



# Take Control *of* Upgrading to Panther

by Joe Kissell

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## VERSION 1.1 CHANGE LIST

As with any new operating system, Panther was full of surprises—some good, some not-so-good. Despite the extensive testing performed by Apple and an army of beta testers prior to Panther's release, a number of issues have surfaced since the day this ebook was first published (which was the same day as Panther's release). Although it would be impossible to cover every possible problem that might arise during installation, several concerns have stood out as affecting a large number of users. This version 1.1 update to *Take Control of Upgrading to Panther* helps you deal with them. Here are the major changes:

- An entirely new section on using FireWire hard drives, some of which have experienced data loss under Panther
- Information on preventing (or repairing) installation issues affecting firewalls, printing, AppleTalk, and X11
- Discussion of a RAM problem that can cause installation to fail
- More detailed advice for those who wish to partition a hard drive
- Improved instructions for copying essential files after an Archive and Install upgrade
- Details on additional software that must be updated to work correctly under Panther
- Several minor clarifications and additional tips

I made many of the changes in response to feedback from readers, and I deeply appreciate the comments I've received. Along with the TidBITS staff, I have been delighted and overwhelmed at the positive reception readers have given this publication.

### **FUTURE UPDATES**

TidBITS Electronic Publishing may publish minor updates to this ebook to account for errata, updates in covered software, new information coming to light, or other reasons. Such updates will be available at no additional charge, and you will be notified of them at the email address you gave at the time of purchase.

## READING TIPS

This ebook was designed to be read online or printed. Here are a few tips for enhancing your online reading experience in Adobe Acrobat and Adobe Reader (we're still learning the tricks for Panther's Preview application):

- In Adobe Acrobat 5, the Take Control default settings on the View menu are Fit in Window and Continuous. For most people with larger monitors, those should be fine. To focus only on reading, in Acrobat 5, choose View > Full Screen, or in Acrobat 6, choose Window > Full Screen View. (Press Esc to leave full screen mode.)
- You can increase the size of the text by clicking the window's Zoom button to make the window as wide as possible, and then choosing View > Fit Width. You can eke out more horizontal width by closing the Bookmarks tab (click the Bookmarks tab at the far left of the Acrobat document window).
- You can scroll using keyboard shortcuts in a number of ways (you may need to click in the main text area before using these shortcuts). The Page Up and Page Down keys may be the easiest (and they scroll by screen when you are viewing less than a full page). The Left and Right arrow keys scroll to the previous and next page starts.
- Blue text indicates links. You can click any item in the Table of Contents to jump to that section. Cross-references are also links, as are URLs and email addresses.
- Work with the Bookmarks tab showing so you can always see and jump to any main topic by clicking the associated bookmark.
- Remember that you can always print if paper is your preferred reading medium.

## INTRODUCTION

Mac users can be divided into two main categories. On the one hand, there are the early adopters—those who buy every new gadget and install every new software update the moment it's released. These are often the people who wait in line for hours to be among the first customers at a new Apple Store or to get the best seats at a Macworld Expo keynote speech. The other type of Mac user is more cautious, waiting to see what experiences other people have before taking chances with new products. These users, though no less fanatical about their Macs, are often the ones who hold onto old hardware even when it's well past its prime, and who live by the motto, "If it ain't broke, don't fix it."

When it comes time for a major upgrade to the Mac OS, the early adopters often rush to upgrade their systems, only to discover unexpected problems that they then must spend hours or days trying to solve. (These experiences, of course, turn some early adopters into cautious users.) The cautious users, while perhaps envious of the new features their friends have, are not envious of their problems, and may choose to wait until the x.0.1 or x.0.2 release before upgrading.

I am a recalcitrant early adopter; I muddle through problems and figure out the solutions so cautious users don't have to. With Apple's release of Mac OS X 10.3 Panther, I have access to some remarkable capabilities that have already made my computing life a lot easier and more enjoyable. If you, too, are an early adopter, I hope my experiences will save you time, effort, and aggravation as you upgrade. And if you're a more cautious user, perhaps this ebook will inspire you to jump in sooner and take control of your Panther upgrade. You'll be glad you did.

## CHECK YOUR HARDWARE FOR COMPATIBILITY

If your Mac was manufactured within the last four years or so, you almost certainly have adequate hardware to run Panther. For older machines, the situation is more complex. In particular, not every computer that can run Jaguar can also run Panther.

**WARNING** Planning to use an external FireWire drive with your Panther system? Be sure to read [Update or Remove FireWire Hardware](#), later in this section.

### Processor and USB Support

For starters, Panther requires a PowerPC G3, G4, or G5 processor and built-in USB. So any iMac, eMac, iBook, PowerBook G4, Power Mac G4 (including the Cube), or Power Mac G5 qualifies—as long as it has enough RAM (see just ahead under “RAM”). The original beige Power Macintosh G3 and the Power Macintosh G3 All-In-One cannot run Panther, but all newer desktop machines can.

The situation is murkier with G3 PowerBooks. The original (“Kanga”) PowerBook G3, which lacks factory-installed USB ports, cannot run Panther. Neither can the “Wallstreet” PowerBook G3, for the same reason (even though it can run Jaguar). However, the “Lombard” PowerBook (Bronze Keyboard) and the “Pismo” PowerBook (FireWire) both meet Apple’s minimum requirements.

Note that simply adding a USB card to an unsupported Mac will not make it Panther-compatible; the installer will refuse to run.

**TIP** XPostFacto is a utility that enables Jaguar to be installed on some unsupported systems. The author is currently working on an update, which he hopes will enable Panther to run on both beige G3 and Wallstreet PowerBook G3 computers. To check on the current status of XPostFacto, visit the Other World Computing Web site.  
<http://eshop.macsales.com/OSXCenter/XPostFacto/framework.cfm?page=XPostFacto.html>

## BACK UP YOUR DATA

System upgrades, because they affect so many parts of your hard disk, and at such a low level, are times when problems are especially likely to occur. So I can't emphasize this strongly enough: before upgrading, back up your data. The time you spend now may save you countless hours of frustration later.

If you already follow a regular backup regimen (good for you!), verify that all your important files are freshly backed up and test your backup by seeing if you can successfully restore a few representative ones. (For a list of the files you should pay particular attention to, see "Backing up your personal files," next.) If not, this is a perfect time to start. A backup utility will make the process much easier. Every serious Mac geek I know (including myself) uses Dantz's Retrospect for backups (<http://www.dantz.com/>). There are a number of other alternatives, including Apple's own Backup utility for .Mac members (though it doesn't come close to Retrospect's power).

Whether or not you already use a commercial utility for backups, I recommend that before upgrading to Panther, you also *clone* your entire hard disk—make a complete, bootable copy—just to be safe. (This is especially important if you erase your disk when installing Panther.) See "Backing up your system" (a few paragraphs ahead) for instructions.

### Backing up Your Personal Files

If you always store data in its default location, most or all of your personal files are in your home folder, located in your user's folder in **/Users**. This includes documents, photos, movies, and music files as well as preferences, fonts, AppleScripts, saved email, Address Book and iCal entries, and many third-party preference panes—plus the items that appear on your Desktop. So any thorough backup should include your entire home folder. (If your machine is configured for multiple users, be sure each user's home folder is backed up.) If you have stored any personal files outside your home folder, be sure to include those in the backup as well.

## Backing up Your System

Even if all your documents are backed up, you should consider making a bootable backup of your entire disk. In the event that you upgrade to Panther and encounter serious problems (such as an essential piece of software that does not work under the new operating system), you will want to return to your old system, and a bootable copy of that system will make the process easier. (See [How to Downgrade](#) for details.) Under Mac OS X, you cannot simply copy your System folder onto a new volume and have a bootable backup. You *could* learn a long sequence of Unix commands to do this, but an easier way is to use Retrospect or Mike Bombich's free Carbon Copy Cloner (<http://software.bombich.com/cccl.html>).

You will need a second hard drive (which could even be an iPod), a large network drive, or a DVD burner to clone your entire system. Although you can also clone your system to a separate partition on your internal hard disk, this is less safe because a hardware problem could make all your partitions inaccessible.

Carbon Copy Cloner and Retrospect include complete instructions, so I won't repeat all the steps here. For best results when using Carbon Copy Cloner, I recommend selecting the Repair Permissions Before Cloning and Make Bootable options in the Permissions dialog. In Retrospect, use the Duplicate button on the Immediate tab to clone your hard disk.

## PERFORM A CUSTOMIZED UPGRADE

With your hardware checked, your data safely backed up, and plenty of free disk space, it's time to begin the upgrade. Insert the first Panther CD and double-click the Install Mac OS X icon. In the window that appears, click the Restart button, and enter your administrator password when prompted. Your computer restarts from the CD and the installer runs.

**TIP** In the unlikely event that your computer does not restart from the CD, try the [Computer Won't Start](#) steps in the "Troubleshoot Upgrade Problems" section, near the end of this ebook. This section also has suggestions for solving a variety of other problems you might encounter during installation.

The installer asks you to choose a language, then presents you with a Welcome screen, a Read Me file, and a Software License Agreement. I assume you know how to deal with all those screens.

### Select a Destination

The next screen asks you to select which volume to install Panther onto. If you have only one volume, this is an easy choice; if you have multiple partitions and/or disks, be sure to select the correct one. The installer tells you if there is sufficient disk space; if not, it tells you how much more you need. (You can reduce this amount by deselecting optional software packages in the next step.) Then...

### Stop!

Do not click Continue, do not pass Go, do not collect \$200. Not even if your disk has plenty of space. Before you go on to the next step, click the Options button at the bottom of the window to display a sheet where you can choose one of up to three upgrade methods. This choice is crucial to your future happiness!

**NOTE** If you use the Panther upgrade CDs obtained through the Mac OS X Up-to-Date program, you can install Panther only onto a volume that already has some version of Mac OS X installed. If you need to put Panther on another volume, install Jaguar there first.

## TROUBLESHOOT UPGRADE PROBLEMS

Even if you diligently followed all the instructions in this ebook, you might encounter problems while upgrading. I can't anticipate every difficulty you may have (or provide solutions in every case), but here are some of the most likely issues and how to deal with them.

### Computer Won't Start Up from the CD...

After launching the installer and restarting, if your computer will not boot from the installation CD, do this:

1. Shut down your computer and wait for a few seconds. If the CD was ejected, make sure it is free of smudges, scratches, and fingerprints, and reinsert it.
2. Press the Power button, and immediately hold down the C key to force the computer to boot from the CD. If this doesn't work...
3. Restart your computer, this time holding the Option key. Icons representing each valid startup volume will appear on the screen. Click the icon for the installation CD, then click the right arrow. If this doesn't work...
4. Shut down your computer, then remove *all* peripherals, network cables, and anything else attached to your computer except the Apple-supplied keyboard, mouse, and display. (You may also need to remove any third-party video and PCI card(s) and even, in rare cases, extra RAM modules.) Then go back to Step 2 (and Step 3 if necessary). If this doesn't work...
5. Zap your PRAM. To do this, restart, and immediately hold down the Command, Option, P, and R keys. When you hear the second startup chime, release the keys and immediately press the C key as in Step 2. If this doesn't work...
6. Contact Apple. Start with the Support section of the Apple Web site; if that does not contain the help you need, contact AppleCare (if applicable) or visit your local Apple Store for assistance.

You should be able to restart from the Panther Install CD by the time you finish these steps.

## ABOUT THE AUTHOR

Joe Kissell is the author of several books about Mac software, including *50 Fast Mac OS X Techniques*. He has worked in the Macintosh software industry for the past ten years, including positions managing software development for Kensington Technology Group and Nisus Software.

Joe holds the honorary title “Curator of Interesting Things” at alt concepts, an Internet publishing company. You can read his popular Interesting Thing of the Day column at <http://itotd.com/>.

When he’s not writing computer books or articles about interesting things, Joe likes to travel, cook, practice t’ai chi, and imitate the “ba-deep” sounds his TiVo makes. He lives in San Francisco with his wife, Morgen Jahnke.

To contact Joe about anything in this ebook, send him email him at [jwk@mac.com](mailto:jwk@mac.com) and be sure to include the words **Take Control of Upgrading to Panther** in the subject of your message.



## TAKE CONTROL OF PANTHER: THE SERIES

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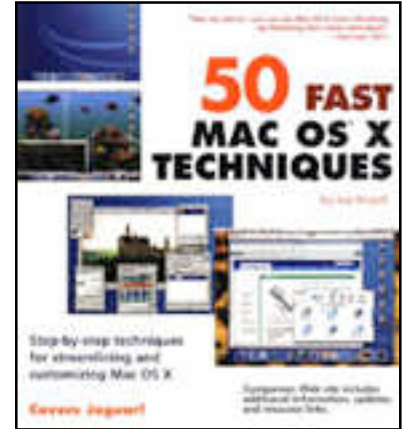
*Take Control of Sharing Files in Panther*

*Take Control of .Mac*

With your support, we plan to publish a number of additional ebooks in early 2004.

## SHAMELESS PLUG

Joe's book, *50 Fast Mac OS X Techniques* (Wiley, 2003), was written for Jaguar, but most of the techniques are equally useful under Panther. This book shows you how to enhance, extend, and customize Mac OS X. You'll learn to use Terminal like a Unix geek, connect to the Internet using your Bluetooth cell phone, master the use of Mac OS X's handwriting- and voice-recognition features, automate repetitive tasks, and much more.



You can learn more about the book, read sample pages, search its contents, or place an order by visiting Amazon.com:

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## ABOUT TidBITS ELECTRONIC PUBLISHING

Take Control ebooks are a project of TidBITS Electronic Publishing. TidBITS Electronic Publishing has been publishing online since 1990 when co-publishers Adam and Tonya Engst first created their online newsletter, *TidBITS*, about Macintosh and Internet-related topics. *TidBITS* has been in continuous, weekly production since then, and it is the leading online Macintosh newsletter.

To stay up to date on Mac OS X 10.3 Panther and other Macintosh topics, be sure to read *TidBITS* each week. At the *TidBITS* Web site you can subscribe to *TidBITS* for free, participate in TidBITS Talk discussions, or search 13 years of news, reviews, and editorial analysis.

Adam and Tonya are well-known in the Macintosh world as writers, editors, and speakers, and they have written innumerable online and print publications. They are also parents to Tristan, who is almost five and thinks ebooks about trains, clipper ships, and dinosaurs would be cool.

**TidBITS Web site:** <http://www.tidbits.com/>

**Adam's home page:** <http://www.tidbits.com/adam/>

**Tonya's home page:** <http://www.tidbits.com/tonya/>

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This ebook has been brought to you by the letter X and the number 3.

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...and the many friends and relatives that helped in large and small ways by providing technical expertise, dinner, childcare, and so on.