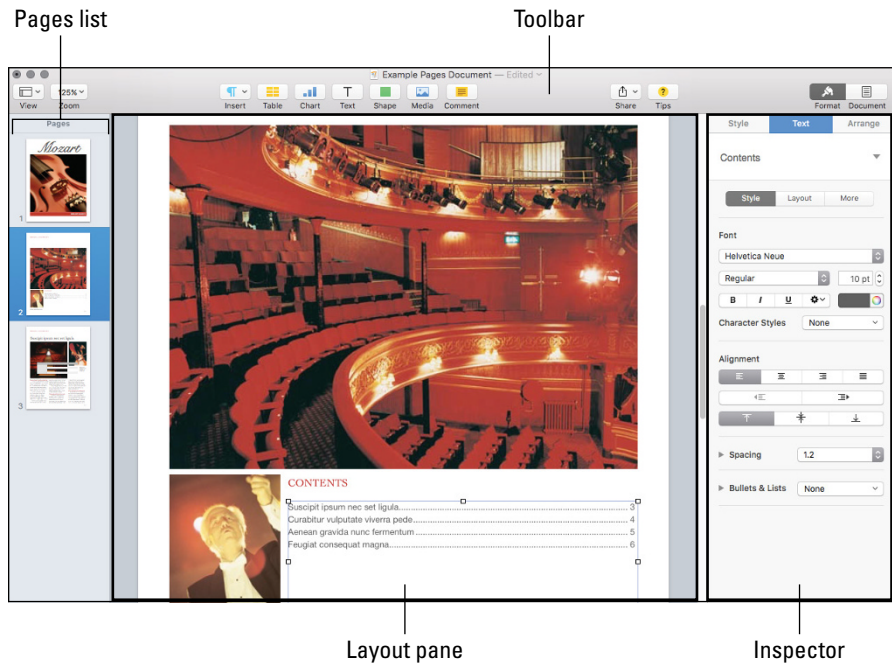


FIGURE 17-2:
The major points
of interest in the
Pages window.

Entering and Editing Text

If you've used a modern word processing program, you'll feel right at home typing within Pages. The bar-shaped text cursor, which looks like a capital letter *I*, indicates where the text you enter will appear in a Pages document. To enter text, simply begin typing. To edit existing text in your Pages document, select and highlight the text. As you type, Pages replaces the existing text. You can delete text by clicking and dragging across the characters to highlight them and then pressing Delete.

Using Text and Graphics Boxes

Within Pages, text and graphics appear in *boxes*, which can be resized by clicking and dragging one of the handles that appear around the edges of the box. (Click the box to select it and hover the cursor over one of the square handles; you'll see that it changes to a double-sided arrow, indicating that Pages is ready to resize the box.)

You can also move a box, including all the stuff it contains, to another location within the Layout pane. Click in the center of the box, and drag the box to the desired spot. Note that Pages displays yellow alignment lines to help you align the box with other elements around it (or with regular divisions of the page, such as the vertical center of a poster or flyer).



REMEMBER

To select text or graphics within a box, you must first click the box to select it and then double-click the line of text or the graphic you want to change.

The Three Amigos: Cut, Copy, and Paste

“Hang on, Mark. You’ve covered moving stuff, but what if you want to *copy* a block of text or a photo to a second location? Or how about cutting something from a document open in another application?” Good questions. That’s when you can call on the power of the cut, copy, and paste features within Pages. The next few sections explain how you do these actions.

Cutting stuff

Cutting selected text or graphics removes them from your Pages document and places that material on your Clipboard. (Think of the *Clipboard* as a holding area for snippets of text and graphics you want to manipulate.) To cut text or graphics, select some material and choose Edit ⇨ Cut or press ⌘+X.

Copying text and images

When you copy text or graphics, the original selection remains untouched, and a copy of the selection is placed on the Clipboard. Select some text or graphics, and choose Edit ⇨ Copy or press ⌘+C. To copy selected items by dragging, hold down the Option key while you drag the items to their destination.



REMEMBER

If you cut or copy a new selection to the Clipboard, it erases what was there. In other words, the Clipboard holds only the latest material you cut or copied.

Pasting from the Clipboard

Wondering what you can do with the stuff that's stored on the Clipboard? Pasting the contents of the Clipboard places the material at the current location of the insertion cursor.



WARNING

You must paste the contents before you cut or copy again to avoid losing what's on the Clipboard.

To paste the Clipboard contents, click the insertion cursor at the location you want and choose **Edit** ⇨ **Paste** or press **⌘+V**.

Formatting Text the Easy Way

If you feel that some (or all) of the text in your Pages document needs a facelift, you can format that text any way you like. Formatting lets you change the color, font family, character size, and attributes as necessary.

After the text is selected, you can apply basic formatting in two ways:

- » **Use the Inspector.** The Inspector appears at the right side of the Pages window (refer to Figure 17-2). The controls it displays vary according to the selection you've made. (Click the **Format** button on the far right side of the toolbar, which looks like a tiny paintbrush, to display and hide the Inspector.) Click to select a font control to display a pop-up menu and then click your choice. For example, select a portion of text and open the **Font Family** pop-up menu to change the font family from vanilla Arial to something more daring. You can also select characteristics, such as the text's paragraph style, or choose italic or bold. The Inspector also provides buttons for both vertical and horizontal text alignment.
- » **Use the Format menu.** Most controls displayed within the **Format** section of the Inspector are also available from the **Format** menu. Click **Format** and hover the mouse cursor over the **Font** menu item, and you can then apply bold, italic, and underlining to the selected text. You can also make the text bigger or smaller. To change the alignment from the **Format** menu, click **Format** and hover the mouse cursor over the **Text** menu item.

Adding a Spiffy Table

In the world of word processing, a *table* is a grid that holds text and graphics for easy comparison. You can create a custom table layout within Pages with a few simple clicks.

Follow these steps:

1. Click the insertion cursor at the location where you want the table to appear.
2. Click the Table button on the Pages toolbar.

Pages displays thumbnail images of different table styles. You have a selection of colors. Some tables also include highlighted rows and columns. Use the left and right buttons to display different styles of thumbnails until you find the one that's closest to the table you need.



TIP

Don't worry if the style isn't exactly right. You can always change the layout by selecting the table and displaying the Format Inspector, where you can fine-tune all sorts of font, color, grid, and border options.

3. Click the style thumbnail to insert the table.

If you need to change the number of rows or columns in your table, Pages makes it easy. To add or delete rows or columns directly from the table, select it and then click the row and column buttons that appear. (Each bears an equal sign, as shown in Figure 17-3.)

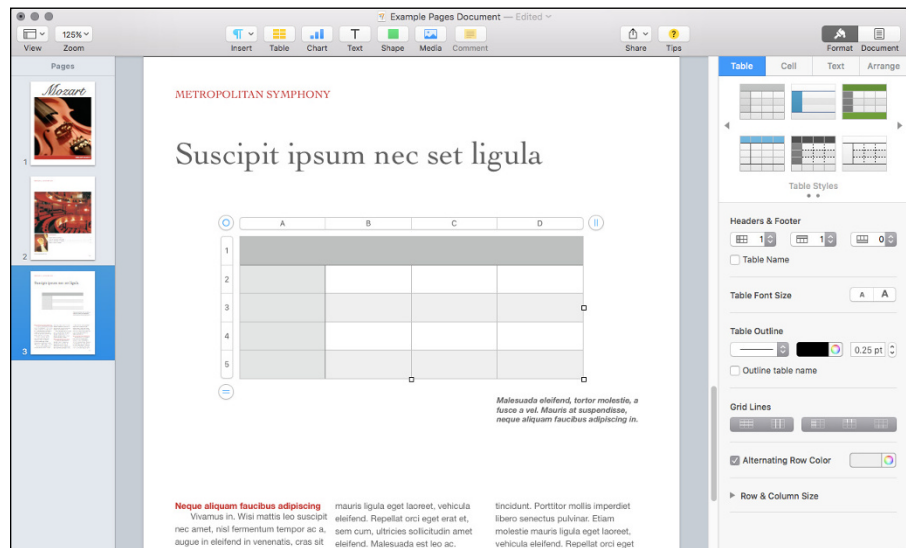


FIGURE 17-3:
Use Table controls to tweak your table.

4. Click within a cell in the table to enter text.

The table cell automatically resizes and *wraps* the text you enter to fit.



REMEMBER

You can paste material from the Clipboard into a table. See the earlier section “Pasting from the Clipboard” for details.

Here are a few pointers on how to dress up your table and make its data more attractive and readable:



TIP

» **Change the borders on a selected cell.** Click the Format icon on the toolbar to open the Inspector, click the Cell tab, and then click the Border section.

Select a range of cells in a table by holding down Shift as you click. Hold down ⌘ and click to select multiple cells that aren’t contiguous.

» **Add a background color to selected cells, or fill them with an image for a background.** Click the Cell tab, click the Fill section in the Inspector, and choose a type of background.

Adding Alluring Photos

You can choose between two methods of adding a picture within your Pages document:



TIP

» **As a floating object:** You place the image in a particular spot, and it doesn’t move even if you make changes to the text. To add a floating object, drag an image file from a Finder window and place it at the spot you want within your document. Alternatively, you can click the Media button on the toolbar, click Photos, navigate to the location where the file is saved, and click the image thumbnail. Figure 17-4 shows the Media Browser in action.

Click the magnifying glass icon to search for a specific item using keywords or by filename.

Note that a floating object (such as a shape or image) can be sent to the *background*, where text does not wrap around it. To bring back a background object as a regular floating object, click the object to select it and choose Arrange ⇄ Bring to Front. (More about background objects later in this chapter.)

» **As an inline object:** The image flows with the surrounding text as you make layout changes. To add an inline object, hold down the ⌘ key as you drag an image file from a Finder window and place it where you want within your

document. You can also click the Media toolbar button and click Photos to display the Media Browser. Navigate to the location where the file is saved, hold down the ⌘ key, and drag the image thumbnail to the spot where you want it in the document.

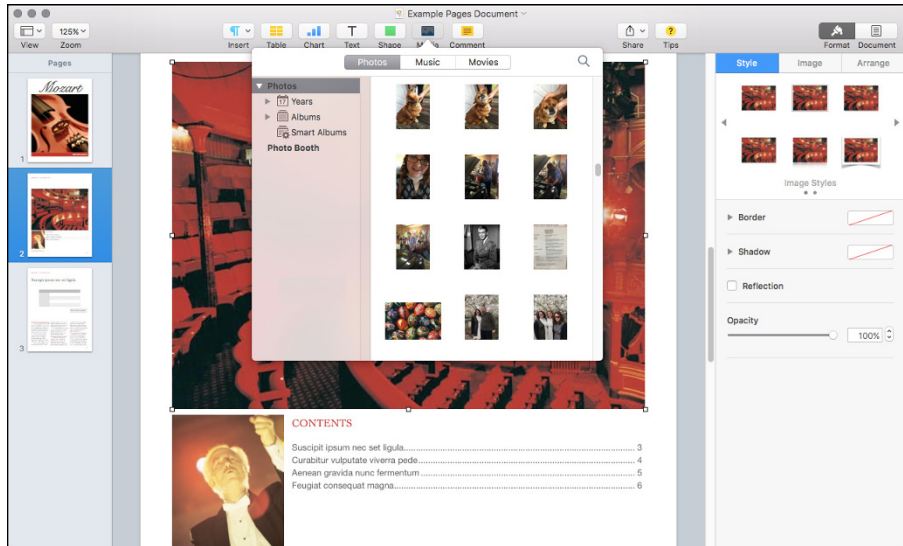


FIGURE 17-4:
Hey, isn't that the
Pages Media
Browser?



TIP

To resize an image object, click the image to select it, and drag one of the selection handles that appear along its border. (The handles look like tiny squares.) The side-selection handles drag only that edge of the frame. The corner-selection handles resize both adjoining edges of the selection frame. Hold down the Shift key to make the vertical and horizontal proportions remain fixed.

Adding a Background Shape

To add a shape (such as a rectangle or circle) as a background for your text, follow these steps:

1. Click the insertion cursor in the location you want.
2. Click the Shape button on the Pages toolbar, and choose a shape.

The shape appears in your document.

3. Click the center of the shape, and drag it to a new spot.

Shapes can be resized or moved in the same manner as image boxes. See the preceding section.



REMEMBER

You can type over a shape set as a background. Before you do, though, select the shape, and choose Arrange ⇨ Send to Back.

Are You Sure about That Spelling?

Pages can check spelling as you type (the default setting) or after you complete your document. If you find automatic spell-checking distracting, you should pick the latter method.



REMEMBER

As my technical editor reminds me, spell-checking only confirms that a word matches an entry in the Pages dictionary, *not* that it's the right word for the job! If you've ever "red" a document that someone else "rote," you understand.

To check spelling as you type, follow these steps:

1. **Click the Edit menu, and hover the cursor over the Spelling and Grammar menu item.**
2. **Choose Check Spelling While Typing from the submenu that appears.**
If a possible misspelling is found, Pages underlines the word with a red dashed line.
3. **Right-click the word to choose a possible correct spelling from the list, or choose Ignore Spelling if it's spelled correctly.**

To turn off automatic spell-checking, click the Check Spelling While Typing menu item again to deselect it.

To check spelling manually, follow these steps:

1. **Click within the document to place the text insertion cursor where the spell check should begin.**
2. **Click Edit, hover the cursor over the Spelling and Grammar menu item, and choose Check Document Now from the submenu that appears.**
3. **Right-click any possible misspellings, and choose the correct spelling, or choose Ignore Spelling if the word is spelled correctly.**

Printing Your Pages Documents

Ready to start the presses? You can print your Pages document on real paper, of course, but don't forget that you can also save a tree by creating an electronic PDF instead of a printout. You'll find the PDF button within the standard El Capitan Print dialog.

To print your Pages document on old-fashioned paper, follow these steps:

1. Within Pages, choose File ⇨ Print.

Pages displays the Print sheet.

2. Click in the Copies field, and enter the number of copies you need.

3. Select the pages to print:

- To print the entire document, select All.
- To print a range of selected pages, select the From radio button and enter the starting and ending pages.

4. Click the Print button to send the document to your printer.

Sharing That Poster with Others

Besides printing — which is, after all, so *very passé* these days — you can choose to share your Pages document electronically using several methods:

» **Share on iCloud.** If you stored your new masterpiece in your iCloud Drive, you can send a link to the finished document in a number of different ways. Click the Share button on the Pages toolbar, and hover the cursor over the Share Link via iCloud item to send the link through Mail, Messages, Twitter, or Facebook. The recipient of the link can easily view your document with a single click. (Read Chapter 9 for more information about iCloud.)



TIP

You can specify whether a shared document can be edited (or simply viewed) by others. Click Share on the toolbar and then click the View Share Settings item. Click the Permissions pop-up menu to choose an editable or view-only document. To assign an optional password (which is required for *anyone* to open the document), click the Add Password button. Finally, click Share Document to send the link to others using Mail, Messages, Twitter, or Facebook.



REMEMBER

- » **Send a Copy.** Maybe you prefer to send a copy of the actual document, which the recipient can open using Pages on his or her own Mac or iOS device. Click Share on the toolbar, and hover the cursor over the Send a Copy item. You can send the document via Mail or Messages, or you can make it available through AirDrop (if the recipient is within range of your iMac's Wi-Fi signal).

If you decide to send your Pages document as an email attachment, don't forget that most Internet service providers have a maximum message size. If your document is too large, your mail server probably will reject it. (Instead, use the Mail Drop feature within Apple Mail to allow that huge Pages document to be downloaded using a link.)

- » **Export.** You're not limited to sharing over that Internet thing! Pages can also export your work directly to your drive in one of six different formats: a PDF file, a Microsoft Word document, an EPUB file (for use with electronic book apps like iBooks), a document compatible with the previous version of Pages, a ZIP archive, or even plain text. (Remember when everything was in plain text?) Choose File ⇨ Export To, and pick your format; Pages displays any options you can set for that format. When you're ready, click Next, and select the location where Pages should save the file. Click Export, and sit back while your favorite desktop publishing application does all the work.



TIP

If the recipient of your document doesn't need to edit your work, I recommend creating a PDF file, which keeps your document as close as possible to how it appears in Pages.

IN THIS CHAPTER

Creating, opening, and saving spreadsheets

Selecting cells, entering data, and editing data

Formatting cells

Adding and removing rows and columns

Creating simple calculations

Adding charts to your spreadsheets

Printing a Numbers spreadsheet

Chapter 18

Creating Spreadsheets with Numbers

Are you downright afraid of spreadsheets? Does the idea of building a budget with charts and all sorts of fancy graphics send you running for the safety of the hall closet? Well, good iMac power user, Apple has again taken something that everyone else considers super-complex and turned it into something that normal human beings can use! (Much as Apple did with video editing and songwriting. Is there *any* type of software that Apple designers can't make intuitive and easy to use?) If your iMac is less than three to four years old, Numbers is a free download from the App Store, and the spreadsheets you create with it are easily opened and edited with the iOS version of Numbers.

In this chapter, I demonstrate how the Numbers spreadsheet program can help you organize data and analyze important financial decisions for home and business — everything from a household budget to your company's sales statistics!

Before You Launch Numbers . . .

In case you're unfamiliar with applications like Numbers and Microsoft Excel — and the documents they create — let me provide you a little background information.

A *spreadsheet* organizes and calculates numbers by using a grid system of rows and columns. The intersection of each row and column is a *cell*, which can hold either text or numeric values. Cells can also hold calculations called *formulas* and *functions*, which are usually linked to the contents of surrounding cells.

Spreadsheets are wonderful tools for making decisions and comparisons, because they let you plug in different numbers — such as interest rates or your monthly insurance premium — and instantly see the results. These are some of my favorite spreadsheets that I use regularly:

- » Car and mortgage loan comparisons
- » A college planner
- » My household budget (not that I pay any attention to it)



REMEMBER

Numbers can open, edit, and save spreadsheets created with Microsoft Excel.

Creating a New Numbers Document

Like Pages (Apple's desktop publishing application, which I cover in Chapter 17), Numbers ships with a selection of templates you can modify quickly to create a new spreadsheet. For example, after a few modifications, you can easily use the Budget, Loan Comparison, and Mortgage templates to create your own spreadsheets.

To create a spreadsheet project file, follow these steps:

1. Click the Launchpad icon on the Dock.
2. Click the Numbers icon.

3. Click the **New Document** button at the lower-left corner of the **Open** dialog that appears.

Numbers displays the Choose a Template window, shown in Figure 18-1. (To display the Choose a Template window and start a new Numbers project at any time, just choose File ⇨ New.)

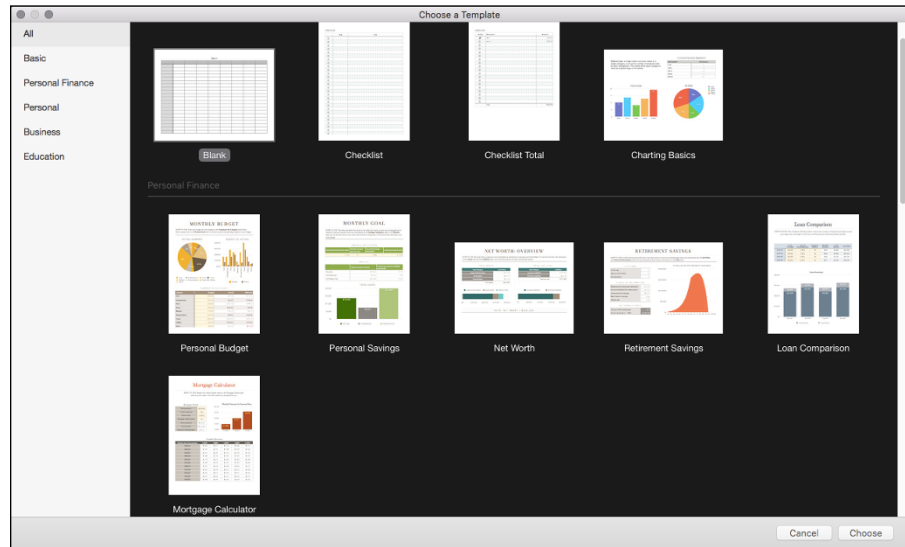


FIGURE 18-1:
Hey, these
templates aren't
frightening at all!

4. In the list on the left, click the type of document you want to create.
The document thumbnails in the center are updated with templates that match your choice.
5. Click the template that most closely matches your needs.
6. Click the **Choose** button to open a new document using the template you selected.

Opening an Existing Spreadsheet File

If you see an existing Numbers document in a Finder window (or you locate it using Spotlight or the All My Files location), just double-click the Document icon to open it. Numbers automatically loads and displays the spreadsheet.

It's equally easy to open a Numbers document from within the program. Follow these steps:

1. **From Launchpad, click the Numbers icon to run the program.**
2. **Press $\text{⌘}+\text{O}$ to display the Open dialog.**



TIP

As an iMac power user running OS X El Capitan, you can save and load Numbers documents directly to and from your iCloud Drive. All three applications — Pages, Numbers, and Keynote — feature an Open dialog that can display the contents of your iCloud Drive as well as your iMac's internal drive. (The iCloud Drive is a great place to store documents that you plan on editing on your iPhone or iPad. Read Chapter 9 for more information about iCloud.) If the spreadsheet is stored in your iCloud Drive, click the Numbers item under the iCloud heading in the Sidebar at the left of the dialog and then double-click the desired document thumbnail.

3. **If the document is stored on your iMac's internal drive, on your network, or in one of your Favorites locations, click the desired drive or folder in the Sidebar on the left side of the dialog.**
4. **Drill down through folders and subfolders until you locate the desired Numbers document.**



TIP

If you're unsure where the document is, click the Search box at the top of the Open dialog and type a portion of the document name or even a word or two of text it contains. Note that you can choose to search your drive, your iCloud Drive, or both.

5. **Double-click the spreadsheet to load it.**



TIP

If you want to open a spreadsheet you've been working on over the past few days, choose **File** ⇨ **Open Recent** to display Numbers documents that you've worked with recently.

Save Those Spreadsheets!

Thanks to the auto-save feature in El Capitan, you no longer have to fear losing a significant chunk of work because of a waning battery or a coworker's mistake. However, if you're not a huge fan of retyping data, *period*, you can also save your spreadsheets manually after making a major change. Follow these steps to save your spreadsheet to your hard drive:

1. **Press ⌘+S.**

If you're saving a document that hasn't yet been saved, the Save As sheet appears.

2. **Type a filename for your new spreadsheet.**

3. **Open the Where pop-up menu, and choose a location in which to save the file.**

Common locations are your iCloud Drive, Desktop, Documents folder, and Home folder.



TIP

If the location you want isn't listed in the Where pop-up menu, click the down-arrow button next to the Save As text box to display the full Save As dialog. Click the desired drive in the Devices list on the left side of the dialog and then click folders and subfolders until you reach the desired location. Alternatively, type the folder name in the Spotlight search box at the top right, and double-click the desired folder in the list of matching names. (As a bonus, you can also create a new folder in the full Save As dialog.)

4. **Click Save.**

After you save a Numbers document for the first time, you can create a version of that document by choosing File ⇨ Save. To revert to an older version of the current document, choose File ⇨ Revert To. You can choose to revert to the last saved version, or you can click Browse All Versions to look through multiple versions of the document and choose one of those to revert to.

Exploring the Numbers Window

Apple has done a great job of minimizing the complexity of the Numbers window. Figure 18-2 illustrates these major points of interest:

- » **Sheets tabs:** Because a Numbers project can contain multiple spreadsheets, they're displayed in Sheets tabs at the top of the window. To switch among spreadsheets in a project, click the desired tab.
- » **Sheet canvas:** Numbers displays the rows and columns of your spreadsheet in this section of the window; you enter and edit cell values within the sheet canvas.
- » **Toolbar:** The Numbers toolbar keeps the most common commands you'll use within easy reach.

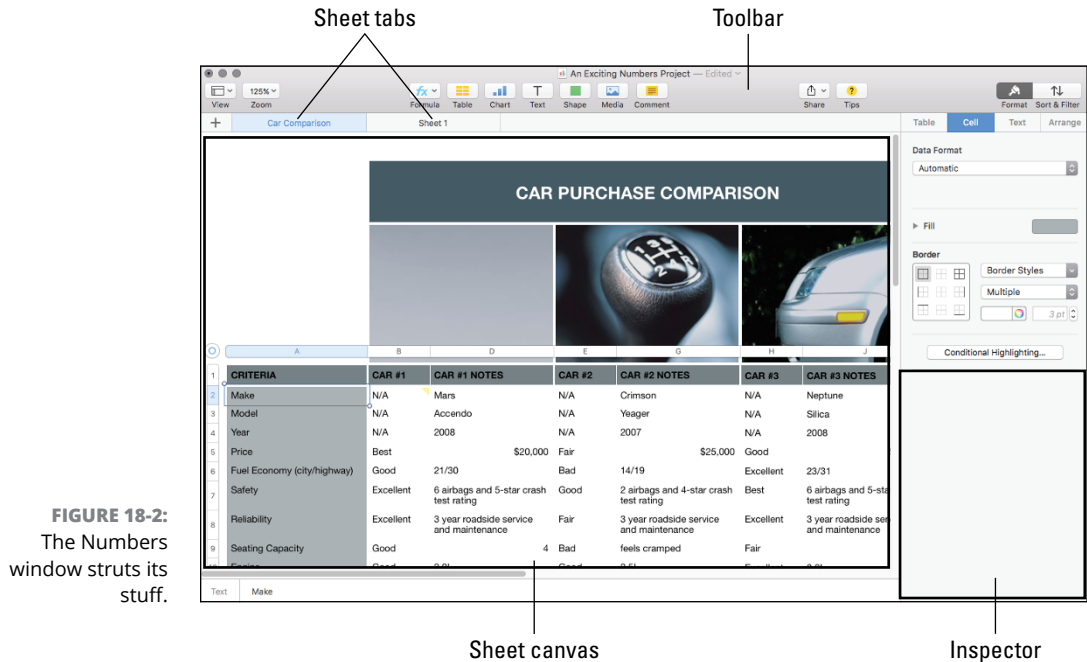


FIGURE 18-2:
The Numbers window struts its stuff.

» **Inspector:** Located on the right side of the Numbers window, the Inspector displays editing controls for the object that's currently selected, whether it's a selection of text, a table, or a single cell. (If you enter an equal sign [=] into a cell to create a formula, the Inspector displays the Function list, where you can specify a calculation that Numbers should perform.)

Navigating and Selecting Cells in a Spreadsheet

You can use the scroll bars to move around in your spreadsheet, but when you enter data into cells, moving your fingers from the keyboard is a hassle. Numbers has various handy navigation shortcut keys you can employ, as shown in Table 18-1. After you commit these keys to memory, your productivity level will shoot straight to the top.

TABLE 18-1 Movement Shortcut Keys in Numbers

Key or Key Combination	Where the Cursor Moves
Left arrow (←)	One cell to the left
Right arrow (→)	One cell to the right
Up arrow (↑)	One cell up
Down arrow (↓)	One cell down
Home	To the beginning of the active worksheet
End	To the end of the active worksheet
Page Down	Down one screen
Page Up	Up one screen
Return	One cell down (also works within a selection)
Tab	One cell to the right (also works within a selection)
Shift+Enter	One cell up (also works within a selection)
Shift+Tab	One cell to the left (also works within a selection)

You can also use the mouse or trackpad to select cells in a spreadsheet:

- » To select a *single* cell, click it.
- » To select a *range* of adjacent cells, click a cell at any corner of the range you want and drag in the direction you want.
- » To select a *column* of cells, click the alphabetic heading button at the top of the column.
- » To select a *row* of cells, click the numeric heading button at the far left end of the row.

Entering and Editing Data in a Spreadsheet

After you navigate to the cell in which you want to enter data, you're ready to type your data. Follow these steps to enter That Important Stuff:

- 1. Click the cell or press the spacebar.**

A cursor appears, indicating that the cell is ready to hold any data you type.



REMEMBER

2. Enter your data.

Spreadsheets can use both numbers and alphabetic characters within a cell; either type of information is considered data in the Spreadsheet World.

3. When you're ready to move on, press Return (to save the data and move one cell down) or press Tab (to save the data and move one cell to the right).

Make a mistake? No big deal:

» **To edit data:** Click within the cell that contains the data error (to select the cell) and then click the cell again to display the insertion cursor. Drag the insertion cursor across the characters to highlight them and then type the replacement data.

» **To delete characters:** Select the cell, highlight the characters, and press Delete.

Selecting the Correct Number Format

After you enter your data (in a cell, row, or column), you might need to format it so it appears correctly. Say you want certain cells to display a specific type of number, such as a dollar amount, percentage, or date. Numbers gives you a healthy selection of number-formatting possibilities.



TIP

Characters and formatting rules — such as decimal places, commas, and dollar and percentage notation — are part of number formatting. If your spreadsheet contains units of currency, such as dollars, format it as such. Then all you need to do is type the numbers, and the currency formatting is applied automatically.

To specify a number format, follow these steps:

1. **Select the cells, rows, or columns you want to format.**
2. **Click the Format toolbar button.**
3. **Click the Cell tab in the Inspector.**
4. **From the Data Format pop-up menu, choose the type of formatting you want to apply, as shown in Figure 18-3.**

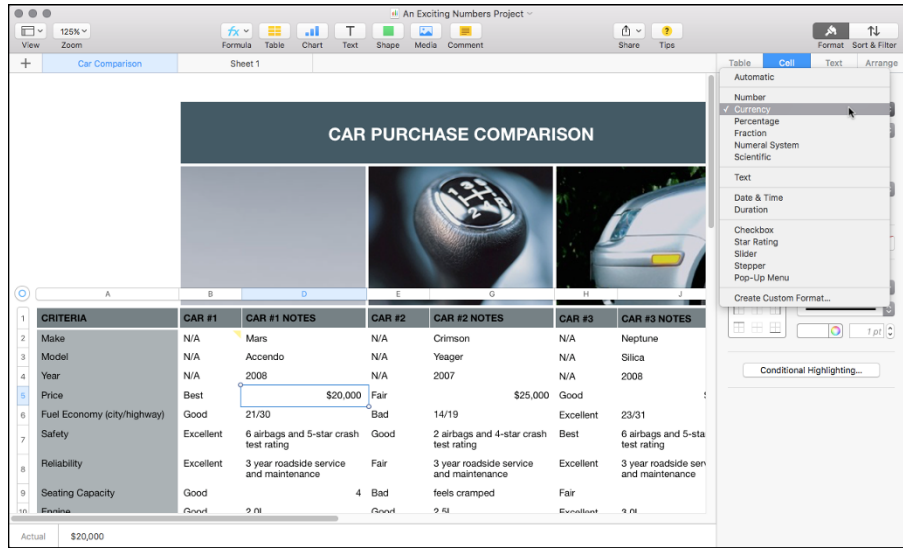


FIGURE 18-3: From the Inspector, you can format the data you've entered.

Aligning Cell Text Just So

You can also change the alignment of text in the selected cells. The default alignment is *flush left for text* and *flush right for numeric data*. Follow these steps:

- 1. Select the cells, rows, or columns you want to format.**
See the earlier section “Navigating and Selecting Cells in a Spreadsheet” for tips on selecting stuff.
- 2. Click the Format toolbar button.**
- 3. Click the Text tab of the Inspector to display the settings shown in Figure 18-4.**
- 4. Click the corresponding Alignment button to choose the type of formatting you want to apply.**

You can choose left, right, center, and justified (as well as the defaults of text left and numbers right). Text can also be aligned at the top, center, or bottom of a cell.



TIP

Do you need to set apart the contents of some cells? For example, you might need to create text headings for some columns and rows or to highlight the totals in a spreadsheet. To change such formatting, select the cells, rows, or columns you want to format; then click the Font Family, Font Size, or Font Color buttons on the Text tab.

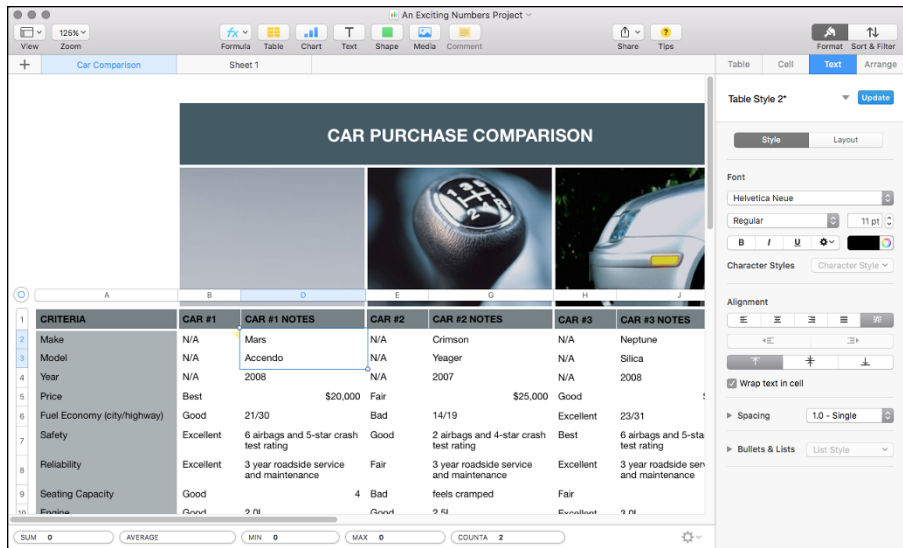


FIGURE 18-4: Set text alignment within a cell.

Formatting with Shading

Shading the contents of a cell, row, or column is helpful when your spreadsheet contains subtotals or logical divisions. Follow these steps to shade cells, rows, or columns:

1. Select the cells, rows, or columns you want to format.
2. Click the Format toolbar button.
3. Click the Cell tab of the Inspector.
4. Click the triangle next to the Fill heading, and choose a shading option from the Fill pop-up menu.

Figure 18-5 shows the controls for a gradient fill.

5. Click the color box to select a color for your shading.
Numbers displays a color picker (also shown in Figure 18-5).
6. Click to select a color.
7. After you achieve the effect you want, click the color box again to close the color picker.



TIP

You can also add a custom border to selected cells, rows, and columns from the Cell tab. Click the triangle next to the Border heading to select just the right border.

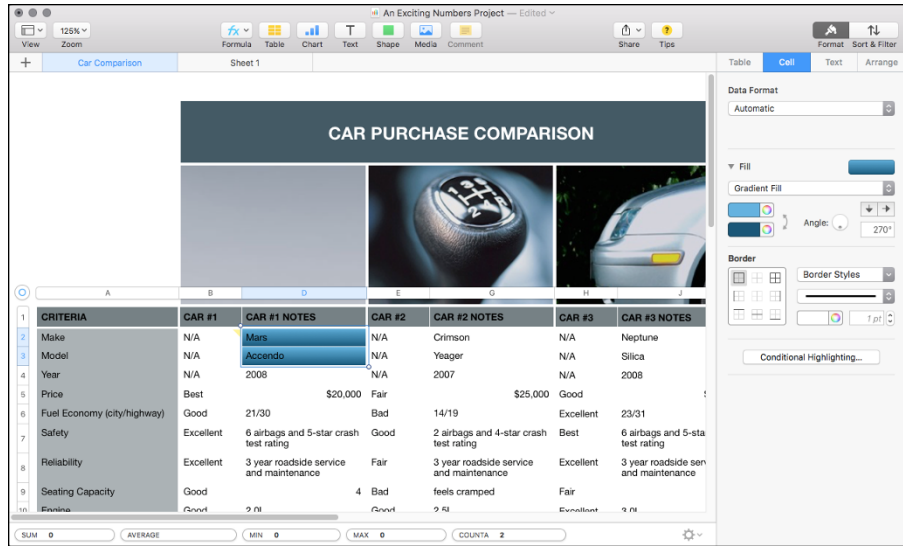


FIGURE 18-5: Adding shading and colors to cells, rows, and columns is easy in Numbers.

Inserting and Deleting Rows and Columns

What's that? You forgot to add a row, and now you're three pages into your data entry? No problem. You can easily add — or delete — rows and columns. First, select the row or column adjacent to where you want to insert (or delete) a row or column. Then do one of the following:

- » **For a row:** Right-click and choose Add Row Above, Add Row Below, or Delete Row from the shortcut menu that appears.
- » **For a column:** Right-click and choose Add Column Before, Add Column After, or Delete Column from the shortcut menu that appears.

If you select multiple rows or columns, right-click and choose Add. Numbers inserts the same number of new rows or columns you selected.



TIP

You can also insert rows and columns via the Table menu at the top of the Numbers window.

The Formula Is Your Friend

It's time to talk about *formulas*, which are equations that calculate values based on the contents of cells you specify in your spreadsheet. For example, if you designate cell A1 (the cell in column A at row 1) to hold your yearly salary and cell B1 to hold the number 12, you can divide the contents of cell A1 by cell B1 (to calculate your monthly salary) by typing this formula into any other cell:

```
=A1/B1
```

Formulas in Numbers always start with an equal sign, and they may include one or more functions as well. A *function* is a preset mathematical, statistical, or engineering calculation that will be performed, such as figuring the sum or average of a series of cells.

“So what’s the big deal, Mark? Why not use a calculator?” Sure, you could. But maybe you want to calculate your weekly salary. Rather than grab a pencil and paper, you can simply change the contents of cell B1 to 52, and — boom! — the spreadsheet is updated to display your weekly salary.

That’s a simple example, of course, but it demonstrates the basics of using formulas (and the reason why spreadsheets are often used to predict trends and forecast budgets). It’s the what-if tool of choice for everyone who works with numeric data.

To add a simple formula within a spreadsheet, follow these steps:

- 1. Select the cell that will hold the result of your calculation.**
- 2. Type = (the equal sign).**
The Formula box appears within the confines of the cell.
- 3. Click the Format button on the Numbers toolbar to display the available functions in the Inspector, as shown in Figure 18-6.**
- 4. Click the category of calculation you want from the left column of the Inspector.**

Instead of scrolling through the entire function library, it's easier to choose a category — such as *Financial* for your budget spreadsheet — to filter the selection. (Alternatively, you can click in the Search box and type a function name or keyword.)

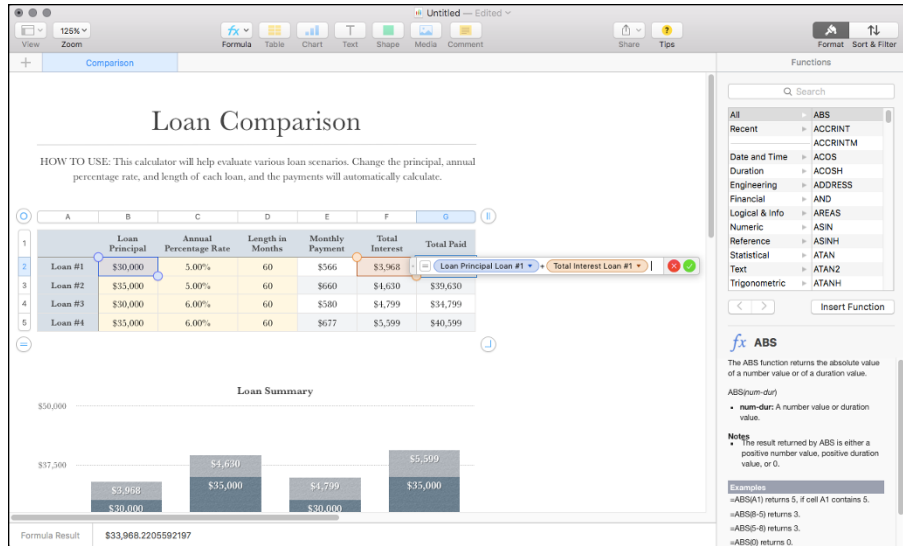


FIGURE 18-6: If you have to use formulas, at least Numbers can enter them for you.



To display more information about a specific function, click it in the right column of the Inspector. In Figure 18-6, choosing the ABS function brings up a description at the bottom of the Inspector.

5. After you select the perfect function in the right column, click the Insert Function button.

The function appears in the Formula box, along with any arguments it requires.

In case you're unfamiliar with the term *argument*, it refers to a value specified in a cell that a formula uses. For example, the SUM formula adds the contents of each cell you specify to produce a total; each of those cell values is an argument.

6. Click an argument button in the formula, and click the cell that contains the corresponding data.

Numbers automatically adds the cell you indicated to the formula.

7. Repeat Step 6 for each argument in the formula.

8. When you finish, click the Accept button — the green check mark — to add the formula to the cell.

That's it! Your formula is now ready to work behind the scenes, doing math for you so the correct numbers appear in the cell you specified.

Adding Visual Punch with a Chart

Sometimes, you just have to see something to believe it, so it can help to use the data you've added to a spreadsheet to generate a professional-looking chart. After you've entered the data you want to chart, follow these steps:



TIP

1. Select the adjacent cells you want to chart by dragging.

To choose individual cells that aren't adjacent, you can hold down the ⌘ key as you click.

2. Click the Chart button on the Numbers toolbar.

The Chart button bears the symbol of a bar graph.

Numbers displays the thumbnail menu shown in Figure 18-7. Note that you can display different categories of charts by clicking one of the three tabs at the top (2D/3D/Interactive), and you can scroll the menu to reveal additional thumbnails by using the left- and right-arrow buttons.

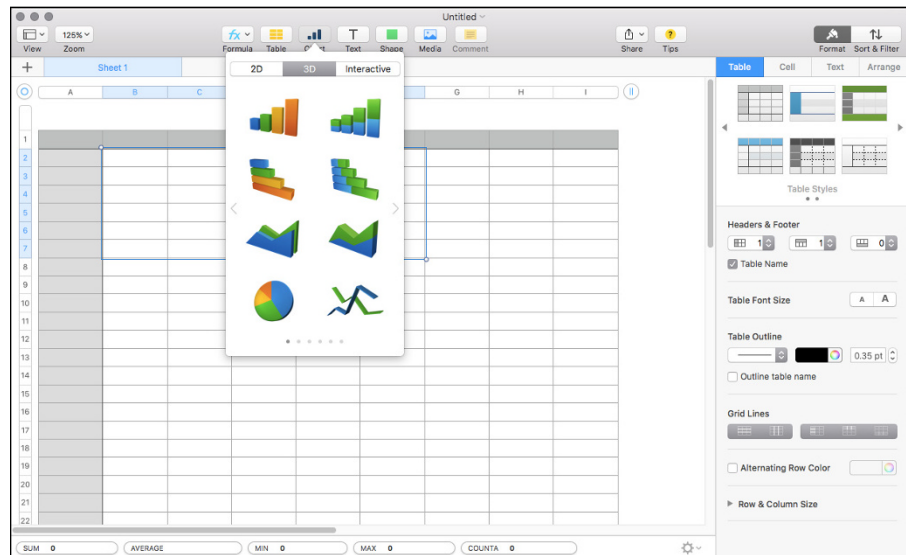


FIGURE 18-7: Numbers displays the chart styles you can use.

3. Click the thumbnail for the chart type you want.

Numbers inserts the chart as an object within your spreadsheet so you can move the chart. You can drag using the handles that appear on the outside of the object box to resize your chart.

4. **To change the default title, click the title box to select it; click it again to edit the text.**



TIP

With your chart selected, click the Format toolbar button to display your old friend the Inspector, complete with the controls you can use to customize your chart's appearance. For example, you can change the colors and add (or remove) the title and legend.

Printing Your Spreadsheet

You can easily send a Numbers spreadsheet to a USB or shared network printer — or, if you'd rather create an electronic copy of the document as an Adobe PDF, you can click the PDF button that appears on the Numbers Print dialog and select a location where the file will be saved.

To print a Numbers spreadsheet on your default printer, follow these steps:

1. **Choose File ⇨ Print from the Numbers menu bar.**

Because a Numbers document can contain multiple spreadsheets, you can select a specific spreadsheet to print (by clicking it in the grid and clicking the Print This Sheet radio button at the bottom of the window), or you can print all spreadsheets in the document (by clicking the Print All Sheets radio button).

2. **Click the desired page orientation.**

Spreadsheets with a large number of columns are often printed in landscape orientation to ensure that everything fits on the page. You can also scale the spreadsheet so it automatically fits on the page by clicking the Fit button (next to the Content Scale slider).

3. **Click Print at the bottom of the window.**

Numbers displays the Print dialog. To display additional settings, click the Show Details button at the bottom of the sheet.

4. **Click in the Copies field, and enter the number of copies you need.**

5. Select the pages to print:

- *To print the entire spreadsheet, select All.*
- *To print a range of selected pages, select the From radio button, and enter the starting and ending pages.*

6. Click the Print button to send the document to your printer.



TIP

Click the Share toolbar icon to share your spreadsheet masterpiece with others (either as a link to the document on your iCloud Drive or an actual copy of the document file). You can also specify whether the document should be view-only or password-protected.

IN THIS CHAPTER

Creating a new presentation

Adding slides

Using selection boxes

Entering and editing text

Formatting text

Adding presenter's notes

Inserting media and shapes

Running a slideshow

Printing slides and notes

Chapter 19

Building Presentations with Keynote

It seems like only yesterday that I was giving business presentations with a clunky overhead projector and black-and-white acetate transparencies. Fancy color gradients and animation were unheard of, and the only sound my presentations made was the droning of the projector's fan. I might as well have been using tree bark and chalk.

Thank goodness those “cave painting” days are gone. Cutting-edge presentation software like Keynote makes slide creation easy and — believe it or not — *fun!* This is the application Steve Jobs once used for his Macworld keynotes every year.

So much visual candy is available that you'll never need to shout to wake your audience again.

In this chapter, I first demonstrate how simple it is to build a stunning Keynote presentation. Then you can see how to start and control your slide display from the keyboard (or even your iPhone, iPad, or iPod touch). And don't forget that you can print your slides and notes so your audience can keep a copy of your brilliant work.

Creating a New Keynote Project

Like the other productivity applications from Apple, Keynote begins the document creation process with a Theme Chooser window. To create a new presentation project, follow these steps:

1. Click the Launchpad icon on the Dock.
2. Click the Keynote icon, which looks like a lectern.
3. Click the New Document button at the lower-left corner of the Open dialog.

The Theme Chooser window, shown in Figure 19-1, appears. (I have to say that these are probably the most stunning visual building blocks I've ever seen in a presentation application.)

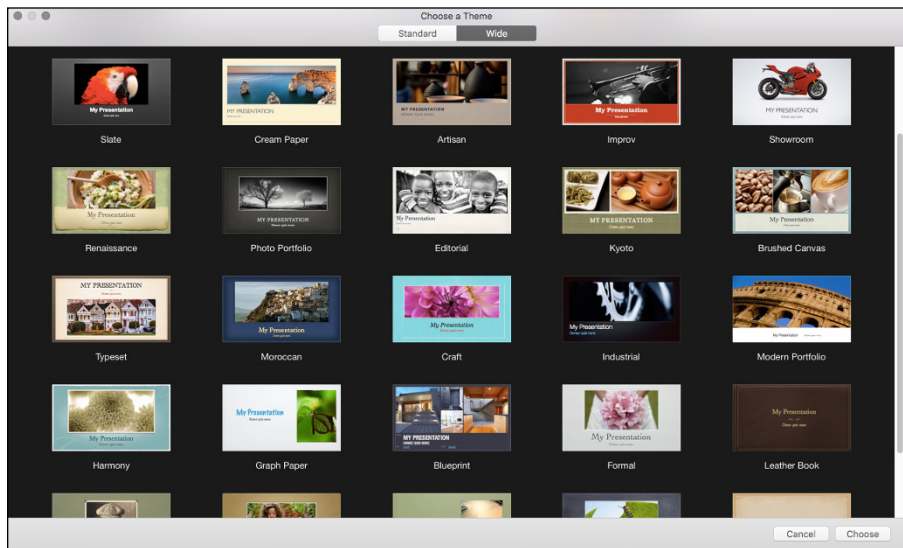


FIGURE 19-1: Select a template from the Theme Chooser window.

4. **Choose the aspect ratio, using either the Standard or Wide button at the top of the window.**

Although you don't necessarily need to select an exact match for your iMac's screen resolution, it's a good idea to select the value closest to your projector's maximum resolution. If someone else is providing the projector, the Standard size is the more compatible choice. If you'll present on a typical high-resolution computer monitor, widescreen provides a better display. (Of course, nothing's stopping you from creating *two* documents of the same presentation, one in Standard ratio and one in Wide ratio. As the Scouts say, "Be prepared!")

5. **Click the theme thumbnail that most closely matches your needs.**
6. **Click the Choose button to open a new document that uses the theme you selected.**

Opening a Keynote Presentation

If an existing Keynote presentation file is visible in a Finder window, you can double-click the document icon to open the project. If Keynote is already running, follow these steps to load a project from within the application:

1. **Press ⌘+O to display the Open dialog.**
2. **Click the desired drive in the Devices list at the left of the dialog; then click folders and subfolders until you locate the Keynote project.**
3. **Do one of the following:**
 - *If the project is stored on your iCloud Drive*, click the Keynote item under the iCloud heading in the sidebar on the left side of the dialog and then double-click the desired project thumbnail.
 - *If the project is stored on your hard drive*, the All My Files location can quickly display all your documents. You can jump directly to any location or folder under the Favorites heading by simply clicking the entry. Oh, and don't forget that you can use the Search box at the top of the Open dialog to locate the document by name or by some of the text it contains. After you've located the project, double-click the filename to load it.



TIP

If you want to open a Keynote document you've edited in the recent past, things get even easier! Just choose File⇨Open Recent, and you can open the document with a single click from the submenu that appears.



TIP

Who says you're stuck with opening a Keynote presentation on your Mac? Don't forget about the iOS version of Keynote, which offers the ultimate in portability using your iPhone or iPad! The iOS version can open and run any Keynote presentation that you've stored in your iCloud Drive.

Saving Your Presentation

Because Keynote provides full support for the OS X auto-save feature, saving your work often isn't as critical as it used to be. To safeguard your work in a world of power failures, though, follow these steps:

1. Press ⌘+S.

If you're saving a document that hasn't yet been saved, the familiar Save As sheet appears.

2. Type a filename for your new document.

3. From the Where pop-up menu, choose a location in which to save the document.

By default, Keynote saves the project directly to your iCloud Drive (iCloud appears in the Where pop-up menu), making it available to other Macs and iOS devices using the same Apple ID. To select a location not available from the Where pop-up menu, click the button with the down-arrow symbol to expand the sheet. You can also create a new folder from the expanded sheet.

4. Click Save.



REMEMBER

You can create a version of a Keynote presentation by choosing File⇨Save. To revert to an older version of the current presentation, choose File⇨Revert To. Keynote gives you the option of reverting to the last saved version, or you can click Browse All Versions to browse multiple versions of the presentation and revert to any saved version.

Putting Keynote to Work

Ready for the 5-cent tour of the Keynote window? Launch the application and create or load a project, and you see the tourist attractions shown in Figure 19-2:

» **Slides list:** Use this thumbnail list of all the slides in your project to navigate quickly. Click a thumbnail to switch instantly to that slide.



TIP

The Slides list can also display your project in outline format, allowing you to check all your discussion points. (This is a great way to ferret out any holes in your presentation's flow.) While in outline mode, you can still jump directly to any slide by clicking the slide's title in the outline. To display the outline, choose View ⇨ Outline. You can switch back to the default Navigator Slides list by choosing View ⇨ Navigator.

- » **Layout pane:** Your slide appears in its entirety in this pane. You can add elements to and edit the content of the slide from the Layout pane.
- » **Toolbar:** As does the toolbar in Pages and Numbers, the Keynote toolbar makes it easy to find the most common controls you'll use while designing and editing your slides. Clicking an icon on the toolbar performs an action, just as selecting a menu item does.
- » **Presenter Notes pane:** You might decide to add notes to one or more slides — either for your own use or to print as additional information for your audience. Click the View icon on the toolbar, and select Show Presenter Notes (or choose View ⇨ Show Presenter Notes) to open the Notes pane. This text box appears under the Layout pane.
- » **Inspector:** Keynote displays this pane on the right side of the window when you click the Format button, allowing you to format selected text and images on the fly.

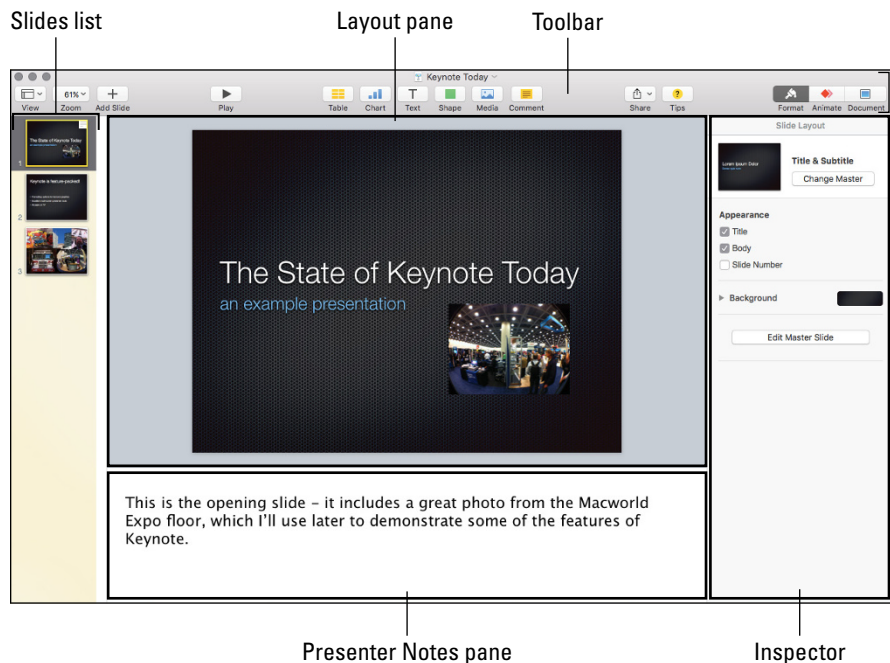


FIGURE 19-2: The Keynote window is dominated by the Layout pane.

Adding Slides

Keynote creates a single Title slide when you first create a project. However, not many presentations are complete with just a single slide! To add more slides to your project, use one of these methods:

- » Click the Add Slide button on the toolbar.
- » Choose Slide ⇨ New Slide.
- » Press ⌘+Shift+N.
- » Right-click an existing slide in the Slides list, and choose New Slide from the menu that appears.

Keynote adds the new slide to your Slides list and automatically switches to the new slide in the Layout pane.



TIP

Need a slide that's very similar to a slide you've already designed? Right-click the existing slide, and choose Duplicate from the shortcut menu to create a new slide just like it. (Consider this cloning without the science.)

To move slides to different positions in the Slides list (that is, to change the order in your Keynote presentation), drag each slide thumbnail to the desired spot in the list.

Working with Text and Graphics Boxes

All the text and graphics placeholders on your first Title slide appear within boxes. Keynote uses these boxes to manipulate text and graphics. You can resize a box (and its contents) by clicking the box and dragging one of the handles that appear around the edges of the box. (The cursor changes into a double-sided arrow when you're "in the zone.") Side selection handles drag only the edge of the frame, whereas corner selection handles resize both adjoining edges of the selection frame.



TIP

To keep the proportions of a box constrained, hold down Shift while dragging its corner handles.

Boxes make it easy to move text and graphics together (as a single unit) to another location within the Layout pane. Click in the center of the box, and drag the box to the desired spot. Keynote displays alignment lines to help you align the box with

other elements around it (or with regular divisions of the slide, like horizontal center).



REMEMBER

To select a box, click it. To select text or graphics within a box (see the next section), double-click the box.

When you're resizing a photo in a box, hold down the Shift key while you drag the frame. Doing so tells Keynote to preserve the image's aspect ratio so that the vertical and horizontal proportions remain fixed. You can also flip images horizontally or vertically from the Arrange menu.

To delete an image, just click it to select it and then press the Delete key.

Adding and Editing Slide Text

As with Pages, which also uses boxes for text layout, you can add or edit text in Keynote with ease. Say you have a box with the placeholder text *Double-click to edit*. Just double-click in that box, and the placeholder text disappears, leaving the field ready to accept new text. Any new text you type appears at the blinking cursor within the box.

Here are some additional ways to work with slide text:

- » **Add a new text box.** Just click the Text button on the Keynote toolbar, and click one of the sample styles that appear. Your new text box appears in the middle of the slide.
- » **Edit existing text.** Click — using the bar-shaped cursor to select just the right spot in the text — and drag the insertion cursor across the characters to highlight them. Type the replacement text, and Keynote obligingly replaces the old text with the new text you type.
- » **Delete text.** Click and drag across the characters to highlight them; then press Delete. You can also delete an entire box and all its contents: Right-click the offending box, and choose Delete from the menu that appears.

When a box's contents are just right, and you're finished entering or editing text, click anywhere outside the box to hide it from view. You can always click the text again to display the box later.

Formatting Slide Text for the Perfect Look

Keynote doesn't restrict you to the default fonts for the theme you chose. It's easy to format the text in your slides — apply a different font family, font color, text alignment, and text attributes (such as bolding and italicizing) — on the fly.

Select the desired text by double-clicking a box and dragging the text cursor to highlight the characters. Now apply your formatting using one of two methods:

- » **The Inspector:** The font controls in the Inspector work in two ways. After you've selected text, either click a font control to display a pop-up menu, or click a button to immediately perform an action. Opening the Font Size pop-up menu, for example, displays a range of sizes for the selected text. With a single click of the B (bold) button, add the bold attribute to the highlighted characters. To create bullets and lists, click the Text tab at the top of the Inspector.
- » **The Format menu:** The controls on the Keynote Format menu generally mirror those in the Inspector. To change the alignment from the Format menu, click Format and hover the cursor over the Text menu item. To change text attributes, click Format and hover the cursor over the Font menu.

Using Presenter's Notes in Your Project

As mentioned earlier, you can type presenter's text notes in the Notes pane. I use them to display related topic points while presenting my slideshow. However, you can also print the notes for a project along with the slides, so presenter's notes are also great for including reminders and to-do points for your audience in handouts.

To type your notes, just click within the Notes pane. If that pane is hidden, choose View ⇨ Show Presenter Notes, or click the View button at the far left end of the Keynote toolbar and choose Show Presenter Notes. When you're finished adding notes, click in the Slides list or the Layout pane to return to editing mode.



TIP

To display your notes while practicing, use the Keynote Rehearsal feature. Click the Play menu at the top of the Keynote window, choose Rehearse Slideshow, click the Tools icon at the top right, and select the Presenter Notes check box to enable it. Now you can scroll through the notes while the slideshow runs! (More on slide-shows in a second.)

Every Good Presentation Needs Media

Adding audio, photos, and movies to a slide is drag-and-drop easy in Keynote! Simply drag an image, audio, or movie file from a Finder window, and place it at the spot you want within your document.

You can also use the Media Browser. To do so, follow these steps:

- 1. Click the Media button on the toolbar and then click the Photos, Music, or Movies tab to select the desired type.**
Keynote displays the contents of your various media collections (such as your iPhoto and iTunes libraries).
- 2. When you find the file you want to add, drag it to the spot you want in the document.**

Figure 19-3 shows the Media Browser in action.

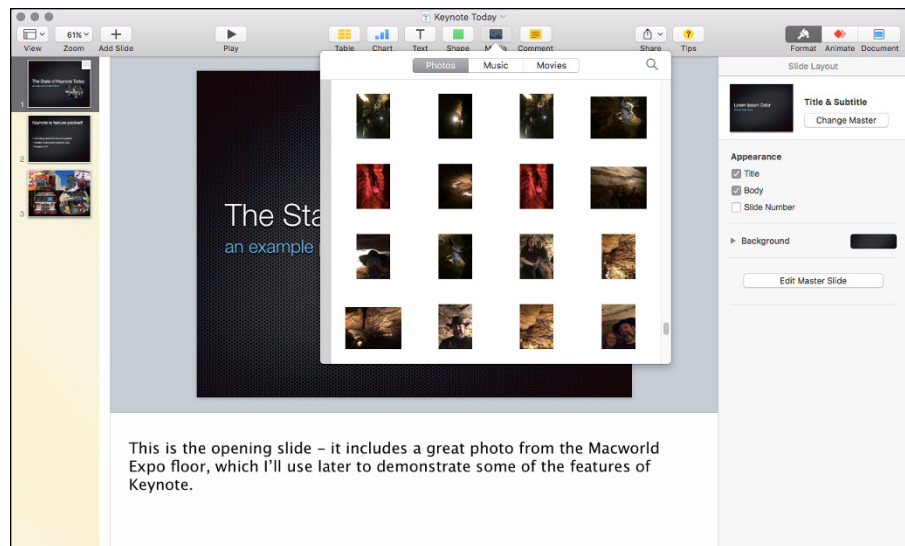


FIGURE 19-3:
It's not just photos. You can add audio and movie clips to a slide too!



TIP

Having trouble finding that specific photo or movie? Click the Search icon (which looks like a magnifying glass) at the top-right corner of the Media Browser, and you can specify a particular filename or keyword.

Adding a Background Shape

Text often stands out on a slide when it sits on top of a background shape. To add a shape (such as a rectangle or circle) as a background for your text, follow these steps:

1. **Click the insertion cursor in the location you want.**
2. **Click the Shape button on the Keynote toolbar, and choose a shape.**

The shape appears in your document.

3. **Click the center of the shape, and drag it to a new spot.**

As with image boxes, you can resize or move shapes. You can read about how to do just that in the earlier section “Working with Text and Graphics Boxes.”

4. **When the shape is properly positioned and sized, select it, and choose Arrange ⇨ Send to Back.**

You want to “send the shape to the back” so that any text you enter sits in front of the shape, not behind it.



TIP

Of course, you’re not limited to creating shapes and graphics within Keynote; consider using an application like Adobe Photoshop or Illustrator to create graphics that you can import into your slides! As mentioned earlier, you can easily drag and drop your new graphic into a slide from a Finder window.

Creating Your Keynote Slideshow

The heart of a Keynote presentation is the slideshow you build from the slides you’ve created. A Keynote slideshow is typically presented as a full-screen presentation, with slides appearing in linear order as they are sorted in the Slides list.

You run a Keynote slideshow simply by clicking the Play button on the toolbar or by choosing Play ⇨ Play Slideshow. You can advance to the next slide by clicking, or by pressing the right bracket key, which looks like this:].

Of course, other controls are available besides the ones that advance to the next slide. Table 19-1 lists the key shortcuts you’ll use most often during a slideshow.



TIP

Keynote offers a number of settings you can tweak to fine-tune your slideshow. To display these settings, choose Keynote ⇨ Preferences, and click the Slideshow button in the Preferences window.

TABLE 19-1 Keynote Slideshow Shortcut Keys

Key	Action
] (right bracket)	Go to next slide.
[(left bracket)	Go to previous slide.
Home	Jump to first slide.
End	Jump to last slide.
C	Show or hide the pointer.
<i>number</i>	Jump to the corresponding slide in the Slides list.
U	Scroll notes up.
D	Scroll notes down.
N	Show current slide number.
H	Hide the slideshow and display the last application used. (The presentation appears as a minimized icon on the Dock.)
B	Pause the slideshow and display a black screen. (Press any key to resume the slideshow.)
Esc	Quit.



TIP

If you have an iPhone, iPad, or iPod touch handy, and you've installed the iOS version of Keynote on your device, choose Keynote⇨Preferences to display the Preferences window. Click the Remotes tab to link your device to your iMac and Keynote. Now you can use your handheld device as a remote during your slideshow. *Sweet!*

Printing Your Slides and Notes

I'll be honest: I don't print handouts for every presentation I give. However, if you're presenting a lengthy slideshow with plenty of information you want your audience to remember or refer to later, nothing beats handouts that include scaled-down images of your slides (and, optionally, your presenter's notes).

You're not limited to paper, though. You can also use Keynote to create an electronic PDF (Portable Document Format) file instead of a printed handout, which your audience members can download from your website. Or, if you're an educator with access to an interactive whiteboard (such as a SMART Board), you can use this new technology with Keynote.

To print your slides and notes, follow these steps:

1. Within Keynote, choose File ⇨ Print or press ⌘+P.

Keynote displays the Print sheet, shown in Figure 19-4. (Note that some printer-specific features may be different on your screen.) If necessary, expand the Print sheet to show all the settings by clicking the Show Details button at the bottom of the sheet.

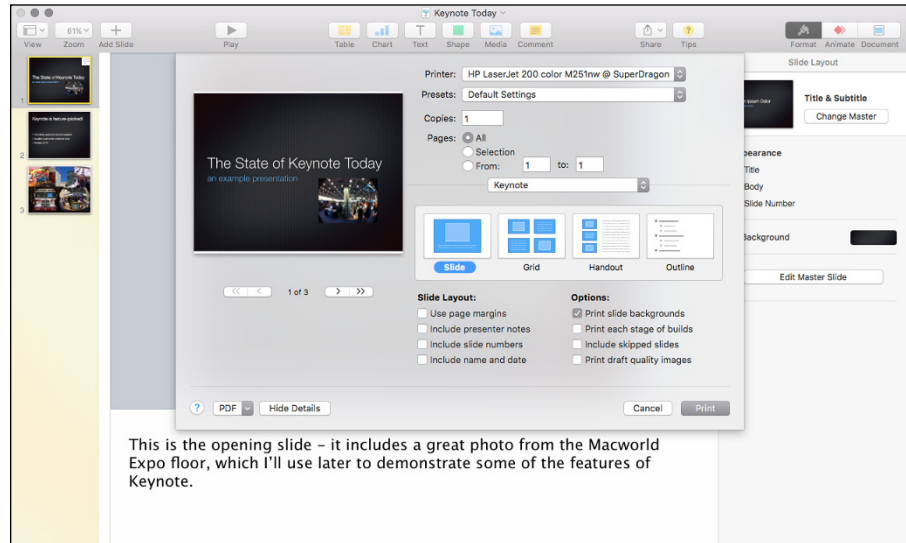


FIGURE 19-4: Keynote offers a wide range of printing options for your slides and notes.

2. Click one of the following formats (each format displays a different set of Layout options):

- *Slide*: Print each slide on a separate page at full size. You can optionally choose to print the presenter notes for each slide as well.
- *Grid*: Print multiple slides on a page at a reduced size. Using the Slides Per Page pop-up menu, specify how many slides Keynote should print on each page.
- *Handout*: Print a handout with multiple slides per page (and, optionally, with presenter's notes). Again, you can choose how many slides appear on each page.
- *Outline*: Print the contents of your Slides list in Outline view.

3. Select the pages to print:

- To print the entire document, select the All radio button.
- To print a range of selected slides, select the From radio button and then enter the starting and ending pages.

4. **Select or deselect additional options in the Options section.**
5. **Click the Print button to send the job to your printer.**



TIP

You can also send a copy of your finished presentation as an attachment within Mail or Messages. Or, if the presentation is saved to your iCloud Drive, you can provide others a web link through Twitter or Facebook. Click the Share button on the toolbar to explore your sharing options. Note that sharing a link for viewing a presentation (from the Share Link via iCloud menu item) is different from sending an actual copy of the Keynote document (from the Send a Copy menu item). For example, if your recipient needs to edit your presentation, you should send a copy rather than a link.



TIP

Click the Share button on the toolbar, and choose View Share Settings to password-protect your shared presentation or to share it as view-only.



**The Necessary
Evils:**

**Troubleshooting,
Upgrading,
Maintaining**

IN THIS PART . . .

Troubleshoot and fix problems with your iMac.

Expand your iMac with additional RAM, external drives, and more.

Maintain your iMac properly for peak performance.

Back up your iMac by using Time Machine.

IN THIS CHAPTER

Avoiding the blame (righteously)

Putting basic troubleshooting precepts to work

Using Mark's Troubleshooting Tree

Getting help

Chapter 20

It Just . . . Sits . . . There

I wish you weren't reading this chapter.

Because you are, I can only surmise that you're having trouble with your iMac, and that it needs fixing. (The other possibility — that you just like reading about solving computer problems — is more attractive but much more problematic.)

Consider this chapter a crash course in the logical puzzle that is computer *troubleshooting*: the art of finding out What Needs Fixing. I tell you what to do when you just plain can't solve the problem yourself.

Oh, and you're going to encounter a lot of Tips and Mark's Maxims in this chapter. I learned all of them the hard way, so I recommend committing them to memory.

Repeat after Me: Yes, I Am a Tech!

Anyone can troubleshoot. Believe it, and put these common troubleshooting myths to rest:



- » **It takes a college degree in computer science to troubleshoot.** Tell that to my troubleshooting teen. She'll think it's a hoot, because she has an iMac in her room, as well as Apple computers in the classroom, and she fixes minor problems all the time. You can follow all the steps in this chapter without any special training.
- » **I'm to blame.** Ever heard of viruses? Failing hardware? Buggy software? Any of those things can cause the problem. It's Mark's Maxim time:
Don't beat yourself up! Your iMac *can* be fixed.
- » **I need to buy expensive utility software.** Nope. You can certainly invest in a commercial testing and repair utility if you like. My favorite is Drive Genius 4 from Prosoft Engineering (www.prosofteng.com), but a third-party utility isn't a requirement for troubleshooting. (I do, however, consider an antivirus application a must-have; you should have one already. Hint, hint.)
- » **There's no hope if I can't fix it.** Sure, parts fail and computers crash, but your Apple Service Center can repair just about any problem. And (ahem) *if you backed up your computer* (as I preach throughout this book), you'll keep that important data (even if a new hard drive or motherboard is in your future).
- » **It takes forever.** Wait until you read the number-one rule in the next section; the first step takes but 10 seconds and often solves the problem. Naturally, not all problems can be fixed so quickly. But if you follow the procedures in this chapter, you should fix your iMac (or at least know that the problem requires outside help) in an afternoon.

With those myths banished, you can get down to business and start feeling better soon.

Step-by-Step iMac Troubleshooting

In the following sections, I walk you through my should-be-patented Troubleshooting Tree, as well as the El Capitan built-in troubleshooting application, Disk Utility. I also introduce you to several keystrokes that can make your Mac jump through hoops.

The number-one rule: Reboot!

The simple fact is that rebooting your iMac can often solve many problems. If you're encountering these types of strange behavior with your iMac, a reboot might be all you need:

- » Intermittent problems communicating over a network
- » A garbled screen, strange colors, or screwed-up fonts
- » The swirling Beach Ball of Doom that won't go away after several minutes
- » An application that locks up
- » An external device that seems to disappear or can't be opened

To put it succinctly, here's a modest Mark's Maxim:



AUTHOR
SAYS

Always try a reboot before beginning to worry. Always.

If you're in the middle of a program, try to save all your open documents before you reboot. That might be impossible, but try to save what you can.

As your first (and best) option for shutting down, click the Apple menu () and choose Shut Down. If you need to force a *locked* application (one that's not responding) to quit so that you can reboot, follow these steps to quash that locked application:

1. Click the Apple () menu, and choose Force Quit.

The dialog shown in Figure 20-1 appears.

2. Click the offending application and then click the Force Quit button.

WHY IS REBOOTING SO DARNED EFFECTIVE?

Rebooting fixes problems because it resets *everything*. Your network connection, for example, might be acting up or might have timed out, and rebooting restores it. Hardware connections are reset when you reboot, which can “magically” bring recalcitrant external peripherals back to life. Rebooting also fixes problems due to brownouts or those notorious AC power flickerings you undoubtedly have noticed from time to time. Such interruptions in constant juice might not bother you or me (or your less-intelligent toaster), but they can play tricks on your iMac that rebooting can fix.

FIGURE 20-1:
Force a recalcitrant application to take off.



When you get everything to quit, you should be able to click the Apple menu and choose Shut Down (not Restart) without a problem.

If your iMac simply won't shut down (or you can't get the offending application to quit), do what must be done:

- 1. Press and hold your iMac's Power button until it shuts itself off.**

You have to wait about five seconds for your Mac to turn itself off.



TIP

If holding the Power button down on your iMac doesn't do the trick, press the Power button and the Left Option+Left Shift+Left Control keyboard shortcut at the same time; then release them all at the same time. (This method also resets some of your iMac's internal hardware settings, which is often A Good Thing.)

- 2. Wait about ten seconds.**

- 3. Press the Power button again to restart the computer.**

After everything is back up, check whether the problem is still apparent. If you use your iMac for an hour or two and the problem doesn't reoccur, you likely fixed it!

Special keys that can come in handy

Several keys have special powers over your iMac. I'm not kidding! These keys affect how your computer starts up, and they can really come in handy while troubleshooting.

Using Safe Boot mode

You can use Safe Boot mode to force El Capitan to run a directory check of your boot drive and disable any login items that might be interfering with your system. Follow these steps:

1. Choose the Shut Down menu item from the Apple () menu to turn off your iMac.
2. Press the Power button to restart the computer.
3. Immediately after you hear the start-up tone, press and hold down the Shift key (and keep holding it down until you see the boot progress indicator).
4. After El Capitan boots, you're in Safe Boot mode, and you can check the operation of your iMac by using Disk Utility (or a commercial utility application).
5. When you're ready to return to normal operation, restart your iMac again (this time, without pressing the Shift key).

Start-up keys

Table 20-1 provides the lowdown on start-up keys. Hold down the indicated key either *when you push the Power button* or *immediately after the screen goes blank during a restart*. (As I just mentioned, the Shift key shortcut to Safe Mode is the exception; you should press it and hold it down after you hear the start-up tone.)

Some of the keys and combinations in Table 20-1 might never be necessary for your machine, but an Apple technician might instruct you to use them.

TABLE 20-1

Start-Up Keys and Their Tricks

Key	Effect on Your iMac
C	Boots from the CD or DVD that's loaded in your optical drive (if you have one)
Media Eject	Ejects the CD or DVD in your optical drive (if you have one)
Option	Displays a system boot menu, allowing you to choose any bootable operating system on your iMac
Shift	Boots in Safe Mode
T	Starts your iMac in Target Disk mode (using your Thunderbolt or FireWire port)
⌘+V	Shows OS X Console messages
⌘+R	Boots from the El Capitan Recovery HD volume
⌘+S	Starts your iMac in Single User mode
⌘+Option+P+R	Resets Parameter RAM (PRAM)

DANGER, WILL ROBINSON!

Many Disk Utility functions can actually *wipe your drives clean of data* instead of repairing them! These advanced functions are unlikely to help you with troubleshooting a problem with your existing volumes.

Remember: Don't use the following Disk Utility functions unless an Apple technician *tells* you to:

- Partitioning and erasing drives
- Setting up RAID arrays with the Raid Assistant
- Restoring files from disk images

All hail Disk Utility, the troubleshooter's friend

The El Capitan *Disk Utility* is a handy tool for troubleshooting and repairing your iMac's drive — you can use it to check the format and health of both drives and volumes (and automatically correct any problems). You can find Disk Utility in the Utilities folder in Launchpad.

Fire up Disk Utility to open the rather powerful-looking window shown in Figure 20-2.

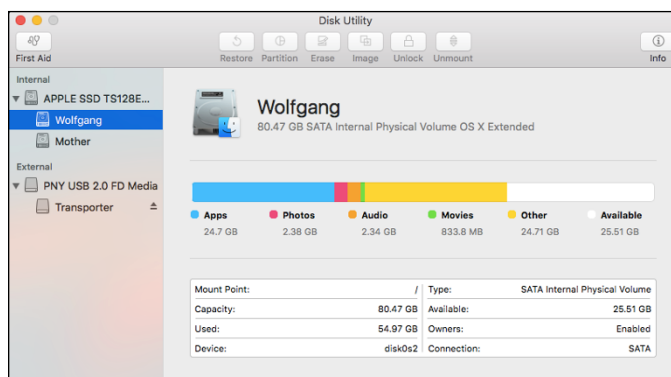


FIGURE 20-2: The physician of drives: the El Capitan Disk Utility.

In the left column of the Disk Utility window, you can see



TECHNICAL
STUFF

» The *physical* drives in your system (the actual hardware)

» The *volumes* (the data stored on the drives)

You can always tell a volume, because it's indented below the physical drive entry.

» Any CD or DVD loaded on your iMac

» USB, Thunderbolt, or FireWire external drives

Figure 20-2 shows that I have one internal drive (the APPLE SSD entry) and one USB 2.0 external drive (the PNY USB entry). The hard drive has two volumes (Wolfgang and Mother), and the external drive has one volume (Transporter).



TECHNICAL
STUFF

The information at the bottom of the Disk Utility window is the specifications for the selected drive or volume. This info includes capacity, free space, and the number of files and folders for a volume, or connection type and total capacity for a drive.



TECHNICAL
STUFF

Using Disk Utility to repair your hard drive carries a couple of caveats:

» **You may not be able to immediately repair problems on your boot drive or boot volume.** This limitation actually makes sense, because you're actually using that drive and volume right now.

SO EXACTLY WHAT IS A DISK PERMISSION, ANYWAY?

Because El Capitan is built on a Unix base, lots of permissions can apply to the files on your drive — that is, who can open (or read or change) every application, folder, and document on your drive. Unfortunately, these permissions sometimes get messed up by wayward applications or power glitches, or application installers that do a subpar job of cleaning up after themselves. And if the permissions on a file are changed, applications often lock up or refuse to run.

If you're an experienced OS X user, and you're looking for the old familiar Repair Disk Permissions button in Disk Utility, let me shorten your search: It no longer exists in El Capitan! Instead, disk permissions are now automatically checked and repaired as part of the First Aid process. Progress marches on, but I'll miss that old codger.

If First Aid finds a problem on your boot drive but reports it can't fix that error, boot your iMac from the OS X Recovery HD volume. Reboot and then hold down the ⌘+R keyboard shortcut immediately after you hear the start-up chord. Then run Disk Utility from the window that appears. Because you've booted your iMac from the Recovery HD volume, you can repair those problems with your start-up drive. (You should be able to select your boot hard drive or volume and click the First Aid button.)

» **You can't repair CDs and DVDs.** CDs and DVDs are read-only media and thus can't be repaired (at least by Disk Utility).

If your iMac is having trouble reading a CD or DVD, wipe the disc with a soft cloth to remove dust, oil, and fingerprints. Should that fail, invest in a disc-cleaning contrivance of some sort.

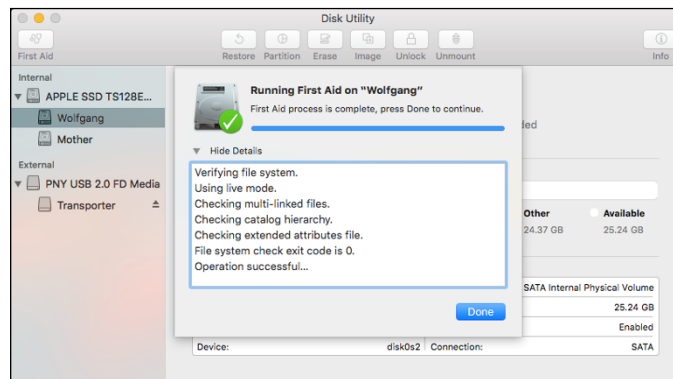
To check and repair problems using First Aid, follow these steps:

1. Click the **Go** menu and choose **Utilities**; then double-click the **Disk Utility** icon.
2. In the list at the left side of the **Disk Utility** window, click the drive or volume you want to check.
3. Click the **First Aid** button, and click the **Run** button that appears.
4. Click **Done** to exit **First Aid**.

If changes were made (or if you had to boot from the OS X Recovery HD volume), Disk Utility may prompt you to reboot after repairs have been made.

Figure 20-3 illustrates the details you see if you click **Show Details** to expand the display. Although some of the messages might include cryptic Linux details, you can still tell from the figure that the operation is successful (and you get that snazzy green check mark). All is well!

FIGURE 20-3:
First Aid reports that this drive is error-free.



Mark's iMac Troubleshooting Tree

As hip-hop artists say, “All right, kick it.” And that’s just what my iMac Troubleshooting Tree is here for. If rebooting your aluminum supercomputer didn’t solve the problem, follow these steps in order until you either find the solution or run out of steps (more on that in the next section).



TIP

If you’re not sure quite what’s producing the error, this process is designed to be *linear* — followed in order — but if you already know that you’re having a problem with one specific peripheral or one specific application, feel free to jump to the steps that concern only hardware or software.

Step 1: Investigate recent changes

The first step is a simple one that many novice iMac owners forget. Simply retrace your steps and consider what changes you made to your system recently. Here are the most common culprits:

- » **Did you just finish installing a new application?** Try uninstalling it by removing the application directory and any support files it might have added to your system. (And keep your applications current with the most recent patches and updates from the developer’s website.)
- » **Did you just apply an update or patch to an application?** Uninstall the application, and reinstall it without applying the patch. If your iMac suddenly works again, check the developer’s website, or contact the application’s technical support department to report the problem.
- » **Did you just update El Capitan?** Updating OS X can introduce problems in your applications that depend on specific routines and system files. Contact the developer of the application, and look for updated patches that bring your software in line with the latest El Capitan updates.
- » **Did you just make a change in System Preferences?** Return the options you changed to their original settings; then consult Chapter 5 for information on what might have gone wrong. (If the setting in question isn’t listed in Chapter 5, consider searching OS X online Help or the Apple support website for more clues.)
- » **Did you just connect (or reconnect) an external device?** Try unplugging the device and then rebooting to see if the problem disappears. Remember that many peripherals need software drivers to run; without those drivers installed, they don’t work correctly. Check the device’s manual or visit the company’s website to search for software you might need.

If you didn’t make any significant changes to your system before you encountered the problem, proceed to the next step.

Step 2: Run Disk Utility

The next step is to run Disk Utility and use First Aid. The earlier section “Repairing permissions and disks” shows how to complete this task on your El Capitan boot drive.

Step 3: Check your cables

Cables can work themselves loose, and sometimes they fail. Check all the cables to your external devices — make sure that they’re snug — and verify that everything’s plugged in and turned on. (Oh, and don’t forget to check for crimps in your cables or even Fluffy’s teeth marks.)



TIP

If a FireWire, Thunderbolt, or USB device acts up, swap cables around to find whether you have a bad one. A faulty cable can have you pulling your hair out in no time.

Step 4: Check your Trash

Check the contents of the Trash to see whether you recently deleted files or folders by accident. Click the Trash icon on the Dock to display the contents. If you deleted something by mistake, right-click the item in the Trash and choose Put Back from the contextual menu.

I know this one from personal experience. A slight miscalculation while selecting files to delete made an application freeze every time I launched it.

Step 5: Check your Internet and network connections

Now that always-on DSL and cable modem connections to the Internet are the norm, don’t forget an obvious problem: Your iMac can’t reach the Internet if your ISP is down or your network is no longer working!

When you’re at home, a quick visual check of your DSL or cable modem usually indicates whether a connection problem exists between your modem and your ISP. My modem has a set of informative activity lights that I always glance at first. If your iMac is connected to the Internet through a larger home or office network, however, and you can’t check the modem visually, you can check your Internet connection by pinging `www.apple.com`, as follows:

1. Click the Spotlight icon at the right side of the Finder menu bar, and type Network Utility in the search box.
2. Click the Network Utility entry.

3. **Click the Ping button.**
4. **Enter `www.apple.com` in the Address box.**
5. **Click Ping.**

You should see successful ping messages. If you don't get a successful ping *and* you can still reach other computers on your network, your cable modem, DSL modem, or ISP is likely experiencing problems. If you can't reach your network at all, the problem lies in your network hardware or configuration. (In an office environment, your network system administrator will be happy to help you at this point, especially if you're blood relatives.)

Step 6: Think virus

If you've made it to this point, it's time to run a full virus scan. Make sure that your antivirus application has the latest updated data files. My antivirus application of choice is Virus Barrier X8 from Intego (www.intego.com). If you don't want to invest in a commercial antivirus application, I can also recommend the excellent freeware ClamXav 2 (<http://clamxav.com>).



TIP

If a virus is detected, and your antivirus application can't remove it, try *quarantining* it instead. This basically disables the virus-ridden application and prevents it from infecting other files.

Step 7: Check your login items

El Capitan might encounter problems with applications you've marked as login items in System Preferences. Your account's login items are applications that run automatically every time you log in to your iMac. If one of these login items is to blame for your problems, your iMac will encounter some type of trouble every time you log in. (This is usually the case when you receive an application error message each time you start the computer.)

To check the boot process, it's time to use that fancy Safe Boot mode I discussed earlier in the chapter. Restart your iMac, and press and hold down the Shift key after you hear the start-up tone. Login items are disabled when you're running in Safe Mode, so if your computer starts up without any errors, you know that one or more login items are probably to blame.

If your computer starts without problems in Safe Mode, the next step is to check your login items. Restart your iMac and then follow this procedure for each item in the login list:

1. **Open System Preferences, click Users & Groups, and then click the Login Items button.**

2. Select the first item from the list, and remove it.

You can delete the selected item by clicking the Delete button, which bears a minus sign. (If a recurring error message mentions a specific application that appears in the Login Items list, that's your likely culprit, so start by deleting that item.)

3. Restart your iMac.

4. If your iMac is still misbehaving, repeat Steps 2 and 3, and disable a new login item.

When your Mac starts up normally, you have discovered the perpetrator.

5. Delete that application, and reinstall it.

Don't forget to add back each of the *working* login items to the Login Items list using the Add button (which carries a plus sign)!

Step 8: Turn off your screen saver

The next step is to turn off your screen saver. This remedy is a long shot, but it isn't unheard of to discover that a faulty, bug-ridden screen saver has locked up your iMac. If you are running a screen saver other than one from Apple, and your computer never wakes up from Sleep mode or hangs while displaying the screen saver, you've found your prime suspect.

Reboot your iMac (if necessary), open System Preferences, click Desktop & Screen Saver, and click the Screen Saver button. Then do one of the following:

- » Switch to an Apple screen saver.
- » Click the Start After pop-up menu and choose Never.

Step 9: Run System Information

Ouch. You've reached the final step, and you still haven't uncovered the culprit. At this point, you've narrowed the possibilities to a serious problem, such as bad hardware or corrupted files in your OS X System folder. Fortunately, El Capitan provides the System Information utility, which displays real-time information on the hardware in your system. To start System Information, follow these steps:

- 1. Choose About This Mac from the Apple () menu.**
- 2. Click the System Report button.**
- 3. Click each of the Hardware categories in turn, double-checking to make sure everything looks okay.**



REMEMBER

You don't have to understand all the technical hieroglyphics. If a Hardware category doesn't return what you expect or displays an error message, though, that's suspicious. (If your iMac doesn't have a specific type of hardware onboard — such as an optical drive — you won't see information in that category.)



TIP

The Diagnostics category shows whether your iMac passed the Power On self-test.

Okay, I Kicked It, and It Still Won't Work

Don't worry, friendly reader. Just because you've reached the end of my spiffy iMac Troubleshooting Tree doesn't mean you're out of luck. In the following sections, I discuss the online help available in OS X and on the Apple website, as well as local help in your own town.

Local service, at your service

In case you need to take in your iMac for service, an Apple Store or Apple Authorized Service Provider is probably in your area. To find the closest service, launch Safari and visit the Apple website Support page (www.apple.com/support); then click the Apple Authorized Service Providers link at the bottom of the page. You can search by city and state or zip code. Click one of the locations near you to display the provider's mailing address, website address, telephone number, and even a map of the location.

Always call your Apple service provider before you lug your iMac's svelte frame all the way to the shop. Make sure you know your iMac's serial number (which you can display in System Information) and which version of OS X you're using.

The OS X Help Center

Although most OS X owners tend to blow off the Help Center when the troubleshooting gets tough, that's never the best course of action. Always take a few moments to search the contents of the Help Center by choosing **Finder** ⇨ **Help** to see whether any mention is made of the problem you've encountered.

Apple Help Online

If you haven't visited the Apple iMac Support site yet, run, don't walk, to www.apple.com/support/imac. There, you find

- » The latest patches, updates, and tutorials for the iMac line
- » iMac and OS X discussion boards, moderated by Apple
- » Tools for ordering spare parts, checking on your remaining warranty coverage, and searching the Apple knowledge base
- » Do-it-yourself instructions (PDF files) that you can follow to repair or upgrade your iMac

Chapter 21

I Want to Add Stuff

“**N**o iMac is an island.” Somebody famous wrote that, I’m sure.

Without getting too philosophical — or invoking the all-powerful Internet yet again — the old saying really does make sense. All computer owners usually add at least one *peripheral* (external device), such as a printer, backup drive, joystick, camera, or scanner. I talk about the ports on your iMac in Chapter 1. Those holes aren’t there to just add visual interest to the back end of your treasured iMac. Therefore, I cover your USB, Thunderbolt, and FireWire ports (and what you can plug in to them) in detail in this chapter.

Ah, but what about the stuff *inside* your supercomputer? That’s where things get both interesting and scary at the same time. In this chapter, I also describe what you can add to the innards of some iMac models as well as how to get inside there if you work up the courage to go exploring. (Don’t tell your family or your friends, but adding memory to a late-model 27” iMac is as simple as pressing a button and pulling a couple of plastic levers. There’s actually nothing to fear whatsoever.)

Here’s the trick: Just make it sound like an adventure from *Mission: Impossible*, and folks will crown you their new resident techno-wizard!

More Memory Will Help

Hey, wait a second. No *however* stuck on the end? You mean that, for once, there isn't an exception? Aren't all computers different? Hard as it is to believe, just keep in mind this Mark's Maxim:



AUTHOR
SAYS

More memory helps.

Period. End of statement. No matter what type of computer you own, how old it is, or what operating system you use, adding more memory to your system (to the maximum it supports, of course) significantly improves the performance of your operating system (and practically every application that you run).



TECHNICAL
STUFF

Memory maximizes the power of your computer: The more memory you have, the less data your iMac has to temporarily store on its hard drive. Without getting into virtual memory and other techno-gunk, just consider that extra memory as extra elbow room for your applications and your documents. Believe me, both OS X and Windows efficiently make use of every kilobyte of memory that you can provide.

Figuring out how much memory you have

To see how much memory you have on your computer, click the Apple menu () and choose About This Mac. Figure 21-1 shows the dialog that appears.



FIGURE 21-1:
Find out how much memory your iMac has.



TIP

The 8GB of standard memory supplied by Apple is enough for running any of the Apple applications bundled with El Capitan. If your primary applications include video editing, playing the latest crop of immersive 3D games, or image editing, though, you can use all the memory your iMac can hold — as you can see from Figure 21-1, my 27" iMac is stuffed with 32GB of RAM for just such applications.

Ah, but there's a caveat. (Go figure.) At this writing, only the 27" iMac from the current lineup has memory sockets that you — a Regular Human Being — can access. The 27" models provide slots for four 1867 MHz PC3-14900 DDR3 SDRAM memory modules at up to 8GB each. (Don't fret over what those abbreviations mean. Rest assured that this memory type is fast.)

Unfortunately, the memory in a late-model (2012 and later) 21.5" iMac can't be replaced by anyone except an authorized Apple Service Center technician. So if you're using a 21.5" iMac, you can skip the rest of this section, except for the rest of this paragraph. If you're ready to order a *new* 21.5" iMac from Apple, I *strongly* recommend that you opt for as much additional memory as you can afford while configuring your dream machine, since you can't upgrade it later.

In the past, Apple's prices for RAM were . . . well . . . *outrageous* (as in, "Boy, howdy, I can't afford that!"). Recently, however, Apple's memory prices have become far more competitive, so I now recommend that you add memory while configuring and ordering either model of iMac.

How you plan memory upgrades depends on how much memory you want. If your 27" iMac uses the two default 4GB modules (8GB total) supplied by Apple, you can add RAM by inserting memory modules in the empty slots. At this writing, a 4GB memory module should set you back about \$40 or so.

If your iMac already has all four memory slots filled and you'd still like to add more system RAM, it's time to remove one or all of the existing modules and replace them with full 8GB modules. (Current prices for an 8GB module hover around \$100.) With all four slots filled with 8GB modules, you'll have the coveted 32GB 27" iMac that marks you as one of the "In People."

If you've already bought your 27" iMac and you'd like to shop around for the best memory prices, I can heartily recommend any one of these online sources that cater to Mac owners:

- » MacMall (www.macmall.com)
- » CDW (www.cdw.com/content/brands/apple/default.aspx)
- » Crucial (www.crucial.com)
- » Small Dog Electronics (www.smalldog.com)
- » Newegg (www.newegg.com)

Installing memory modules

I'm happy to report that adding extra memory to a 27" iMac is one of the easiest internal upgrades that you can perform. Therefore, I recommend that you add memory yourself unless you simply don't want to mess with your iMac's internal organs. Of course, your local Macintosh service specialist will be happy to install new RAM modules for you (for a price).

As you've concluded by this point in this book, Apple has designed the world's best all-in-one computer. That even includes making it EZ-Open. (Forgive me if your treasured work of art now reminds you of a longneck beer bottle. Come to think of it, the level of technical knowledge required to gain access to either one is about the same.)

Unlike earlier "picture frame" iMac models, however, you can't remove the back completely. In fact, Apple allows the owner of a 27" iMac to perform only one kind of upgrade, and there's only one opening you need to worry about. Naturally, an Apple repair technician can get deeper into the machine, but I hope that you never need aid from those folks.



WARNING

You'll void your warranty by tinkering with anything other than your memory slots, so don't even *think* about it.

To add memory modules to a late-model 27" iMac, follow these steps:

- 1. Get ready to operate:**
 - a. Spread a clean towel on a stable work surface, like your kitchen table. The towel helps protect your screen from scratches.*
 - b. Shut down your iMac.*
 - c. Unplug all cables from the computer.*
- 2. Tilt the computer over, and lay the screen flat (face-down) on top of the towel.**
- 3. Press the button directly above the power-cord socket.**

The memory access door pops open.
- 4. Remove the memory access door.**
- 5. Stow the memory access door safely out of reach of kids and cats.**

Tah-dah! That wasn't much of a challenge, was it? Take a moment to gaze with rapt fascination at a small portion of the bare innards of your favorite computer.



WARNING

LET'S GET GROUNDED!

Follow one cardinal rule when the unguarded insides of any computer are in easy reach: *Always ground yourself before you touch anything!* Your body can carry enough static electricity to damage the RAM you're installing or removing, and touching those modules without grounding yourself is an invitation for disaster.

Grounding yourself is easy to do: Just touch any metal surface around your work table, such as a chair leg or your local metal sink. After you ground yourself, you can then safely handle RAM modules that you remove (if any) as well as the new ones that you're installing.

If you walk anywhere in the room — say, taking a sip of liquid reinforcement that you stashed a comfortable and safe distance away — you *must* ground yourself again before you get back to work. **Remember:** You can actually pick up a static charge by simply walking. Go figure.

6. *Ground thyself!*

Check out the “Let's get grounded!” sidebar.

7. **Gently pull outward on the two plastic securing levers and then pull them toward the bottom of the access door (as shown in Figure 21-2).**

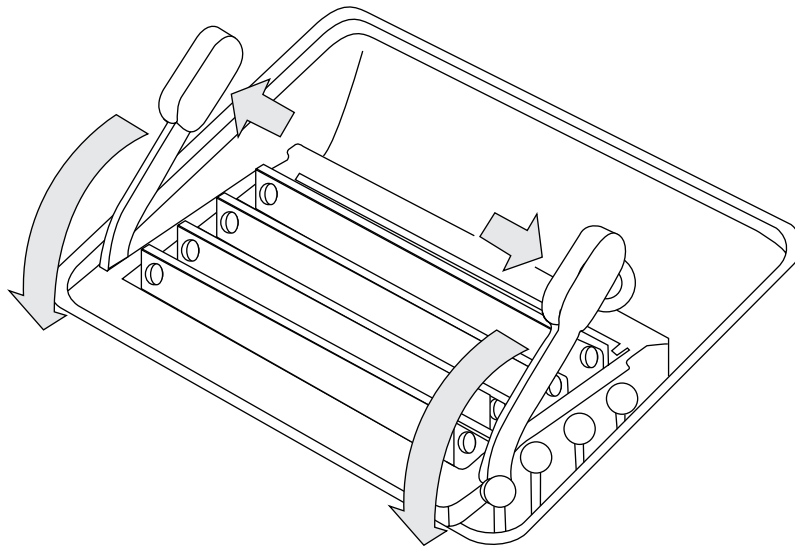


FIGURE 21-2:
Remove a memory module like a pro.



TIP

8. Remove a module by gripping it by the corners and gently pulling it straight upward.

Save the old module in the static-free packaging that held the new module. Your old RAM (which you can now sell on eBay) will be protected from static electricity.

9. Position the new module in the socket:

- a. Line up the module's copper connectors toward the socket.
- b. Line up the notch in the module aligned with the matching spacer in the socket.
See what I mean in Figure 21-3, which shows the correct orientation for a late-2013 27" iMac.

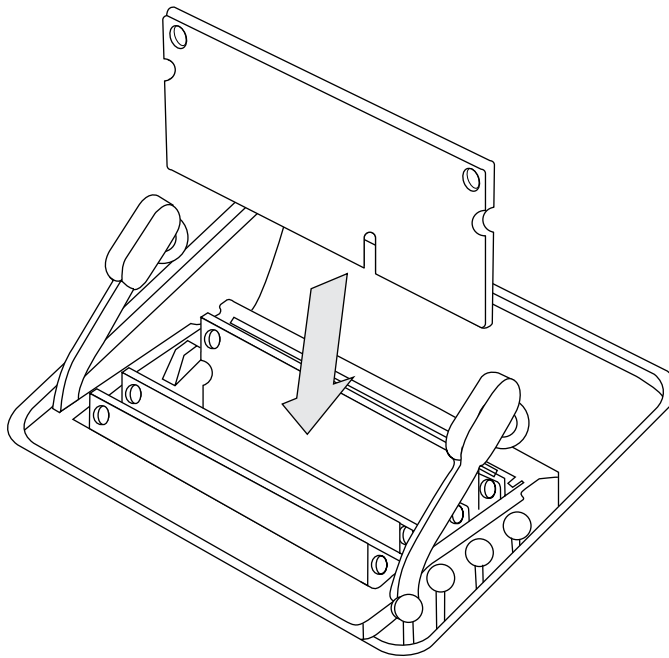


FIGURE 21-3:
Installing the new module is a snap (pun intended)!

10. Press gently (but firmly) on both ends of the module until the module clicks into place.

11. Repeat Steps 8–10 for each module you're replacing.

12. Push the two securing levers back into their original positions.

You should hear a click when they're seated.

13. Replace the memory access door.

14. Return your iMac to its natural upright stance, and plug any cables you removed back into the back of the computer.

Waxing nostalgic: This is rather like changing the oil on my Dad's 1970 Ford pickup truck.

Congratulations! You've done it — and you're now an iMac memory guru! To verify that all is well with your iMac, boot the computer, click the Apple menu (), and choose About This Mac. Your iMac should report the additional memory. If your iMac doesn't boot, check to make sure that the modules you installed are properly seated in the sockets.

Can I Upgrade My Hard Drive?

Asking whether you can upgrade your hard drive is a trick question. Yes, you certainly *can* upgrade your hard drive. But before you start cruisin' the Internet for a 4TB monster, I have two suggestions:

» Be sure you really *need* a hard drive upgrade.

Apple is pretty generous when configuring hard drive storage for its base systems. (Current models run with anywhere from a 1TB to a whopping 3TB drive — yep, that's 3 *terabytes*, or 3,000GB! Something tells me that your prized walnut brownie recipe will have plenty of elbow room on a 3TB drive, as will as a huge amount of digital video.) Naturally, if you're purchasing a new iMac and you want to avoid a bad case of "storage pinch" in the future, I definitely recommend that you opt for more than a 1TB hard drive.

I'll be honest here: Most folks simply don't need more than 1TB of hard drive space. You're likely to find that you still have plenty of wide-open spaces for a typical family's needs on your hard drive unless you're heavily into

- Digital video (DV)
- Cutting-edge video games
- Tons of high-quality digital audio
- Four generations of high-resolution digital photos of your family (hey, it's possible!)

» If you decide that you do need to upgrade, don't install your internal hard drive yourself.

Read more about dealing with the installation of an internal hard drive in the upcoming section "Gotta have internal."



TIP

If you're short on hard drive space, first clean up your existing hard drive by deleting all the crud you don't need, such as game and application demos, duplicate or "work" copies of images and documents, archived files you downloaded from the Internet, and the contents of your Trash. You can read how in Chapter 22.

Consider your external options

If you *do* need additional hard drive space, I recommend using an external drive. Use a high-speed Thunderbolt 2 or USB 3.0 port to connect a second hard drive the quick and easy way. (Owners of slightly older iMac models can use FireWire 800 as well.)

Today's Thunderbolt and USB peripherals don't even require the driver software that Mac old-timers remember with such hatred. You simply plug a device into one of these ports, and it works. And you can move your external drive between different Macs with a minimum of fuss and bother.

An external hard drive can do virtually anything that your internal hard drive can do. You can boot from it, for example, or install (and boot from) a different version of OS X (great for beta testers like me).



TIP

Apple's Time Capsule unit is an external hard drive with a difference: It stores the huge Time Machine backup files created by the Macs running OS X on your network, and it uses a wireless connection to transfer data! (In fact, if you're thinking of adding a wireless base station to your wired network, your Time Capsule actually acts as a full AirPort Extreme Base Station, complete with USB port for connecting a USB printer.) At this writing, Time Capsule is available with a 2TB (\$299) or 3TB (\$399) drive.



TECHNICAL
STUFF

Here's one problem with external drives, though. Even USB 3.0 connections transfer data more slowly this way than via an internal drive (only the newer Thunderbolt connections rival the speed of an internal drive). That's why most Mac owners (especially graphics and video professionals) use their external drives for storing backups, digital media, and little-used documents and applications. Their favorite applications, work in-progress and often-used documents are housed on the internal drive.

Putting a port to work

Current iMac models carry two kinds of high-speed ports, either of which is a good match for connecting any external device.

USB 3.0

The USB standard is popular because it's just as common in the PC world as in the Mac world. (Most PCs don't have a Thunderbolt port.) Your iMac carries its USB 3.0 ports on the back of the case, which are fully compatible with older USB 2.0 devices. Hardware manufacturers make one USB device that works on both Macs and PCs.



REMEMBER

If you're using an older iMac with USB 2.0 ports, there's no need to spend extra money on USB 3.0 devices, because you won't get the performance boost. 'Nuff said.

FIREWIRE 800

Current iMac models no longer carry a FireWire 800 port, but if you're using an older iMac (without a USB 3.0 port), you'll find that a FireWire 800 drive offers much better performance than either a FireWire 400 or a USB 2.0 drive.



WARNING

The physical FireWire 800 connector is shaped differently than an older FireWire 400 port, so don't try to force the wrong connector into the wrong port!

THUNDERBOLT 1 AND 2

Talk about raw speed. A first-generation Thunderbolt connection provides a blazing 10Gbps, which is twice as fast as USB 3.0 — and the latest iMac models sport the Thunderbolt 2 port, which doubles that transfer speed to an unbelievable 20Gbps! You can use a Thunderbolt port to connect an external hard drive or even a high-resolution monitor or HD-TV. Luckily, the price for Thunderbolt external drives has dropped significantly since the port first appeared on the Mac, so you no longer have to pay a premium price for Thunderbolt devices.

Connecting an external drive

With Thunderbolt, USB or FireWire, you can install an external hard drive without opening your iMac's case. With your iMac turned on and the external drive disconnected from the AC outlet, follow these steps:

1. **Connect the FireWire, Thunderbolt, or USB cable betwixt the drive and your computer.**
2. **Plug the external drive into a convenient surge protector or UPS (uninterruptible power supply).**
3. **Switch on the external drive.**

4. If the drive is unformatted (or formatted for use under Windows), partition and format the external drive.

The drive comes with instructions or software to help you do this. (Don't worry, external drives typically come from the factory completely empty, and you won't damage anything by formatting it. To be sure, check the drive's manual.) *Partitioning* divides the new drive into one (or more) volumes, each of which is displayed as a separate hard drive under El Capitan.



TIP

If the drive comes preformatted for use with a Windows PC, I strongly suggest reformatting it for use with OS X. Doing so results in faster performance and more efficient use of space.

After the drive is formatted and partitioned, it immediately appears on the Desktop. *Shazam!*

Gotta have internal

If you decide that you absolutely have to upgrade your existing internal hard drive — or if your internal drive fails and needs to be replaced — you *must take your iMac to an authorized Apple Service Center* and allow the techs there to sell you a drive and make the swap. Here are four darned good reasons why:

- » **Warranty:** As I mention earlier, you'll void your iMac's warranty by attempting a drive upgrade yourself.
- » **Selection:** If you're worried about picking the proper drive, an Apple technician can order the right drive type and size for you . . . no worries.
- » **Difficulty:** Swapping a hard drive in your iMac is nothing like adding RAM modules. It's complex and involves breaking into your iMac — not A Good Thing, even for the knowledgeable Mac guru.
- » **Backup:** That very same Apple service technician can back up all the data on your existing drive and move it to the new drive, saving you from losing a single document. That will save you time and possible angst.



WARNING

To those who *truly* won't be satisfied with their lives until they upgrade an internal drive in an iMac: Yes, I'm sure you can find a magazine article that purports to show you how. Even better, I've seen many how-to articles on the web that will lead you down a rosy path to a hard drive upgrade. Here's my take on those savvy instructions: You're walking into a field of land mines with someone else's map, so you had better have *complete* faith in your tech skills. (And a darn good backup.)

Weighing Attractive Add-Ons

The external toys I cover in this section might add a cord or two to your collection at the back of your iMac, but they're well worth the investment. And they can really revolutionize how you look at technologies such as television, digital audio, and computer gaming.

Game controllers

If you're ready to take a shot at the enemy — whether they be Nazi soldiers, chittering aliens, or the latest jet fighters — you'll likely find your keyboard and mouse somewhat lacking. (And if that enemy happens to be a friend of yours playing across the Internet, you'll be ruthlessly mocked while you're fumbling for the right key combination.) Instead, either pick up a USB joystick (for flying games) or a gamepad (for arcade and first-person shooting games)!

Hard drive arrays

In case you're not familiar with a hard drive array (typically called a *RAID array*), it's just a fancy moniker for an enclosure that holds multiple hard drives. “Grouping” hard drives like this provides a boost in speed, or you can use an array to make a self-maintaining redundant backup of all your data. Your Thunderbolt port is perfect for this high-tech magic. You can also pick up a wired or wireless network storage unit (commonly called a NAS, short for *network-attached storage*), which is essentially hard drive storage that's connected and available to your entire Ethernet network.

Video controllers

For armchair directors, specialized USB digital video controllers make editing easier. The ShuttlePRO V2 from Contour Design (www.contourdesign.com) provides a 15-button jog control that can be configured to match any DV editor. For around \$100, you'll have the same type of editing controller as do those dedicated video-editing stations that cost several thousand dollars.

Audio hardware and MIDI controllers

Ready to put GarageBand to the test with your favorite version of “Chopsticks”? You need a USB piano keyboard, and I recommend the Keystation 88es from M-Audio (www.m-audio.com), which retails online for around \$200. It provides 88 keys and uses a USB connection.

Cleaning unnecessary stuff off your hard drive

Backing up your data

Fixing permissions errors

Automating tasks in El Capitan

Updating OS X automatically

Chapter 22

Tackling the Housekeeping

Nothing runs better than a well-oiled machine, and your iMac is no exception. (But please, don't *ever* oil your iMac; that's just a figure of speech.) In this chapter, I demonstrate how you can make good use of every byte of storage space provided by your hard drive.

With a little El Capitan maintenance, such as Time Machine (for backing up and restoring your hard drive) and frequent scans of your hard drive for disk errors, you can ensure that your iMac is performing as efficiently as possible. Automator allows your iMac to perform tasks automatically that used to require your attention. In addition, configuring Software Update to run automatically can allow you to live life free and easy, watching your favorite reality TV and eating ice cream (or yogurt — your pick).

Cleaning Unseemly Data Deposits

Criminy! Where does all this stuff *come* from? Suddenly, that spacious 1TB hard drive has 19GB left, and you start feeling pinched.

Before you consider buying a new internal or external hard drive (which you can read about in Chapter 21), take the smart step: Sweep your hard drive clean of unnecessary and space-hogging software.

Getting dirty (or cleaning things the manual way)

If you're willing to dig into your data a little, there's no reason to buy additional software to help you clean up your hard drive. All you really need is the willpower to announce, "I simply don't need this particular item any longer." (Sometimes, that's tougher than it may seem.)

Unnecessary files and unneeded folders

Consider all the stuff that you probably don't really need:

- » Game demos and shareware that you no longer play (or even remember)
- » Movie trailers and other QuickTime video files that have long since passed into obscurity
- » Temporary files that you created and promptly forgot
- » Log files that chronicle application installations and errors
- » GarageBand loops and iMovie video clips you'll never use
- » Stuffit and Zip archives that you downloaded and no longer covet
- » iTunes music, video, and movies that no longer appeal

How hard is it to clean this stuff off your drive? Easier than you might think!

- » You can quickly delete files.
- » You can remove items from your iTunes Library (especially movies, which take up several gigabytes of space *each*). If you've purchased an item from the iTunes Store, don't forget that you can download that item again in the future for free — perhaps when you've added an external drive to hold some of your stuff.
- » You can move seldom-used files and folders to external storage (such as a USB flash drive, an external hard drive, or a DVD).
- » You can uninstall applications purchased from the App Store using Launchpad. From the Launchpad display, click and hold down the icon until it wiggles. If an X button appears on the icon, you can click the X to remove the

application from your iMac. Again, these applications can be reinstalled at any time.

- » You can get rid of most of the space taken by any application (often the whole application) by deleting its application folder that was created during the installation process.



WARNING

Always check the application's README file and documentation for any special instructions before you manually delete any application's folder! If you created any documents in that folder that you want to keep, don't forget to move them before you trash the folder and its contents. In fact, some applications may come with their own uninstall utility, so checking the README file and documentation may save you unnecessary steps.

Removing an application or file from your hard drive usually takes two simple steps:

- 1. Display the file or application folder in a Finder window.**
- 2. Delete the file or folder with one of these steps:**
 - Drag the icon to the Trash.
 - Select the icon and press ⌘+Delete.
 - Right-click the icon and choose Move to Trash from the contextual menu.
 - Select the icon and click the Delete button on the Finder toolbar (if you added one).

Truly, no big whoop.



TECHNICAL
STUFF

Unlike programs in the Windows world, most OS X applications don't need a separate, silly uninstall program (although some larger Mac applications include one for convenience).



REMEMBER

Don't forget to actually *empty* the Trash, or you'll wonder why you aren't regaining any hard drive space. (El Capitan works hard to store the contents of the Trash until you manually delete it, just in case you want to undelete something.) To get rid of that stuff permanently and reclaim the space, do the following:

- 1. Click the Trash icon on the Dock and hold down the button — or right-click — until the pop-up menu appears.**
- 2. Choose Empty Trash.**

Associated files in other folders

Some applications install files in different locations across your hard drive. (Applications in this category include the Microsoft Office suite and Adobe Creative Suite and Creative Cloud applications like Adobe Photoshop.) How can you clear out these orphan files after you delete the application folder?

The process is a little more involved than deleting a single folder, but it's still no big whoop. Here's the procedure:

- 1. Click the Search text box in a Finder window.**

You can read more about Search and Finder windows in Chapter 7.

- 2. Type the name of the application in the Search text box.**

Figure 22-1 shows this search. I want to remove Toast Titanium, so I search for every file with the word *Toast* in its name; therefore, I found both the application and its main folder. This trick displays files created in other folders that include your search word in their names, such as project files, PDF files, and the font files that appear in the system Fonts folder.

- 3. Decide which of these files belong to the to-be-deleted application.**

Be sure that the files you choose to delete are part of the deleted application. In Figure 22-1, a word processing document named *Instructions on Making a Perfect Piece of Toast* is definitely not part of Toast Titanium!

Many associated files

- Have the same icon as the parent application
- Are in the Preferences, Caches, or Application Support folder

- 4. In the Search Results window, click the associated file(s) that you want to delete and just drag them to the Trash.**

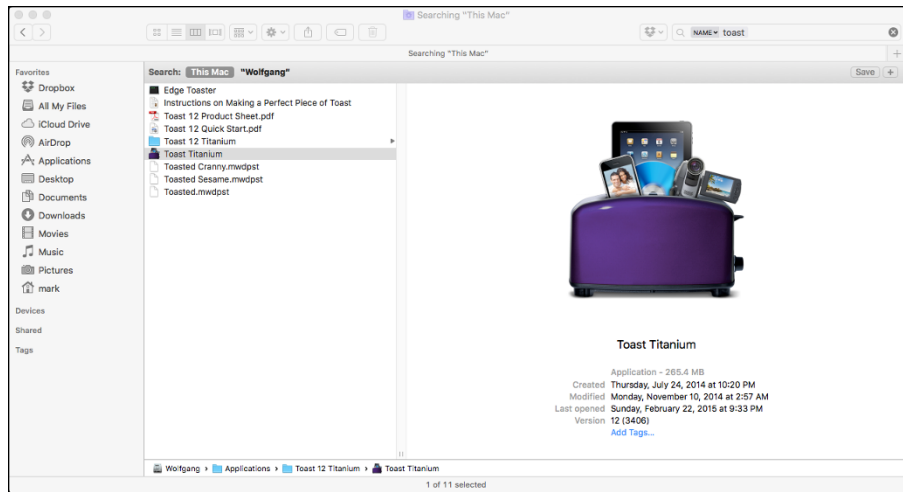
Don't empty the Trash immediately after you delete these files. Wait a few hours or a day. That way, if you realize that you deleted a file that you truly need, you can easily restore it from the Trash.



Using a commercial cleanup tool

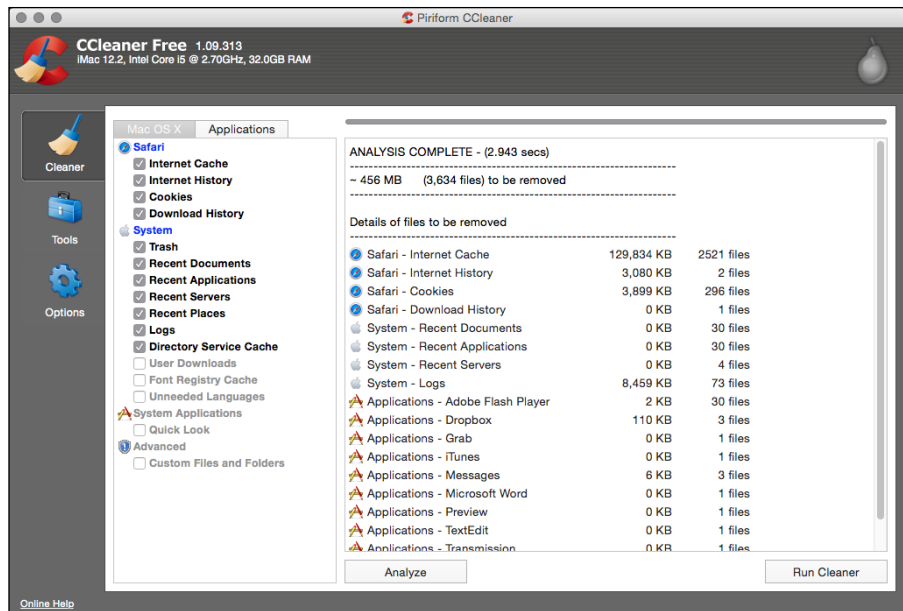
If you'd rather use a commercial application to help you clean up your hard drive, several applications are available, but most are shareware applications that perform only one task. Tidy Up! 4 from Hyperbolic Software (www.hyperbolicsoftware.com), for example, specializes in one thing, but it does it well. It finds duplicate files on your hard drive, matching by criteria such as filename, size, content, and extension. It's a good tool at \$30.

FIGURE 22-1:
Mine your hard drive for additional files to delete.



For a good all-around cleanup utility, I recommend CCleaner for Mac, from Piriform (www.piriform.com/mac/ccleaner), as shown in Figure 22-2. This great utility can clean everything from Internet crud (browser cookies and your surfing history) to those OS X system caches that can grow so doggone huge. And you can easily fine-tune whatever CCleaner for Mac wants to remove. The utility can also uninstall many applications with a single click. Oh, and did I mention that it's free? I *really* like free!

FIGURE 22-2:
Piriform's CCleaner for Mac is a great tool for cleaning your iMac's drive.



Backing Up Your Treasure

Do it.

I'm not going to lecture you about backing up your hard drive . . . well, perhaps just for a moment. Imagine what it feels like to lose *everything*: names, numbers, letters, reports, presentations, saved games, photographs, and music. Then ask yourself, “Self, isn’t all that irreplaceable stuff worth just a couple of hours every month?”

Time for a Mark’s Maxim:



AUTHOR
SAYS

Back up. On a regular basis.

Take my word for it; you *will* thank me some day!

You can back up your files either by saving them to external media or — as I strongly recommend — by using the awesome Time Machine feature included with El Capitan. Read more about Time Machine in the “Putting Things Right with Time Machine” section later in this chapter.

Saving Files

The simplest method of backing up files is simply to copy the files and folders to an external hard drive, USB flash drive or a CD or DVD. Nothing fancy — in fact, I call this procedure the “quick-and-dirty backup” — but it works.

Backing up to an external hard drive

If you have an external hard drive or USB flash drive on your iMac, you can easily drag backup files to it from your internal hard drive (I cover external hard drives in Chapter 21):

1. Open separate Finder windows for

- The external drive
- The internal hard drive

Because you’re using El Capitan, you can also open a Finder tab within a single Finder window to accomplish the same task — from the keyboard, press ⌘+T.

2. **Select the desired files that you want to back up from your internal drive.**
3. **Drag the selected files to the external drive window.**



TIP

“Mark, can I back up individual files to cloud-based storage like iCloud Drive, Dropbox, Google Drive, and OneDrive?” Of course! These services are fine for your most important files (much like backing up a handful of critical files to DVD or flash drive), but these cloud drives aren’t suitable for backing up the entire contents of your iMac’s internal drive. (You should always use Time Machine with an external hard drive for that important chore.) Also, don’t forget that you need an Internet connection to save or retrieve files from cloud storage.

Backing up to CD and DVD

You can burn backups of your most important files to a recordable CD or DVD, if you have an internal or external optical drive. Saving your data is more labor-intensive this way, but the end result is a truly bulletproof backup that doesn’t rely on an external hard drive or flash drive, and the backup can be read in any CD or DVD drive for decades to come.

Burning backups from the Finder

To use the Finder’s Burn feature to create a backup CD or DVD, follow these steps:

1. **Load a blank disc into your iMac’s optical drive.**

If you’re using the default settings in the CDs & DVDs pane in System Preferences, a dialog appears, asking you to choose an action.

2. **From the Action pop-up menu, choose Open Finder and then click OK.**

An icon named Untitled DVD appears on your Desktop. Double-click the icon to open a Finder window.

3. **Drag the files and folders that you want to back up into the disc’s Finder window.**

They can be organized any way you like. Don’t forget that the total amount of data shouldn’t exceed 4GB or so (on a standard recordable DVD) or 8GB (on a dual-layer recordable DVD). You can see how much free space remains on the disc at the bottom of the disc’s Finder window.

4. **When you’re ready to record, click File and then choose Burn Disc from the Finder menu.**

You can also click the Action button that appears at the top of the disc’s Finder window and choose Burn Disc from the pop-up menu.

5. Choose the fastest recording speed possible.
6. Click Burn.

Burning backups from other recording applications

If you've invested in Toast Titanium from Roxio (www.roxio.com) or another CD/DVD recording application, you can create a new disc layout to burn your backup disc. (Think of a layout as a road map indicating which files and folders Toast should store on the backup.)



TIP

If you do decide to back up to CD/DVD or to an external backup drive without using Time Machine, it's a good idea to store that backup media somewhere safe, away from calamities. On the other hand, if you back up with Time Machine — as I'm about to demonstrate — you should instead leave your external drive plugged in to your iMac.

Putting Things Right with Time Machine

If you enable backups via the OS X Time Machine feature, you can literally move backward through the contents of your iMac's hard drive, selecting and restoring all sorts of data. Files and folders are ridiculously easy to restore — and I mean easier than *any* restore you've ever performed, no matter what the operating system or backup program. Time Machine can even handle some deleted items, like Contacts cards! To sum it up, Time Machine should be an important and integral part of every Mac owner's existence.



TIP

Apple's AirPort Time Capsule device is designed as a wireless storage drive for your Time Machine backup files. If you're interested in a single Time Machine backup location for multiple Macs across your wireless network, an AirPort Time Capsule is a great addition to your home or office.



REMEMBER

Before you can use Time Machine, you must have it enabled within the Time Machine pane in System Preferences. I cover the Time Machine configuration settings (and how to turn the feature on) in more detail in Chapter 5. You'll also need an external hard drive that provides considerably more storage capacity than the drive you're backing up. I recommend that your external Time Machine backup drive be at least twice the capacity of the drive you're backing up. (To check on the size of a drive displayed on your desktop, right-click the drive and choose Get Info from the contextual menu.)

Here's how you can turn back time, step by step, to restore a file that you deleted or replaced in a folder:

1. **Open a Finder window and navigate to the folder that contained the file you want to restore.**
2. **Click the Time Machine icon on the Finder menu bar (which bears a clock with a counterclockwise arrow) and then click Enter Time Machine.**

The oh-so-ultra-cool Time Machine background appears behind your folder, complete with its own set of buttons at the bottom of the screen (as shown in Figure 22-3). On the right, you see a timeline that corresponds to the different days and months included in the backups that El Capitan has made.

3. **Click within the timeline to jump directly to a date (displaying the folder's contents on that date).**

Alternatively, use the Forward and Back arrows at the right to move through the folder's contents through time. (You should see the faces of Windows users when you riffle through your folders to locate something you deleted several weeks ago!)



REMEMBER

The backup date of the items you're viewing appears in the button bar at the bottom of the screen.

4. **After you locate the file you want to restore, click it to select it.**

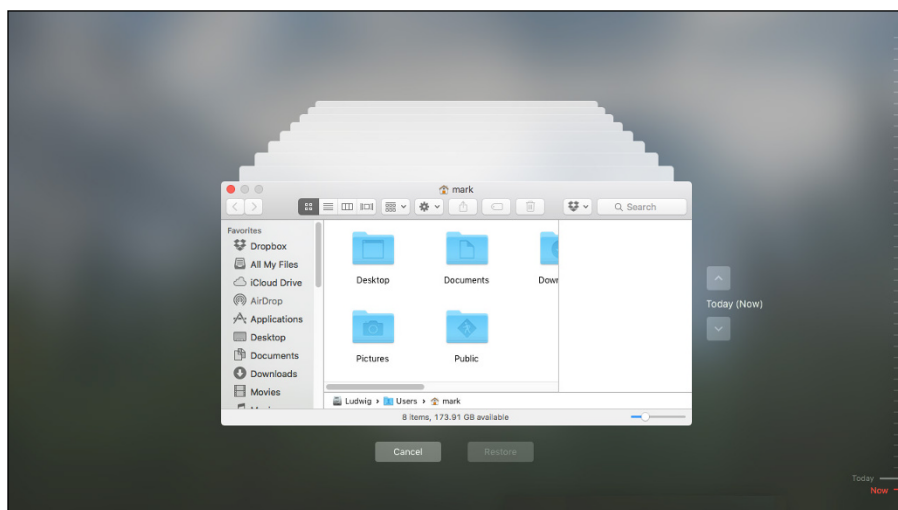


FIGURE 22-3:
Yes, Time Machine really does look like this!

5. Click the Restore button at the right side of the Time Machine button bar.

If you want to restore all the contents of the current folder, click the Restore All button instead.

Time Machine returns you to the Finder, with the newly restored file now appearing in the folder. *Outstanding!*



TIP

To restore specific data from your Contacts database, launch the Contacts application first and then launch Time Machine. Instead of riffling through a Finder window, you can move through time within the application window.



TIP

You can easily restore the entire contents of your iMac's internal hard drive from your Time Machine backup, too. Reboot your iMac and hold down the ⌘+R startup key sequence to boot using the El Capitan Recovery HD volume, then use the Restore function.

For robust backup and restore protection, Time Machine is all that a typical Mac owner at home is likely to ever need. Therefore, a very easy Mark's Maxim to predict:



AUTHOR
SAYS

Get an external hard drive, connect it, and turn on Time Machine. *Do it now.* Don't make a humongous mistake.

Maintaining Hard Drive Health

Shifty-eyed, sneaky, irritating little problems can bother your hard drive: *permissions errors*. Incorrect disk and file permissions can

- » Make your iMac lock up
- » Make applications act screwy (or refuse to run at all)
- » Cause weird behavior within a Finder window or System Preferences

And that's not all: Problems with your drive's catalog file can also result in corrupted data and files that won't open.

To keep El Capitan running at its best, I recommend that you fix permissions and catalog errors at least once per week. Follow these steps:

- 1. Click the Launchpad icon on the Dock and then click the Search box at the top of the window.**



2. Type the word **disk**.
3. Double-click the **Disk Utility** icon.
4. Click the volume at the left that you want to check.

Volume is just computer-speak for a named partition, like Macintosh HD, which appears under your physical hard drive.

5. Click the **First Aid** button and then click **Run**.

Disk Utility does the rest and then displays a message about whatever it has to fix, if anything. (When will someone invent a *car* with a Repair Me button?)

Automating Those Mundane Chores

El Capitan's Automator application is a big hit among iMac power users. You use Automator (shown in Figure 22-4) to create customized tools that automate repetitive tasks. Of course, writing an application might sound daunting — akin to singlehandedly building your own nuclear submarine over a long weekend — but Automator is actually easy to use. Heck, you might find it downright *fun*!

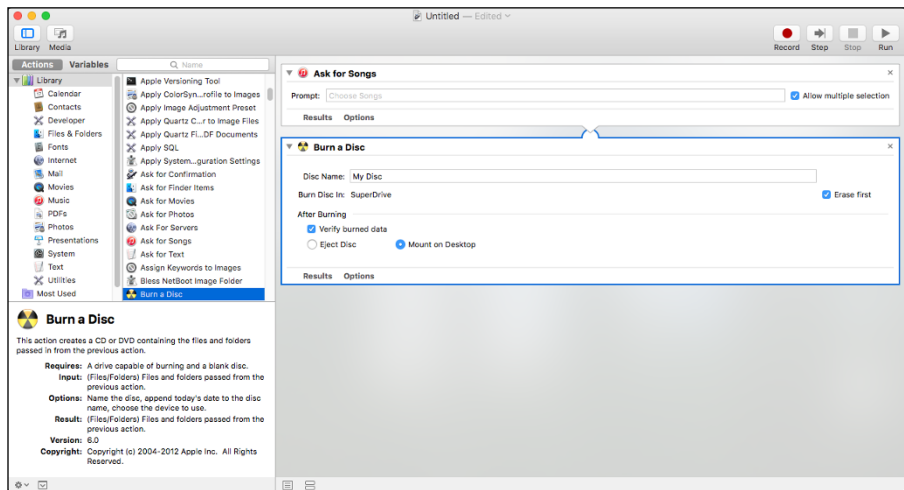


FIGURE 22-4: Automator is a dream come true for those who hate repetitive tasks.

You can also create *workflows*, which are sequential (and repeatable) operations that are performed on the same files or data, and then your Automator application can automatically launch whatever applications are necessary to get the job done.

Here's a great example: You work with a service bureau that sends you a huge .zip file every week with new product shots for your company's marketing department. Unfortunately, these images are flat-out *huge* — taken with a 24-megapixel camera — and they're always in the wrong orientation. Before you move them to the Marketing folder on your server, you have to use Preview to laboriously resize each image and rotate it, and then save the smaller version.

With help from Automator, you can build a custom application that automatically reads each image in the folder, resizes it, rotates it, generates a thumbnail image, prints the image, and then moves the massaged images to the proper folder — and all with a single double-click! Of course, you can run Automator from Launchpad, or from your Applications folder in a Finder window. Currently, Automator can handle specific tasks within more than 100 applications (including the Finder), but both Apple and third-party developers are busy adding new Automator task support to all sorts of new and existing applications.

Creating an application in Automator

To create a simple application with Automator, launch the application and follow these steps:

1. Click the New Document icon.
2. Select Application and click the Choose button.
3. Click the desired application in the Library list.
Automator displays the actions available for that application.
4. Drag the desired action from the Library window to the workflow window on the right.
5. Modify any specific settings provided for the action you chose.
6. Repeat Steps 3–5 until you complete the workflow.
7. Click the Run button (at the upper right) to test your script.
Use sample files while you're fine-tuning your application lest you accidentally do something deleterious to an original (and irreplaceable) file!
8. When the application is working as you like, press $\text{⌘}+\text{S}$ to save it.
9. In the Save dialog that appears, type a name for your new application.
10. Click the Where pop-up menu and specify a location where the file should be saved.
11. Click the File Format pop-up menu and choose Application.



WARNING

12. Click Save.

Your new Automator application icon includes the Automator robot standing on a document. Most normal human beings would call you a *programmer*, so make sure you're inscrutable from now on! If you plan to use your new Automator application often, don't forget that you can make it more convenient to use by dragging the application icon to the Dock or to the desktop.



TIP

To find all the actions of a certain type in the Library list, click in the Search box at the top of the Library list and type a keyword, such as *save* or *burn*. You don't even need to press Return!

Creating an Automator login item

If you want your Automator application to run every time you log in (to track your time on a project, for example), follow these steps to set up the Automator application as a login item:

1. **Open System Preferences.**
2. **Display the Users & Groups pane.**
3. **Click the Login Items button.**
4. **Click the plus button at the bottom of the list.**
5. **Navigate to the location of your new Automator application.**
6. **Click Add.**

Now your Automator application is *really* automatic. Watch your significant other gape in amazement as your iMac begins to work without your touching the keyboard! (If you've added the application icon to your Dock, you can also simply right-click the icon and choose Options ⇨ Open at Login from the menu that appears. Either way, your iMac gets the message.)

Updating OS X Automatically

I prefer my iMac to take care of cleaning up after itself, so updating El Capitan should be automatic as well. In OS X El Capitan, operating system updates are performed by the Update feature built into the App Store application.



TIP

The App Store uses the Internet, so you need an Internet connection to shake hands with the Apple server and download any updates.

Updates are available in two convenient spots:

» **The Apple menu:** Click the Apple menu () and then choose App Store. Click the Update icon in the App Store toolbar, which alerts you to anything new that's available.

» **System Preferences:** Click the App Store icon in the System Preferences window.

If you take the System Preferences route, you can set the App Store to check for critical system updates and install them automatically:

- Select the Automatically Check for Updates check box to enable it.
- Select the Install OS X Updates check box to enable it.
- Select the Install System Data Files and Security Updates check box to enable it.

You can even display any updates immediately from within the App Store System Preferences pane (click the Check Now button).



TIP

With automatic downloading disabled, OS X launches the Updates pane of the App Store and displays any available updates with short descriptions. You can manually click the Update button next to a specific update. El Capitan also displays a Notification window alerting you to new updates. You can choose to continue with the update from the Notification window, or wait and update manually later.



TIP

If you're using the same Apple ID on more than one Mac, the applications you've purchased through the App Store on your other Macs can be automatically downloaded to this computer as well. Select the Automatically Download Apps Purchased on Other Macs check box to enable it; then sit back and watch convenience happen.

7

The Part of Tens

IN THIS PART . . .

Take simple steps to speed your computing.

Find out about computing pitfalls you should avoid at all costs.

IN THIS CHAPTER

Adding memory

Using Dictation

Defragmenting your drive

Banishing the Desktop background

Using column mode

Customizing the Dock

Using keyboard shortcuts

Customizing your Finder windows

Launching recent applications and documents

Using the Go menu

Chapter 23

Ten Ways to Speed Up Your iMac

Even an iMac with an Intel Quad Core i7 processor can always go just a bit faster . . . or *can* it? There's actually a pretty short list of tweaks that you can apply to your iMac's hardware to speed it up, and these suggestions are covered in this chapter.

You can also work considerably faster within El Capitan by customizing your Desktop and your Finder windows, which makes it easier to spot and use your files, folders, and applications. That's in this Part of Tens chapter, too.

Finally, you can enhance your efficiency and make yourself a power user by tweaking yourself. (Sounds a bit tawdry or even painful, but bear with me, and you'll understand.)

Nothing Works Like a Shot of Memory

Okay, maybe *shot* is the wrong word, but adding additional memory to your iMac (by either replacing or adding a memory module) is the single surefire way to speed up the performance of your entire system. That includes every application as well as El Capitan itself.

With more memory, your iMac can hold more of your documents and data at once, and thus has to store less data temporarily on your internal drive. It takes your iMac much less time to store, retrieve, and work with data when that data is in RAM (short for *random access memory*) rather than on your hard drive. That's why your system runs faster when you can fit an entire image in Adobe Photoshop in your iMac's system memory.

At this writing, you can cram up to 32GB of memory in a 27" iMac model, and 21.5" models can be configured with up to 16GB of memory as well when you order from the Apple online store.



REMEMBER

Only 27" iMacs can be upgraded with additional memory *after* purchase.

Hold a Conversation with Your iMac

Many Mac owners will attest that you *can* significantly increase your own efficiency by using the Dictation feature, which allows you to dictate text by speaking within many applications. Your voice is indeed faster than your fingers!

To enable Dictation, choose System Preferences ⇨ Dictation & Speech and click the On radio button next to Dictation. Remember that by default, Dictation is active only when you press the Fn (Function) key twice. (You can change the Dictation shortcut from the Dictation and Speech pane in System Preferences).

Vamoose, Unwanted Fragments!

Apple would probably prefer that I not mention disk fragmentation because El Capitan doesn't come with a built-in defragmenting application. (Go figure.) A disk-defragmenting application reads all the files on your magnetic drive and rewrites them as continuous, contiguous files, which your machine can read significantly faster.

To keep your hard drive running as speedily as possible, I recommend defragmenting at least once monthly. You can use third-party applications like Prosoft Engineering's Drive Genius 4 (www.prosofteng.com) to defragment your drive.



WARNING

You should never defragment your iMac internal drive if it's a SSD (solid-state) or Fusion drive. Only traditional magnetic hard drives benefit from defragmenting. To determine which type of internal drive you're using, launch Disk Utility, click the internal drive entry in the list on the left, and check for the acronym SSD in the drive description. If you see it, your iMac has an SSD or Fusion drive installed.

Keep Your Desktop Background Simple

It's funny that I still include this tip in a chapter dedicated to improving performance. After all, I recommended using a solid-color background in my first books on Mac OS 8 and Windows 98! Just goes to show you that some things never change.

If you're interested in running your Retina 5K iMac system as fast as it will go, choose a solid-color background from the Desktop & Screen Saver pane in System Preferences. (In fact, there's even a separate category that you can pick called Solid Colors. Someone at Apple has The Right Idea.)

Column Mode Is for Power Users

One of my favorite features of OS X is the ability to display files and folders in column view mode. Just click the Column button on the standard Finder window toolbar, and the contents of the window automatically align in well-ordered columns.

Other file-display options require you to drill through several layers of folders to get to a specific location on your hard drive — such as `Users/mark/Music/iTunes/iTunes Music`, which I visit on a regular basis. In column mode, however, a single click drills a level deeper, and often you won't even have to use the Finder window's scroll bars to see what you're looking for. Files and folders appear in a logical order. Also, it's much easier to move a file (by dragging it from one location on your hard drive to another) in column mode.

Make the Dock Do Your Bidding

Just about every Mac owner considers the OS X Dock a good friend. But when's the last time you customized it — or have you ever made a change to it at all?

You can drag files and folders to the Dock, as well as web URLs, applications, and network servers. You can also remove applications and web URLs just as easily by dragging the icon from the Dock and releasing it on your Desktop.

I find that I make a significant change to my Dock icons at least once every week. I find nothing more convenient than placing a folder for each of my current projects on the Dock or adding applications to the Dock that I might be researching for a book or demonstrating in a chapter.



REMEMBER

You can position the Dock at either side of the Desktop or even hide the Dock to give yourself an extra strip of space on your Desktop for application windows. Click the Apple menu () at the left side of the Finder menu bar and then hover your pointer over the Dock item to display these commands.

It All Started with Keyboard Shortcuts

Heck, keyboard shortcuts have been around since the days of WordStar and Visi-Calcul, back when a mouse was still just a living rodent. If you add up all those seconds of mouse-handling that you save by using keyboard shortcuts, you'll see that you can literally save hours of productive time every year.

You're likely already using some keyboard shortcuts, such as the common editing shortcuts ⌘+C (Copy) and ⌘+V (Paste). When I'm learning a new application, I often search the application's online help to find a keyboard shortcut table and then print that table as a quick reference. Naturally, you can also view keyboard shortcuts by clicking each of the major menu groups within an application. Shortcuts are usually displayed alongside the corresponding menu items.

Hey, You Tweaked Your Finder!

Here's another speed enhancer along the same lines as my earlier tip about customizing your Dock: You can reconfigure your Finder windows to present just the tools and locations that you actually use (rather than what Apple *figures* you'll use).

You can right-click the toolbar in any Finder window and choose Customize Toolbar, for example. By default, the OS X Finder toolbar includes only the default icon set that you see at the bottom of the sheet, but you can drag and drop all sorts of useful command icons onto the toolbar. You can save space by displaying small icons, too.

With Finder tabs, you can even open multiple tabs within a Finder window (making it just about as efficient as it can possibly be for operations such as moving files, quickly navigating between locations, and comparing items in different locations).



TIP

The Finder sidebar — which hangs out at the left side of the Finder window — is a healthy, no-nonsense repository for those locations that you constantly visit throughout a computing session. I have both a Games folder and a Book Chapters folder that I use countless times every day (it's important to balance work with pleasure, you know), and I've dragged both of those folders to the sidebar.

Keep in Touch with Your Recent Past

Click that Apple menu () and use that Recent Items menu! I know that sounds a little *too* simple, but I meet many new Apple computer owners every year who either don't know that the Recent Items menu exists or forget to use it. You can access both applications and documents that you've used within the past few days. Consider the Dock and Finder sidebar to be permanent or semipermanent solutions and the Recent Items menu to be more of a temporary solution to finding the stuff that you're working on Right Now.

Go Where the Going Is Good

To round out this Part of Tens chapter, I recommend another little-known (and underappreciated) Finder menu feature (at least among Macintosh novices): the Go menu, which is located on the Finder menu bar.

The Go menu is really a catch-all, combining the most important locations on your system (such as your Home folder) with folders that you've used recently. Also, the Go menu is the place where you can connect to servers or shared folders across your local network or across the Internet.

Pull down the Go menu today — and don't forget to try out those spiffy keyboard shortcuts you see listed next to the command names. (Press $\text{⌘}+\text{Shift}+\text{H}$ to go immediately to your Home folder, for example.) And if a Finder window isn't open at the moment, a new window opens automatically. Such convenience is hard to resist!



TIP

Hold down the Option key when you click the Go menu, and you'll be able to choose your personal Library folder (which is normally hidden) from the menu. This comes in handy when you have to troubleshoot problems with applications that save files or store configuration data in your Library folder.

IN THIS CHAPTER

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Phishing (without a pole)

Using a single password

Liquid Mac meltdowns

Antique utility software

Illegal software

That nasty root account

Cheap surge protectors

Refurbished stuff

Just plain dirt

Chapter 24

Ten Things to Avoid Like the Plague

If you've read other books that I've written in the *For Dummies* series, you might recognize the title of this chapter: It's a favorite Part of Tens subject of mine that appears often in my work. I don't like to see any computer owner fall prey to pitfalls. Some of these pitfalls are minor, like being less than diligent about keeping your iMac clean. Others are downright catastrophic, like providing valuable information over the Internet to persons unknown.

All these potential mistakes, however, have one thing in common: They're *easily prevented* with a little common sense as long as you're aware of them. That's my job. In this chapter, I fill in what you need to know. Consider these pages as experience gained easily (for you, that is!).

Keep Things Cool

I've met several iMac owners over the years who've parked their supercomputers next to a heat source, shoehorned an iMac under a shelf, or draped something over the top of the screen. (That last one happens more often than you think, just because such a cover helps prevent dust from accumulating on the top of any computer.)

What, dear reader, do these three mistakes have in common? In a word, *heat*, which is something you must avoid. Don't forget that your iMac has the same heat-generating CPU, video card, and internal devices that any other computer has these days but only a single pathway for air to flow. Trust me: Your motherboard and internal devices will suffer if you don't allow your iMac's internal fan to perform its job!

As I discuss in Chapter 1, the fan exhaust on your iMac is the slot at the top back of the case, so *don't ever cover that slot* with anything, and locate your iMac in a spot where there's plenty of ventilation directly above the computer. Also, avoid major heat sources anywhere around your iMac that could significantly raise its temperature.

Phishing Is No Phun

Phishing refers to an attempt by criminals to illegally obtain your personal information. If that sounds like an invitation to identity theft, it is — and thousands of sites have defrauded individuals like you and me (along with banks and credit card companies) out of billions of dollars.

A phishing scam works like this: You get an email purporting to be from a major company or business (think eBay), government agency, social networking site, or major credit card company. The message warns you that you have to “update” your login or financial information to keep it current, or that you have to “validate” your information every so often — and the message ever-so-conveniently even provides you a link to an official-looking web page (although sometimes full of spelling errors and always with a bogus address). After you enter information on that bogus page, it's piped directly to the bad guys, and they're off to the races.

Here's a Mark's Maxim that every Internet user should take to heart:



AUTHOR
SAYS

No legitimate company or agency will ever solicit your personal information through an email message!



WARNING

Never respond to these messages. Don't use the link provided in the phishing email! If you smell something phishy, open your web browser and visit the company's site (the *real* one) by typing the address directly; then contact the company's customer support department to report the scam.

In fact, sending any valuable financial information through unencrypted email — even to those whom you know and trust — is a bad idea. Email messages can be intercepted or can be read from any email server that stores your message.

Don't Rely on a Single Password

Okay, confess: Are you using a single password for *everything* you do on your iMac? Is your Apple ID password the same as your user account password — and also the same as your password on every website you visit? Even your online banking? (Oh, my!)

If so, you're taking a big risk with both your personal data and your online reputation. All it takes is a single moment of weakness (perhaps when your friend or co-worker asks to use your Mac, or you use that “oh-so-convenient” universal password on a phishing website). No matter how your password gets out, you and your iMac are suddenly wide open to malicious attacks.

I recommend the same security measure that I recommend to my clients, family, and friends: Use a different password for each of the important websites you visit often, and keep a separate password reserved for your user account. I know it's a hassle to remember multiple passwords, but the alternative is no security at all.

Do You Really Want a Submerged Keyboard?

Your answer should be an unequivocal “No!” — and that's why everyone should make it a rule to park all beverages well out of range of keyboards, speakers, mice, backup drives, and any other piece of external hardware. Especially when kids or cats are in close proximity to your iMac.

Cleaning up a hazardous soda spill is hard enough in the clear, but if that liquid comes in contact with your hardware, you're likely to be visited with intermittent

keyboard problems (or, in the worst-case scenario, a short in an external peripheral or your iMac's motherboard).

Suffice it to say that 12 inches of open space can make the difference between a simple cleanup and an expensive replacement!

Don't Use Antiquated Utility Software

If you're using OS X El Capitan, you should upgrade your older utility programs. These older disk utility applications can actually do more damage than good to a hard drive under OS X El Capitan. Things always change when Apple makes the leap to a new version of OS X, including subtle changes to disk formats and memory management within applications. With an out-of-date utility, you could find yourself with corrupted data. (Note that some out-of-date utilities actually refuse to run on newer versions of OS X that they don't recognize, but other antique utilities attempt to soldier on, sometimes with nasty results.)

Make sure that you diagnose and repair disk and file errors by using only a utility application that's specifically designed to run in El Capitan, such as Drive Genius 4 from Prosoft Engineering (www.prosofteng.com). Your iMac's hard drive will definitely thank you.

(Oh, and while you're at it, don't forget to check the manufacturer's website for any updates to drivers or application software for your third-party external hardware! 'Nuff said.)

Don't Endorse Software Piracy

This one's a real no-brainer. Bear in mind that Apple's overall market share among worldwide computer users currently weighs in at little more than 10 percent. Software developers know this, and they have to expect (and *receive*) a return on their investment or they're going to find something more lucrative to do with their time. As a shareware author, I can attest to this fact firsthand.

An iMac is a great machine, and El Capitan is a great operating system, but even the best hardware and the sexiest desktop won't make up for an absence of good applications. Pay for what you use, and everyone benefits.

Call It the Forbidden Account

You might never have encountered the *root*, or *System Administrator*, account within OS X — and that’s always A Good Thing. Note that I’m not talking about a standard administrator (or admin) account here. Every iMac needs at least one admin account (in fact, it might be the only visible account on your computer), and any standard user account can be toggled between standard and admin status with no trouble at all (by another admin account).

The root account, though, is a different beast altogether, and that’s why it’s disabled by default. All Unix systems have a root account; because El Capitan is based on a Unix foundation, it has one, too. Anyone logging in with the root account can do *anything* on your system, including deleting or modifying files in the System folder (which no other account can access). Believe me: Deliberately formatting your hard drive is about the only thing worse than screwing up the files in your System folder.

Luckily, no one can accidentally access the root/System Administrator account. In fact, you can’t assign the root account with System Preferences; you must use the Terminal application in Utilities (within your Applications folder). Unless an Apple support technician tells you to enable and use it, you should promptly forget that the root account even exists.

Don’t Settle for a Surge Suppressor

Technically, nothing is wrong with using a surge suppressor to feed power to your iMac and all your external peripherals, but it doesn’t do the *entire* job. Your system is still wide open to problems caused by momentary brownouts, not to mention the occasional full-fledged blackout. Losing power in the middle of a computing session will likely lead to lost documents and might even result in disk or file errors later. With an uninterruptible power supply (UPS), you can rest more easily, knowing that your iMac will have a few minutes more of iLife. (Incredibly sad pun unfortunately intended.)

Most Mac owners know about the backup battery power that a UPS provides, but they don’t know about the extra work performed by most UPS units — namely, filtering your AC current. A filtering UPS prevents electronic noise (think about a vacuum being used next to a TV set) and momentary current spikes. These days, you’ll find good UPS models for less than \$100.

Refurbished Hardware Is No Deal at All

Boy, howdy, do I hate refurbished stuff. To quote someone famous, “If the deal sounds too good to be true, it probably is.”

Examine what you get when you buy a refurbished (often called *recertified*) hard drive. It’s likely that the drive was returned as defective, of course, and then sent back to the factory. There, the manufacturer probably performed the most cursory of repairs, perhaps tested the unit for a few seconds, and packed it up again. (I should, however, note that Apple sells refurbished Macs and generally has a good reputation for value on these computers.)



REMEMBER

Before you spend a dime on a bargain that’s *remanufactured* — I can’t get over that term — make sure that you find out how long a warranty you’ll receive, if any.

If at all possible, I recommend spending the extra cash on trouble-free, brand-new hardware that has a full warranty.

iMacs Appreciate iCleanliness

Clean your machine, including your keyboard, mouse, and trackpad. Your iMac case needs only a thorough wiping job with a soft cloth to stay spotless, but don’t be surprised at the primordial nastiness that can build up on your keyboard and the underside of your mouse over time!

Your screen should be cleaned at least once every two or three days. Never spray anything — cleaners, water, **anything!** — directly on your screen or your iMac’s case. I highly recommend using premoistened LCD cleaning wipes to clean your iMac monitor safely.

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About the Author

Mark L. Chambers has been a technology author, computer consultant, BBS sysop, programmer, and hardware technician for more than 30 years — pushing computers and their uses far beyond “normal” performance limits for decades now. His first love affair with a computer peripheral blossomed in 1984 when he bought his lightning-fast 300 BPS modem for his Atari 400. Now he spends entirely too much time on the Internet and drinks far too much caffeine-laden soda.

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His favorite pastimes include collecting gargoyles, watching St. Louis Cardinals baseball, playing his three pinball machines and the latest computer games, supercharging computers, and rendering 3D flights of fancy — and during all that, he listens to just about every type of music imaginable. Mark’s worldwide Internet radio station, *MLC Radio* (at www.mlcbooks.com), plays only CD-quality classics from 1970 to 1979, including everything from Rush to Billy Joel to the *Rocky Horror Picture Show*.

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Mark welcomes all comments about his books. You can reach him at mark@mlcbooks.com, or visit MLC Books Online, his website, at www.mlcbooks.com.

Dedication

This book is dedicated to my youngest daughter, Rose Chambers — she of the Boris Beast and Major Tom — with all the love and happiness I can give her.

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