



# Migrating to Mac OS X

A Guide for Creative Professionals

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# Introduction

Apple builds products that enable creative professionals to focus on what matters most to them: being creative. With Mac OS X v10.3 “Panther,” Apple has introduced a new level of power and productivity for the creative pro. Mac OS X offers unprecedented stability, speed, and graphics support. With Mac OS X, creative professionals can express their imaginations with greater ease and integration into their unique workflow than ever before.

This document will help you make a smooth transition to Mac OS X from your current Mac OS 9–based system. It describes Mac OS X upgrade options, with step-by-step instructions for implementing them. It also offers recommendations for setting up your new Mac OS X system efficiently for design and printing projects.

Mac OS X is easy to learn—and it provides significant benefits over earlier Macintosh operating systems. With the release of Mac OS X Panther, there’s never been a better time to upgrade. Panther delivers the stability and performance that have made Mac OS X renowned, along with exciting new graphics, collaboration, user interface, and digital media features.

- A robust UNIX-based foundation provides outstanding reliability. It also brings dramatic productivity benefits by running multiple applications and tasks faster, and by taking care of memory management for you.
- Mac OS X can convert PostScript to PDF for screen display and printing. Now other computers on your network can send PostScript files to your Macintosh, which can convert the files, rasterize the documents, and print them on a USB printer. The ability to share a USB raster printer as a PostScript printer on the network is an industry first.
- A “Save As PDF” button lets you instantly create PDF files in any Mac OS X application. And you can view them with Preview, the fastest PDF viewer application on any platform.
- Quartz filters provide professional-level transformation and manipulation to enhance your PDF files. These filters can be used to manage color, create special color effects, alter image data, or create PDF files suitable for professional publishing workflows.
- Broad support for multiple font formats and built-in font management allow you to create the exact typographical look you need for each project.
- Support for Unicode text encoding lets you work in multiple languages even within a single document and take advantage of fonts with rich character sets.
- Enhancements to the Finder allow you to navigate through your files and folders faster than ever.

- Exposé is a major advance in user interface design that will change the way you work with multiple files, applications, and projects.
- Printer Setup Utility consolidates print management into one application.
- Standard protocols for file sharing, printing, and other services enable you to collaborate more smoothly with users of Windows-based computers and to preserve your investment in printers and other devices.
- A full complement of multimedia applications, including iChat AV for real-time text-based chats as well as audio and video conferencing, and the iLife suite—iPhoto, iTunes, iMovie, and iDVD—for versatile digital media capabilities.
- A full set of tools for developing Mac OS X applications is included at no additional charge.

More than 10,000 applications—including QuarkXPress, the Adobe Creative Suite, and other favorites of creative professionals—now take advantage of the powerful capabilities of Mac OS X. And the Classic environment in Mac OS X lets you run the Mac OS 9 applications you depend on until you're ready to move to versions written for Mac OS X.

Whether you're upgrading your existing Mac or moving to a new Mac, simply follow the easy instructions in this guide, and you'll be enjoying the benefits of Mac OS X in no time!

## Which Transition Path Should I Take?

If you are planning to install Mac OS X on a Mac with an earlier operating system (Mac OS 9 or a previous version), you should read the section "Upgrading an Existing Mac."

If you have been using a computer with Mac OS 9 (or a previous version of the Mac OS) and you now have a new Mac that has Mac OS X preinstalled, you should read "Moving to a New Mac" to learn how to smoothly transfer your applications and files to the new system.

For your convenience, a Migration Checklist (Appendix I) is provided to ensure that you don't miss any steps in the upgrade process.

Once you've upgraded to Mac OS X, read the section called "Mac OS X Basics" to get acquainted with the new features of Mac OS X. Refer to the appendixes for useful information on font management, formatting your hard disk, Mac OS 9 to Mac OS X quick references, supported devices, system maintenance, troubleshooting, and working with a multiuser system.

# Upgrading an Existing Mac

Use this path if you want to install Mac OS X on a Mac OS 9 computer. The Migration Checklist in Appendix I will aid you in completing all the necessary steps.

You can choose to keep your existing files (and even Mac OS 9, if you wish) on the hard drive or to erase the drive and perform a fresh installation of Mac OS X and your applications. Both ways work and are covered in the steps in this section. These instructions assume that you have had some experience using Mac OS 9.

After your transition, you'll want to familiarize yourself with Mac OS X. We recommend that you read the section called "Mac OS X Basics" and the subsequent sections on printing, fonts, and other common tasks.

In this section, you'll perform the following actions:

1. Evaluate your computer and peripherals. (See "Evaluating Your Hardware," page 7.)
2. Evaluate your applications. (See "Evaluating Your Software," page 8.)
3. Record your current network settings. (See "Recording Your Mac OS 9 Network Settings," page 10.)
4. Record your current email settings. (See "Recording Your Mac OS 9 Email Settings," page 12.)
5. Back up your files. (See "Backing Up Your Files," page 13.)
6. Update Mac OS 9, if needed. (See "Updating Mac OS 9," page 13.)
7. Install Mac OS X. (See "Installing Mac OS X," page 14.)
8. Enter your network and email settings. (See "Entering Your Recorded Settings," page 17.)
9. Install the applications you want to use in Mac OS X. (See "Migrating Your Applications," page 17.)
10. Reinstall your files, if you performed a disk reformatting during this process. Even if you haven't reformatted the disk, you may want to consider moving some of your files to new locations, especially if you'll be using them with Mac OS X applications. See the section "Organizing Your Files" on page 29 for information on storing your files efficiently in Mac OS X.

## Evaluating Your Hardware

Mac OS X version 10.3 “Panther” runs on Macintosh computers with a PowerPC G3, G4, or G5 processor and a built-in USB port. To make sure your computer is ready for Mac OS X, you must have:

- At least 128MB of physical RAM; 1GB recommended for professional publishing
- A built-in display or a display connected to an Apple-supplied video card (most other video cards sold for Mac systems should also work with Mac OS X; check with the manufacturer)
- At least 2GB of disk space; 8GB recommended for creative environments

Apple does not support Mac OS X on systems that have processor upgrade cards. You will need to remove the card or use a different Mac that can run Mac OS X without an upgrade card.

Checklist item 1 in Appendix I will help you evaluate your Macintosh system, and item 2 covers third-party hardware and peripherals.

### Third-party hardware and peripherals

Thousands of products from Canon, Nikon, HP, Sony, LaCie, Epson, Lexmark, 3M, Kodak, Kensington, Logitech, and many other leading vendors are ready to work with Mac OS X right out of the box. What external devices will you want to use with your upgraded Macintosh computer? These are the most common ones used in design and print work:

- Printers
- Scanners
- Removable storage devices
- Digital cameras
- Audio devices (microphones, speakers, other devices)
- Video cards
- CD burners
- PDAs
- SCSI add-in cards

Mac OS X features an advanced I/O system based on established open standards so that it can support the entire spectrum of peripherals used by design professionals. It comes configured with support for many camcorders, digital cameras, storage devices, scanners, printers, and input devices. See Appendix B for links to up-to-date lists of peripherals that are directly supported in Mac OS X.

Some products may require third-party drivers that have been adapted to take advantage of Mac OS X. Information on driver availability can be obtained directly from the manufacturer or from the Apple downloads site at [www.apple.com/downloads/macosx/drivers](http://www.apple.com/downloads/macosx/drivers).

Use checklist item 2 to record the information you find out from your hardware evaluation.

## Evaluating Your Software

More than 10,000 applications specifically built for Mac OS X are already available and in use. This section helps you evaluate the software most often used by creative professionals to determine whether you need to obtain upgrades or new versions of any of your current applications. You may also want to read the information at [www.apple.com/macosx/applications](http://www.apple.com/macosx/applications) or check for other Mac OS X design and print programs at [guide.apple.com/design](http://guide.apple.com/design).

### Types of Mac OS X applications

Most Macintosh developers have either created all-new Mac OS X applications or have added Mac OS X compatibility to existing Mac OS 9 programs. Software written before the release of Mac OS X can be run in the Classic environment of Mac OS X.

- **Applications optimized for Mac OS X.** To get the maximum benefits of Mac OS X, you should use applications that have been designed to take full advantage of features in Mac OS X such as preemptive multitasking and automatic memory management. Some of the applications you are currently running in Mac OS 9 may fall into this category and should run perfectly in the Mac OS X environment.
- **Classic applications.** Other applications—those written before the release of Mac OS X—should run fine in the Classic environment of Mac OS X. They don't need to be reinstalled after you upgrade your computer to Mac OS X; simply double-click one to launch Classic.

Even if your older software runs in Mac OS X, you may want to take this opportunity to upgrade to the latest version. To find out whether your applications are optimized for Mac OS X, you can try running them on a Mac OS X computer or check with the application's developer.

### Image editing and page assembly software

QuarkXPress, Adobe Photoshop, Adobe Illustrator, Adobe InDesign, Macromedia FreeHand, and most other creative applications are now available in native Mac OS X versions to help you work more productively than ever. Check with the developers of your applications to find out whether they have been upgraded. If not, you should be able to use your Mac OS 9 versions in the Classic environment.

A number of popular third-party plug-ins and extensions that add features to Adobe Acrobat, Adobe InDesign, QuarkXPress, and other applications have already been updated for Mac OS X, and others are under development. Check with the vendors for their current status.

See checklist item 3 when you evaluate your image editing and page assembly software.

### Font management software

If you have been using Mac OS 9 versions of professional font management applications such as Extensis Font Reserve, Extensis Suitcase, or Insider Software FontAgent Pro, your transition will be easy, because the Mac OS X versions will be familiar to you. In some cases, the software you're already using on Mac OS 9 will also run on Mac OS X. Check the system requirements on the software package or contact the vendor for details. Note that Adobe Type Manager Deluxe is not available for Mac OS X. Please see the "Extensions and control panels" section for more information.

Mac OS X includes a built-in application for managing fonts called Font Book. For more information about Font Book, see Appendix G.

Use checklist item 4 to help you evaluate this category.



### Importing bookmarks into Safari

The first time you open Safari, it automatically imports bookmarks from Microsoft Internet Explorer, Netscape Navigator, and Mozilla.

If you are using a web browser other than those mentioned, you may be able to move your bookmarks to Safari by exporting them from your browser as an HTML document. Then open the document in Safari and open your Bookmarks Library in a separate window. Drag the links from the first window to a collection in your Bookmarks Library.

### Internet applications

Mac OS X ships with a full-featured email application called Mail. Mail can import mailboxes from various email applications, including Entourage, Outlook Express, Claris EMailer 2.0v3, Netscape 4, and Eudora, so switching to it is straightforward. In addition, most third-party email applications have been updated to run natively in Mac OS X. So if you prefer to keep using your current email program, it's most likely available in a Mac OS X version. Check the vendor's website for details. With the release of Mac OS X v10.3, Mail works with Microsoft Exchange mail servers, so you can access your Exchange mail account from either a Windows or Macintosh computer.

Also included in Mac OS X is a fast, versatile, and innovative web browser called Safari. You can import existing bookmarks from popular Mac OS 9 browsers into Safari, so you may want to switch to Safari instead of upgrading your existing browser.

You can record the results of your Internet software analysis in checklist item 5.

### Business applications

Microsoft Office v. X for Mac brings the new look and capabilities of Mac OS X to your favorite Microsoft productivity applications. You can use your existing Word, Excel, and other documents in this new version of Office.

Financial applications such as Quicken, QuickBooks, and MYOB are also available in Mac OS X versions.

The SimpleText editor included with Mac OS 9 has been replaced in Mac OS X by the more versatile TextEdit application.

Business applications are covered in checklist item 6.

### Extensions and control panels

One of the advantages of Mac OS X is that you no longer have to worry about system extensions and control panels conflicting with each other, because Mac OS X doesn't have them. If you desire specific functionality offered by any of your old extensions, check whether Mac OS X has the equivalent feature built in. If it doesn't, check with the developers of your extensions to see whether they offer similar software for Mac OS X.

If you plan to use the Classic environment on your new Mac OS X system, you'll want to go through your Mac OS 9 extensions and control panels to determine which ones you'll need so that you can copy them to the new system when you migrate. Here are some of the extensions most often used by design and print professionals, with information about whether you need to use them in Mac OS X:

**Adobe Type Manager (ATM)** and ATM Light are no longer needed because Mac OS X has a built-in font rasterizer.

**Adobe Type Manager Deluxe** is not available for Mac OS X. There are several options for this functionality. Mac OS X v10.3 has the built-in Font Book application, which allows you to store all of your fonts in one tool and then build collections (sets) of those fonts for various needs. There are also other font management applications with more sophisticated features; see Appendix H for information.

**Windows connectivity extensions** are not necessary in Mac OS X because it has built-in support for Windows and UNIX connectivity. Files from other operating systems can be accessed from the Network icon in a Finder window or from the Go menu in the Finder. When you access the network in this way, shared items automatically show up in your Network browser. See Appendix H for information on third-party Mac and Windows networking solutions.

**File sharing** on a Mac OS X client is simple and can be turned on in a single preference pane. If you want more advanced sharing services, take a look at Mac OS X Server. Third-party solutions are available for peer-to-peer file sharing; see Appendix H for information.

**Extensions managers** are not needed in Mac OS X because it does not use extensions. Use checklist item 7 to make sure that you've evaluated all of your extensions and control panels.

### AppleScript scripts

AppleScript is fully supported in Mac OS X. In fact, Mac OS X v10.3 ships with dozens of useful preinstalled scripts. Using AppleScript Studio software, you can easily create powerful Mac OS X applications written entirely in AppleScript that have the beautiful Mac OS X interface.

Some of your existing AppleScript scripts may need to be modified to work properly on Mac OS X, so you'll want to test them once you've made the transition.

For more information, visit [www.apple.com/applescript](http://www.apple.com/applescript).

Checklist item 8 gives you a place to note that you've evaluated your AppleScript scripts.

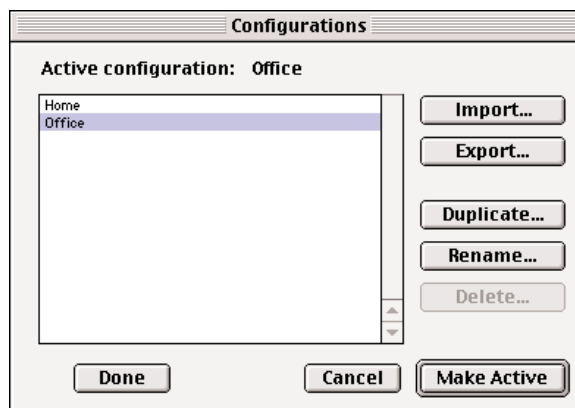
## Recording Your Mac OS 9 Network Settings

If you're planning to connect to a network or to the Internet through an ISP, you'll need to configure network settings in Mac OS X.

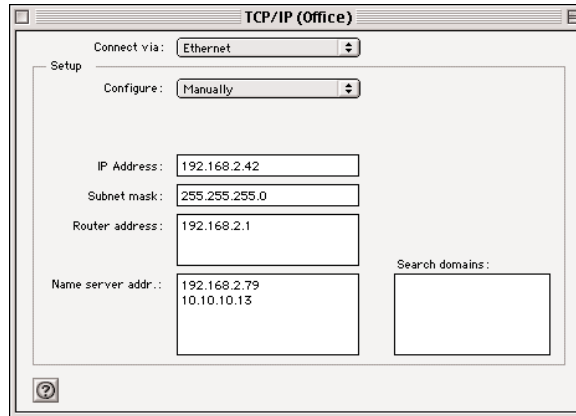
If you've been using DHCP to obtain a dynamic IP address on your Mac OS 9 system, when you first run Setup Assistant for Mac OS X, it should be able to get all the information it needs automatically from your ISP's DHCP server. (To find out whether you're currently using DHCP, go to the TCP/IP control panel and check the settings for each configuration.)

If you have a static IP address, use the instructions in this section to gather the network configuration information from your current Mac so that you can set up networking connections in Mac OS X.

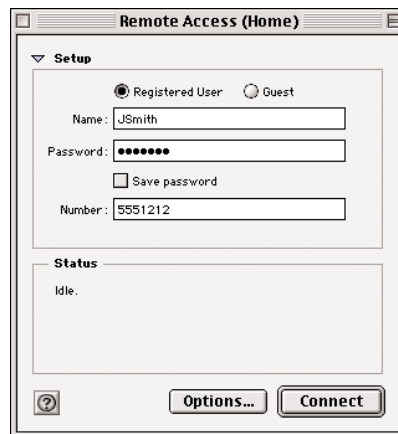
Network information is stored in various locations in Mac OS 9 depending on the type of network connection. In the TCP/IP and Remote Access control panels, you can switch between configurations by choosing Configurations from the File menu. When checking your settings, remember to record the settings for all of the configurations you use—not just the active one.



**TCP/IP.** TCP/IP settings are stored in the TCP/IP control panel. You may have multiple configurations that correspond to different locations in which you use your Mac, so be sure to copy each one.



**PPP.** The settings for PPP—used for dial-up connections—are located in the Remote Access control panel. You may have multiple configurations, so be sure to copy each one.



**PPPoE.** Mac OS 9 doesn't support PPPoE (PPP over Ethernet), so if you're using this connection method (such as with DSL), its settings are probably stored in a third-party application provided by your ISP. Mac OS X has built-in support for PPPoE, so you will not need a special application to use it after your transition. Check your ISP's website for instructions on setting up PPPoE in Mac OS X.

An easy way to copy your settings is to make a screen capture of the window in which they are displayed. To do this in Mac OS 9, press Command–Shift–Caps Lock–4, then click the window you want to record. The picture file appears on the top level of your hard disk with the name Picture 1. Repeat as needed to capture your other settings windows. You can open and print the pictures using SimpleText.

When you add Mac OS X to your Mac, Setup Assistant guides you through network configuration the first time you start up the computer after installing Mac OS X.

You can record your network settings in item 9 of the checklist.

## Recording Your Mac OS 9 Email Settings

To use your current email account with Mac OS X, you'll need to copy some important information about your account. That information includes your email address, password, account type (POP or IMAP), user name, and the names of the incoming and outgoing mail servers your account uses. If you can't find this information, check with your Internet service provider.

When you install Mac OS X, the Setup Assistant application prompts you for your email information. You can enter your settings then, or you can set up your account later in Mac OS X Mail.

Locate your email settings by following these steps:

1. From the Mac OS 9 desktop, choose Control Panels from the Apple menu, then choose Internet from the submenu that appears.
2. In the Internet window that appears, click the E-mail tab.
3. Write down all of your information from the E-mail Account Information pane. Note whether you are using a POP or IMAP account.
  - Email address: yourname@provider.com
  - Account ID or account name: yourname (example: jsmith)
  - Password: yourpassword
  - Incoming mail server (examples: pop.provider.net, mail.provider.com)
  - Outgoing mail server (examples: smtp.provider.net, relay.provider.com)

**Tip:** You can print your email settings by taking a "snapshot" of your Internet window. To do this in Mac OS 9, press Command–Shift–Caps Lock–4, then click the Internet window. Open your hard disk, locate the newest picture file, and then double-click to open it. When the picture opens, choose Print from the File menu. You can open and print the pictures using SimpleText.

Use item 10 of the checklist to record your email settings.

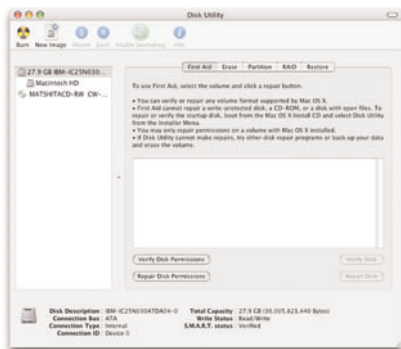
### Verifying your file system

To ensure that your file system is in good shape before you move files to your new system, you should run Disk First Aid, which is part of the Disk Utility application. Disk First Aid can verify and, if necessary, repair the file system on your disk.

To run Disk First Aid, do the following:

1. Start up the computer from the Mac OS X Disc 1 CD. (To start the computer from a CD, press the “c” key after you hear the startup chime and hold it until the Apple logo appears.)
2. From the File menu, choose Open Disk Utility.
3. Select the First Aid tab.
4. Highlight the disk volume you want to repair from the list of disks on the left side of the Disk Utility window. (In the list, volumes have names next to their icons; disks have sizes.)
5. Click Repair Disk.
6. When the repair is completed, scroll to the bottom of the text box in the First Aid pane to see the results.
7. If you see “The volume [your volume name] appears to be OK,” you are finished and can proceed with installing Mac OS X.

If there are problems, run Disk First Aid a second time. If problems persist, you will need to reformat your disk as described in Appendix F, “Formatting Your Hard Disk.”



If you perform this step, check it off in item 11 of the checklist.

### Backing Up Your Files

If you plan to install Mac OS X on the same drive as your Mac OS 9 system, you probably don’t want to remove any existing files from the disk. Installing Mac OS X should not affect your current files. However, it’s always a good idea to back up important files before making any major changes to a computer.

If you already have a backup solution in place, read the sidebar “Verifying your file system,” make a fresh backup, then proceed to the section “Updating Mac OS 9.”

Check off this step in item 11 of the checklist.

### File backup utilities

File backup utilities make it easy to back up individual files, groups of files, or the entire contents of your hard disk. They allow you to save your files on a number of types of internal, external, and removable storage devices, including hard disks, tapes, network servers, CDs, and DVDs.

At this point in the transition process, your backup utility will have to run in Mac OS 9. However, in the long term you will want a backup utility that runs in Mac OS X.

A number of backup utilities can run in either version of the Mac OS. See Appendix H for information.

If you prefer, you can transfer your files to another storage device manually. This method is fine for data files, but it is not recommended for backing up your operating system. Many invisible files are used by the operating system, so copying them using the Finder can be risky.

### What you should back up

When deciding which files are important and should be backed up for safety, consider the following:

- Customer job files
- Fonts
- Letters and contracts
- Digital artwork, photographs, and scans
- Product serial numbers and license keys
- Email messages
- Address book information
- Checkbook data
- Invoices
- Browser bookmarks

Even if your disk is well organized, it can be easy to miss important files. If you are worried about this, your best strategy is to back up everything on your disk—even if it means purchasing backup software and an external storage device.

### Updating Mac OS 9

If you want to use Classic applications, it’s important to make sure you have the latest version of Mac OS 9 before installing Mac OS X. If your computer is connected to the Internet, you can update your Mac OS 9 system software using the Software Update control panel.

1. From the Apple menu, choose Control Panels, then choose Software Update.
2. In the Software Update window, click Update Now.
3. Install the updates.

This is part of item 11 on the checklist.

### Updating firmware

“Firmware” is software that resides permanently on your computer to control various hardware components inside it. You may need to update your firmware before installing Mac OS X.

Look in the Firmware Updates folder located in the Utilities folder on your Mac OS X Installer CD to see whether an update is included for your Mac. If your Mac does need a firmware update, read the About Firmware Update file for your computer. This file contains information about what the update does and gives installation instructions.

You can also go to [docs.info.apple.com/article.html?artnum=86117](http://docs.info.apple.com/article.html?artnum=86117) for a list of Macintosh models that require a firmware update before installing Mac OS X. Or you can search [www.info.apple.com/support/downloads.html](http://www.info.apple.com/support/downloads.html). For example, to find out whether you need a firmware update for your PowerBook G3 computer, use the search feature to look for “PowerBook G3 firmware update.”

## Installing Mac OS X

Installing Mac OS X is easy. After it’s installed, it will guide you through setting up the system to your preferences.

The Mac OS X Panther package includes three Mac OS X installation discs and one Developer Tools CD, which features Apple’s Xcode developer tools. Depending on the installation option you choose, you may be asked for any or all of the three installation discs. Installation of the developer tools is optional.

Here’s all you need to do to get started:

1. Quit any open applications.
2. Insert the Mac OS X Panther Install Disc 1 CD into your computer.
3. Click the restart button on the Mac OS X screen that appears to restart your computer and begin the installation process.



4. Select the language you are going to use.

Follow the Mac OS X Installer instructions described on the next pages. They will guide you through the simple steps needed to install the software.

When you install Mac OS X, none of your existing files are overwritten. By default, Mac OS X is installed in addition to Mac OS 9, not in place of it.

### Installation steps and options

The Installer application will guide you through the installation process.

You can quit the installation any time before you press the final Install or Upgrade button in the Installing step. To stop the installation, select Quit from the Installer menu. You are presented with a confirmation dialog. Press Restart to stop the installation process.

To eject the CD, press and hold the mouse button right after you hear the startup chime. Your disc ejects and your Mac restarts from your existing system.

#### Step 1: Introduction

Click Continue when you’re ready to proceed.

#### Step 2: Read Me

The Read Me file contains important compatibility information. Read through it to make sure your system is compatible with the version of Mac OS X that you’re installing.

### Step 3: License

Read the license agreement and click Continue. A dialog appears that contains the buttons Agree and Disagree. If you click Agree, the installation continues. If you click Disagree, the license agreement reappears. You must either agree to the license to continue the installation or use the Installer menu to quit the Installer application.

### Step 4: Select Destination

Click the icon of the volume on which you want to install Mac OS X. A green arrow appears on the icon to indicate that you can install Mac OS X on the volume.

Once you have selected a volume, the Options button at the bottom of the window becomes active. Click it to view various installation options. Because you have already prepared your disk using instructions in this guide, accept the default option, Install Mac OS X. Click OK to close the dialog, then click Continue to proceed to the next step.

### Step 5: Installation Type

Select "Easy Install on <disk name>."

You will see the message, "Click Install to perform a basic installation of this software package on the volume <disk name>. The software you are installing requires additional installation CDs so have them ready: Mac OS X Install Disk 2."

You have the option to customize, go back, or install.

If you prefer to reduce the size of the installation, you can customize it by clicking the Customize button. Otherwise, click Install.

If you have decided to customize, clicking Customize allows you to view a list of the available options. The Essential System Software must be installed; in fact, you can't uncheck their boxes. Leave the BSD Subsystem checked, too. The Additional Applications package includes a number of useful Apple and third-party Mac OS X programs. You should accept the default and allow these applications to be installed.

The only choices that you should consider changing are the following.

**Fonts.** Click the gray arrow on the left to see your choices:

- **Fonts for Additional Languages.** This is off by default. Selecting this option installs fonts for non-Asian languages. If you will be working in multiple languages, select this option.
- **Additional Asian Fonts.** This option is on by default. If you know that you won't be using Asian fonts, you don't need to install them and you can uncheck this box.

**Printer Drivers.** Click the gray arrow to see your printer driver choices. There are six choices; all but one are selected by default. If you need a broader set of drivers, click the disclosure triangle next to Additional Printer Drivers to view your choices. If you know what printers you will be using, you can skip the drivers from other manufacturers to save disk space. If you want to be able to print to many different types of printers without having to install additional drivers later, choose to install all of the printer drivers. If you're installing on a PowerBook or iBook, installing all of the drivers now will allow you to connect to a number of different printers when you are on the road.

**Language Translations.** All languages are selected by default. Click the disclosure triangle next to Language Translations to display a list of languages that will be supported on your system. To save disk space and reduce installation time, you can deselect languages that you know you won't be using.

**Easy Install.** If you want to go back to the Easy Install choices, click Easy Install at the bottom of the window. Once you are satisfied with your choices, click Install to install Mac OS X.

### **Upgrading from a previous version of Mac OS X**

If you are upgrading to Panther from a previous version of Mac OS X, you will see different installation options. Using the Options button available in the disk selection destination pane, you can choose either the "Archive and Install" option or the "Erase and Install" option.

The Archive and Install option places the existing system files in a folder called Previous System, then installs a fresh copy of Mac OS X. With this option, you can retain your user accounts, network settings, and other user data just as it was before your upgrade. Unlike the default installation, third-party software or hardware support files in the System folder will be archived in a Previous System folder.

The Erase and Install option erases and reformats your disk using the selected disk format, then installs the new version of Mac OS X. With this option, all of your existing data and settings are erased.

### **Step 6: Installing**

In this step, the installation takes place.

### **Step 7: Finishing Up**

In this step, your Mac restarts.

### **Step 8: Additional Software**

In this step, you are prompted to insert the Mac OS X Disc 2 CD. When you do this, the additional software you chose in Step 5 is installed. When this step is completed, your Mac restarts, and you will set up your Mac with Setup Assistant.

### **Setup Assistant**

After Mac OS X is installed, your Mac restarts and opens Setup Assistant. The first screen you see is a welcome screen. During the setup process you are asked a number of questions that will allow Setup Assistant to configure your computer and register your software.

#### **Network setup**

You configure your network setup during this process, so make sure you have the network settings you recorded from Mac OS 9 available. In some cases (such as when your computer is connected to a DHCP server), Setup Assistant can detect your network and configure it for you, so you may not be asked any networking questions. If you are unsure of your network settings, you can skip the network setup steps and configure it later.

#### **Setting up a user account**

You also create your user account during the setup process. Make a note of your user name and password for future reference. You can change your user account information at any time after setup is complete.

### **Software Update**

If your Mac is connected to the Internet, Software Update now opens and checks whether any software updates are available from Apple. It's recommended that you install any available updates right away, although you can run Software Update again and do it at a later time. In some cases, you need to run Software Update more than once to get all of the updates. This is because some updates can be installed only after previous updates are installed.

The installation is complete when Software Update reports that there are no new updates available.

### **Installing the Classic environment**

If you're working with a newer Mac that cannot start up in Mac OS 9, or one that can start up in Mac OS 9 but shipped with Mac OS X, you can install Mac OS 9 (Classic) from the Software Install and Restore disc that was included with your computer.

To install Mac OS 9:

1. Insert the Software Install and Restore disc.
2. Double-click the Install Applications & Mac OS 9 icon.
3. Follow the onscreen instructions.

If you need to quit the Installer before the installation is complete, choose Quit from the Installer menu and click Restart, then hold down the mouse or trackpad button to eject the Software Install and Restore disc. You may be able to eject the disc by pressing the eject button on a tray-loading optical drive or the Media Eject key on the keyboard. Your computer restarts using your current startup disk.



**Note:** If you determined that you still need some third-party extensions for Mac OS 9, you can install them in the Classic environment at this point. If you are not sure whether a particular extension will work in Classic, check with its developer. An example of an extension you might wish to install in Classic is Adobe Type Manager Light. This extension allows your fonts to look good at all sizes and works well in Classic. (ATM Light is available free from Adobe at [www.adobe.com](http://www.adobe.com).)

## Entering Your Recorded Settings

You now need to enter your recorded network and email settings on your new Mac OS X system.

As mentioned earlier, if you are using DHCP to obtain an IP address for your Internet connection, you should not need to enter your network settings manually. Mac OS X should obtain all the information it needs when you run Setup Assistant. If you do need to add or change any network settings manually, you can do so in the Network pane in System Preferences.

Next, open your email program and enter the required setup information (user name, hosts, and so on) in the appropriate locations.

## Migrating Your Applications

As mentioned earlier, many Mac OS 9 applications have already been optimized for Mac OS X. If you are using some applications that have not, they should run fine in the Classic environment. Even if your older software runs on Mac OS X, you may want to take this opportunity to upgrade to the latest version.

- **Applications optimized for Mac OS X.** After you install Mac OS X, you will find applications that have been optimized for Mac OS X, such as Adobe Photoshop 7, in the Applications folder. The Applications folder is the default location for all Mac OS X-compatible applications.
- **Classic applications.** After you install Mac OS X, you will find your Mac OS 9-only applications in the “Applications (Mac OS 9)” folder. If you prefer, you can move Mac OS 9 applications to the main Mac OS X Applications folder. They will open as Classic applications no matter which folder they’re in.

If your Mac is shared with other users and you want an application to be available only to you, you can create a folder called Applications, or another descriptive name, in your home directory (the directory, or folder, that has your name on it). You can also create new folders to group applications according to your workflow needs. See the section “Organizing Your Files” on page 29 for more suggestions on where to install applications in Mac OS X.

### Application preferences and data files

Whether you can move your preferences from Mac OS 9 to Mac OS X depends on the application. Contact the developer of your application for information.

Data files created using an application in Mac OS 9 can almost always be opened with a Mac OS X version of the application.

# Moving to a New Mac

Use this path if you will be moving your applications and files to a Mac that already has Mac OS X. The Migration Checklist in Appendix I will aid you in completing the necessary steps.

After you've completed the migration, familiarize yourself with Mac OS X by reading the section called "Mac OS X Basics" and the subsequent sections on printing, fonts, and other common tasks.

1. Evaluate your add-in cards and peripherals. (See "Evaluating Your Third-Party Hardware and Peripherals," page 19.)
2. Evaluate your applications. (See "Evaluating Your Software," page 19.)
3. Record your current network settings. (See "Recording Your Mac OS 9 Network Settings," page 22.)
4. Record your current email settings. (See "Recording Your Mac OS 9 Email Settings," page 23.)
5. Enter your network and email settings. (See "Entering Your Recorded Settings," page 24.)
6. Install the Mac OS X and Mac OS 9 applications you need. (See "Migrating Your Applications," page 24.)
7. Copy your files from your old computer to the new one. (See "Moving Your Files to a New Mac," page 25.) The section "Organizing Your Files" on page 29 has helpful information on storing your files efficiently in Mac OS X.

## Evaluating Your Third-Party Hardware and Peripherals

Thousands of products from Canon, Nikon, HP, Sony, LaCie, Epson, Lexmark, 3M, Kodak, Kensington, Logitech, and many other leading vendors are ready to work with Mac OS X right out of the box. What external devices will you want to use with your computer?

These are the most common ones used in design and print work:

- Printers
- Scanners
- Removable storage devices
- Digital cameras
- Audio devices (microphones, speakers, other devices)
- Video cards
- CD burners
- PDAs
- SCSI add-in cards

Mac OS X features an advanced I/O system based on established open standards so that it can support the entire spectrum of peripherals used by design professionals. It comes configured with support for many camcorders, digital cameras, storage devices, scanners, printers, and input devices. See Appendix B for links to up-to-date lists of peripherals that are directly supported in Mac OS X.

Some products may require third-party drivers that have been adapted to take advantage of Mac OS X. Information on driver availability can be obtained directly from the manufacturer or from the Apple downloads site at [www.apple.com/downloads/macosx/drivers](http://www.apple.com/downloads/macosx/drivers).

Use checklist item 2 to record the information you find out from your hardware evaluation.

## Evaluating Your Software

More than 10,000 applications specifically built for Mac OS X are already available and in use. This section helps you evaluate the software most often used by creative professionals to determine whether you need to obtain upgrades or new versions of any of your current applications. You may also want to read the information at [www.apple.com/macosx/applications](http://www.apple.com/macosx/applications) or check for other Mac OS X design and print programs at [guide.apple.com/design](http://guide.apple.com/design).

### Types of Mac OS X applications

Most Macintosh developers have either created all-new Mac OS X applications or have added Mac OS X compatibility to existing Mac OS 9 programs. Software written before the release of Mac OS X can be run in the Classic environment of Mac OS X.

- **Applications optimized for Mac OS X.** To get the maximum benefits of Mac OS X, you should use applications that have been designed to take full advantage of features in Mac OS X such as preemptive multitasking and automatic memory management. Some of the applications you are currently running in Mac OS 9 may fall into this category and should run perfectly in the Mac OS X environment.
- **Classic applications.** Other applications—those written before the release of Mac OS X—should run fine in the Classic environment of Mac OS X. You can install them on your new Mac OS X system, then simply double-click one to launch Classic.

Even if your older software runs on Mac OS X, you may want to take this opportunity to upgrade to the latest version. To find out whether your applications are optimized for Mac OS X, you can try running them on a Mac OS X computer or check with the application's developer.

### **Image editing and page assembly software**

QuarkXPress, Adobe Photoshop, Adobe Illustrator, Adobe InDesign, Macromedia FreeHand, and most other creative applications are now available in native Mac OS X versions to help you work more productively than ever. Check with the developers of your applications to find out whether they have been upgraded. If not, you should be able to use your Mac OS 9 versions in the Classic environment.

A number of popular third-party plug-ins and extensions that add features to Adobe Acrobat, Adobe InDesign, QuarkXPress, and other applications have already been updated to run on Mac OS X, and others are under development. Check with the vendors for their current status.

See checklist item 3 when you evaluate your image editing and page assembly software.

### **Font management software**

If you have been using Mac OS 9 versions of professional font management applications such as Extensis Font Reserve, Extensis Suitcase, or Insider Software FontAgent Pro, your transition will be easy, because the Mac OS X versions will be familiar to you. In some cases, the software you're already using on Mac OS 9 will also run on Mac OS X. Check the system requirements on the software package or contact the vendor for details. Note that Adobe Type Manager Deluxe is not available for Mac OS X. Please see the "Extensions and control panels" section for more information.

Mac OS X includes a built-in application for managing fonts called Font Book. For more information about Font Book, see Appendix G.

Use checklist item 4 to help you evaluate this category.

### **Importing bookmarks into Safari**

The first time you open Safari, it automatically imports bookmarks from Microsoft Internet Explorer, Netscape Navigator, and Mozilla.

If you are using a web browser other than those mentioned, you may be able to move your bookmarks to Safari by exporting them from your browser as an HTML document. Then open the document in Safari and open your Bookmarks Library in a separate window. Drag the links from the first window to a collection in your Bookmarks Library.

### **Internet applications**

Mac OS X ships with a full-featured email application called Mail. Mail can import mailboxes from various email applications, including Entourage, Outlook Express, Claris EMailer 2.0v3, Netscape 4, and Eudora, so switching to it is straightforward. In addition, most third-party email applications have been updated to run natively in Mac OS X. So if you prefer to keep using your current email program, it's most likely available in a Mac OS X version. Check the vendor's website for details. With the release of Mac OS X v10.3, Mail works with Microsoft Exchange mail servers, so you can access your Exchange mail account from either a Windows or Macintosh computer.

Also included in Mac OS X is a fast, versatile, and innovative web browser called Safari. You can import existing bookmarks from popular Mac OS 9 browsers into Safari, so you may want to switch to Safari instead of upgrading your existing browser.

You can record the results of your Internet software analysis in checklist item 5.

### **Business applications**

Microsoft Office v. X for Mac brings the new look and capabilities of Mac OS X to your favorite Microsoft productivity applications. You can use your existing Word, Excel, and other documents in this new version of Office.

Financial applications such as Quicken, QuickBooks, and MYOB are also available in Mac OS X versions.

The SimpleText editor included with Mac OS 9 has been replaced in Mac OS X by the more versatile TextEdit application.

Business applications are covered in checklist item 6.

## Extensions and control panels

One of the advantages of Mac OS X is that you no longer have to worry about system extensions and control panels conflicting with each other, because Mac OS X doesn't have them. If you desire specific functionality offered by any of your old extensions, check whether Mac OS X has the equivalent feature built in. If it doesn't, check with the developers of your extensions to see whether they offer similar software for Mac OS X.

If you plan to use the Classic environment on your new Mac OS X system, you'll want to go through your Mac OS 9 extensions and control panels to determine which ones you'll need so that you can copy them to the new system when you migrate. Here are some of the extensions most often used by design and print professionals, with information about whether you need to use them in Mac OS X:

**Adobe Type Manager (ATM)** and **ATM Light** are no longer needed because Mac OS X has a built-in font rasterizer.

**Adobe Type Manager Deluxe** is not available for Mac OS X. There are several options for this functionality. Mac OS X v10.3 has the built-in Font Book application, which allows you to store all of your fonts in one tool and then build collections (sets) of those fonts for various needs. There are also other font management applications with more sophisticated features; see Appendix H for information.

**Windows connectivity extensions** are not necessary in Mac OS X because it has built-in support for Windows and UNIX connectivity. Files from other operating systems can be accessed from the Network icon in a Finder window or from the Go menu in the Finder. When you access the network in this way, shared items automatically show up in your Network browser. See Appendix H for information on third-party Mac and Windows networking solutions.

**File sharing** on a Mac OS X client is simple and can be turned on in a single preference pane. If you want more advanced sharing services, take a look at Mac OS X Server. Third-party solutions are available for peer-to-peer file sharing; see Appendix H for information.

**Extensions managers** are not needed in Mac OS X because it does not use extensions.

Use checklist item 7 to make sure that you've evaluated all of your extensions and control panels.

## AppleScript scripts

AppleScript is fully supported in Mac OS X. In fact, Mac OS X v10.3 ships with dozens of useful preinstalled scripts. Using AppleScript Studio software, you can easily create powerful Mac OS X applications written entirely in AppleScript that have the beautiful Mac OS X interface.

Some of your existing AppleScript scripts may need to be modified to work properly on Mac OS X, so you'll want to test them once you've made the transition.

For more information, visit [www.apple.com/applescript](http://www.apple.com/applescript).

Checklist item 8 gives you a place to note that you've evaluated your AppleScript scripts.

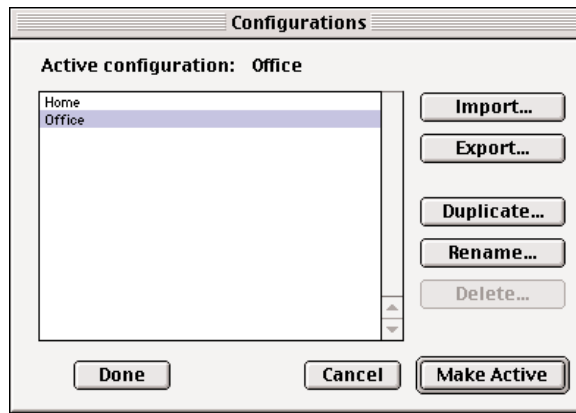
## Recording Your Mac OS 9 Network Settings

If you're planning to connect to a network or to the Internet through an ISP, you'll need to configure network settings in Mac OS X.

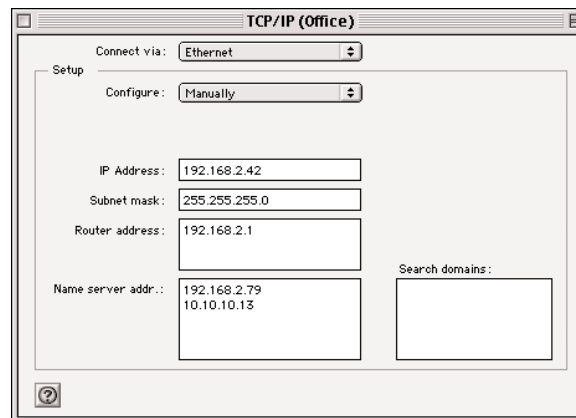
If you've been using DHCP to obtain a dynamic IP address on your Mac OS 9 system, you will want to do the same in Mac OS X. To find out whether you're currently using DHCP, go to the TCP/IP control panel and check the settings for each configuration.

If you have a static IP address, use the instructions in this section to gather the network configuration information from your current Mac so that you can set up networking connections in Mac OS X.

Network information is stored in various locations in Mac OS 9 depending on the type of network connection. In the TCP/IP and Remote Access control panels, you can switch between configurations by choosing Configurations from the File menu. When checking your settings, remember to record the settings for all of the configurations you use—not just the active one.



**TCP/IP.** TCP/IP settings are stored in the TCP/IP control panel. You may have multiple configurations that correspond to different locations in which you use your Mac, so be sure to copy each one.



**PPP.** The settings for PPP—used for dial-up connections—are located in the Remote Access control panel. You may have multiple configurations, so be sure to copy each one.



**PPPoE.** Mac OS 9 doesn't support PPPoE (PPP over Ethernet), so if you're using this connection method (such as with DSL), its settings are probably stored in a third-party application provided by your ISP. Mac OS X has built-in support for PPPoE, so you will not need a special application to use it after your transition. Check your ISP's website for instructions on setting up PPPoE in Mac OS X.

An easy way to copy your settings is to make a screen capture of the window in which they are displayed. To do this in Mac OS 9, press Command–Shift–Caps Lock–4, then click the window you want to record. The picture file appears on the top level of your hard disk with the name Picture 1. Repeat as needed to capture your other settings windows. You can open and print the pictures using SimpleText.

When moving your applications and files to a Mac that already has Mac OS X up and running, you will need to go to the Network pane in System Preferences and enter your network information in the TCP/IP, PPPoE, and/or AppleTalk sections.

You can record your network settings in item 9 of the checklist.

## Recording Your Mac OS 9 Email Settings

To use your current email account with Mac OS X, you'll need to copy some important information about your account. That information includes your email address, password, account type (POP or IMAP), user name, and the names of the incoming and outgoing mail servers your account uses. If you can't find this information, check with your Internet service provider.

When you start up Mac OS X for the first time, the Setup Assistant application prompts you for your email information. You can enter your settings then, or you can set up your account later in Mac OS X Mail.

Locate your email settings by following these steps:

1. From the Mac OS 9 desktop, choose Control Panels from the Apple menu, then choose Internet from the submenu that appears.
2. In the Internet window that appears, click the E-mail tab.

3. Write down all of your information from the E-mail Account Information pane. Note whether you are using a POP or IMAP account.

- Email address: yourname@provider.com
- Account ID or account name: yourname (example: jsmith)
- Password: yourpassword
- Incoming mail server (examples: pop.provider.net, mail.provider.com)
- Outgoing mail server (examples: smtp.provider.net, relay.provider.com)

**Tip:** You can print your email settings by taking a “snapshot” of your Internet window. To do this in Mac OS 9, press Command–Shift–Caps Lock–4, then click the Internet window. Open your hard disk, locate the newest picture file, and then double-click to open it. When the picture opens, choose Print from the File menu. You can open and print the pictures using SimpleText.

Use item 10 of the checklist to record your email settings.

## Entering Your Recorded Settings

You now need to enter your recorded network and email settings on your new Mac OS X system.

As mentioned earlier, if you are using DHCP to obtain an IP address for your Internet connection, you should not need to enter your network settings manually. Open the Network pane in System Preferences, click TCP/IP, and choose Using DHCP from the Configure pop-up menu. If you need to use PPPoE, AppleTalk, and/or proxies, enter the appropriate settings in each of those panes. Then close the Network pane.

Next, open your email program and enter the required setup information (user name, hosts, and so on) in the appropriate locations.

## Migrating Your Applications

As mentioned earlier, many Mac OS 9 applications have already been optimized for Mac OS X. If you are using some applications that have not, they should run fine in the Classic environment. Even if your older software runs on Mac OS X, you may want to take this opportunity to upgrade to the latest version.

- **Applications optimized for Mac OS X.** Once you move to your new Mac, you should move applications that have been optimized for Mac OS X, such as Adobe Photoshop 7, to the Applications folder. This is the default location for all Mac OS X-compatible applications. It is recommended that you reinstall them from the original program CDs to ensure that all the files associated with each application are placed in the proper folders.
- **Classic applications.** You should reinstall your Mac OS 9-only applications in the “Applications (Mac OS 9)” folder. This is the default location for all Classic applications. If you prefer, you can move Mac OS 9 applications to the main Mac OS X Applications folder. They will open as Classic applications no matter which folder they’re in.

If your Mac is shared with other users and you want an application to be available only to you, you can create a folder called Applications, or another descriptive name, in your home directory (the directory, or folder, that has your name on it). You can also create new folders to group applications according to your workflow needs. See the section “Organizing Your Files” on page 29 for more suggestions on where to install applications in Mac OS X.



### Application preferences and data files

Whether you can move your preferences from Mac OS 9 to Mac OS X depends on the application. Contact the developer of your application for information.

Data files created using an application in Mac OS 9 can almost always be opened with a Mac OS X version of the application.

## Moving Your Files to a New Mac

When you transition to Mac OS X by moving to another Mac, you need to transfer your files to your new computer. The examples in this section will guide you through the process of moving files from a computer running Mac OS 9 to one running Mac OS X.

There are a number of ways to transfer your files from one Mac to another. The following methods are discussed in this section:

- Use FireWire Target Disk Mode.
- Use an external FireWire hard disk drive.
- Copy files to a CD or DVD.
- Copy files over a network using a network cable or AirPort wireless networking.

### Method 1: Copy files using FireWire Target Disk Mode

FireWire Target Disk Mode allows a Macintosh computer with a FireWire port to be used as an external hard disk on another FireWire-equipped computer. The computer acting as a hard disk is called the target. The computer accessing the target disk is called the host. Once a target computer is started up as a FireWire hard disk and is connected to the host computer, you can copy files to and from it.

#### Compatible systems

To use FireWire Target Disk Mode, both your Mac OS 9 computer and your Mac OS X computer must have FireWire ports. In addition, the target computer must have:

- FireWire version 2.3.3 or later
- Mac OS 8.6 or later

All Mac systems with built-in FireWire ports can enter FireWire Target Disk Mode and start up from FireWire, with the following exceptions:

- Power Mac G3 (Blue and White)
- Power Mac G4 with a 450MHz or slower processor and PCI graphics

The following models can be used for FireWire Target Disk Mode only if they have received the firmware upgrade:

- Power Mac G4 with 500MHz or slower processor and AGP graphics
- Early FireWire-equipped iMac models (before July 2000)

You can test a Mac by restarting it and holding down the "T" key. If you see a FireWire logo, Target Disk Mode is supported. If instead you see the normal Finder, either Target Disk Mode is not supported on that system or the computer's firmware is out of date. You can find more information about models that support FireWire Target Disk Mode and a link to firmware updates at [docs.info.apple.com/article.html?artnum=58583](http://docs.info.apple.com/article.html?artnum=58583).

### FireWire and USB cables

FireWire connectors come in three varieties: 9-pin, 6-pin, and 4-pin. All current Macintosh computers have FireWire 400 ports that use 6-pin connectors. Some Macintosh models also have FireWire 800 ports, which use 9-pin connectors. You will need to determine which kind of connector your external storage device uses. Various types of FireWire cables are available to go between two similar or dissimilar connectors.

USB connectors come in two varieties: Type A and Type B. Computers use Type A connectors, and according to the USB specifications, external devices should use Type B connectors, so all you should need is a standard USB A-B cable. However, some external devices use Type A connectors, so be sure to check before buying a cable.

### Using FireWire Target Disk Mode

You will use your Mac OS 9 computer as the target and your new computer as the host. This allows you to browse your old files from your Mac OS X system. You can then copy files from your old computer to your new one.

To use FireWire Target Disk Mode, follow these steps:

1. Make sure the target computer is turned off. If you are using a PowerBook or iBook as the target, you should connect its power adapter to an AC source. The host computer does not need to be turned off.
2. Connect the two computers with the appropriate FireWire cable. (Generally this is a 6-pin-to-6-pin cable, although if your new computer has FireWire 800, you can also use a 6-pin-to-9-pin cable. Be aware, however, that the transfer speed will be that of FireWire 400, the speed of FireWire on your Mac OS 9 system.)
3. Start up the target computer. Immediately press and hold the "T" key until the FireWire icon appears. The hard disk of the target computer should appear on the desktop of the host computer (unless your Mac OS X system preferences are set not to display connected volumes, in which case you'll need to navigate to the target drive from a Finder window).
4. Now you can begin copying files. When you are finished, drag the target computer's hard disk icon to the Trash or choose Eject from the File menu.
5. Turn off the target computer and unplug the FireWire cable.

### Method 2: Copy files using an external storage device

If you are unable to use FireWire Target Disk Mode, you can use an external storage device to transfer your files.

External storage devices come in many shapes and sizes. There are hard disk drives, solid-state devices that can fit on a keychain, and removable media devices (such as Iomega's Zip drive). All of these devices commonly connect to your Mac using either FireWire or USB. A FireWire connection usually provides faster throughput than a USB connection, so if you have a choice, use FireWire.

If your device has a small storage capacity, you may have to make multiple trips between your two computers. To use this method, you must make sure you don't have a file that is larger than the capacity of your external device.

Unless your external device can plug directly into the computer's FireWire or USB port (typically the case with keychain units), you will need a cable. See the sidebar for information about FireWire and USB cables.

Although it's unlikely, you may need software that allows your external device to work with your Mac systems. Check with the maker of the device to see whether you need to do anything special to make it work.

Once you have confirmed that your external storage device works with both computers, you can start transferring files. Follow these simple steps:

1. Connect your external storage device to your Mac OS 9 computer.
2. Copy some files from your Mac to the storage device.
3. Disconnect the device.
4. Connect the device to your Mac OS X computer.
5. Copy the files from the device to your Mac OS X computer.
6. Remove the copied files from the device.
7. Remove the device from your Mac OS X computer and repeat steps 1 through 6 until all of your files have been transferred.

### Method 3: Transfer files via CD or DVD

If you cannot use either of the preceding methods and you have a CD or DVD recorder on your Mac OS 9 computer, you can use it to make one or more discs containing your data files. Once you've copied all of your files onto a disc, simply insert it into your new Mac and copy the files to the hard drive.

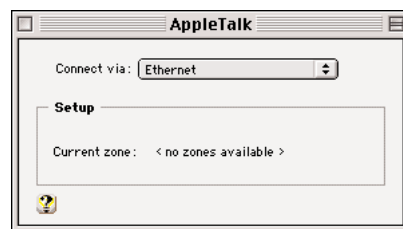
### Method 4: Copy files over a network

One of the easiest ways to connect two Macintosh computers together is to network them. You can connect them to an existing Ethernet network, run an Ethernet cable from one to the other, or use Apple's AirPort wireless networking. Once you have the systems networked, use the steps on the following pages to copy your files.

If you use a direct Ethernet connection, you need a standard RJ-45 Cat-5 Ethernet cable. All recent Macintosh models automatically configure themselves to work with either a crossover cable or a standard Ethernet cable. Older models require a crossover cable. To find out the cabling requirements for your Mac, see [docs.info.apple.com/article.html?artnum=42717](http://docs.info.apple.com/article.html?artnum=42717).

### Step 1: In Mac OS 9—Turn on AppleTalk

1. From the Apple menu, choose Control Panels > AppleTalk.



2. Select Ethernet from the "Connect via" pop-up menu.
3. Quit the control panel.

### Mac OS 9 file sharing

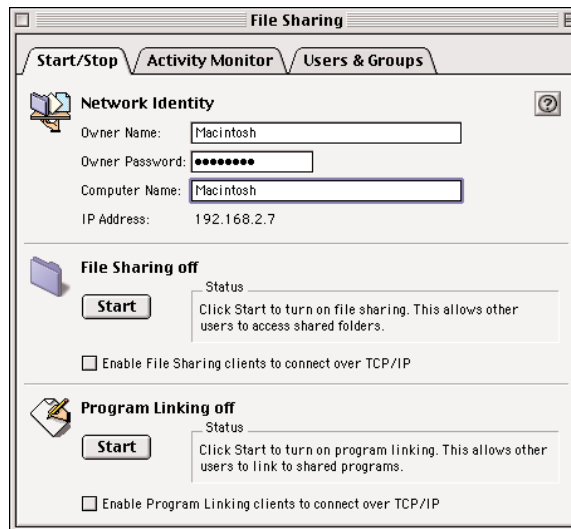
It's easy to share files from a Mac running Mac OS 9 with those running Mac OS X. In the File Sharing control panel of the Mac OS 9 system, go to the Start/Stop tab. Make sure that file sharing is turned on and that "Enable File Sharing clients to connect over TCP/IP" is selected.

If you are using static IP addresses and both computers are connected to the Internet, you need to make sure that each computer has a different address. Even if you plan to use your old static address on your new Mac after your transition, during the time you're transferring files, the two computers must have different addresses. This problem can be avoided by disconnecting the computers from the Internet, using DHCP instead of static addresses, or temporarily obtaining a static address for the Mac OS X system that's different from that of the Mac OS 9 computer.

For more information about Mac OS 9 file sharing, see [docs.info.apple.com/article.html?artnum=107369](http://docs.info.apple.com/article.html?artnum=107369).

### Step 2: In Mac OS 9—Turn on File Sharing

1. From the Apple menu, choose Control Panels > File Sharing.



2. Select the Start/Stop tab.
3. Enter an owner name in the Owner Name text field if one isn't already present. Make a note of the owner name—you'll need to enter it in order to connect to your Mac across the network.
4. If you don't know your current password, enter a new password in the Owner Password text field. Make a note of the password; you'll need to enter it in order to connect to your Mac across the network.
5. Enter a name for your computer if one isn't already present. This is the name that identifies the computer when you browse the network for it.
6. In the File Sharing section, select "Enable File Sharing clients to connect over TCP/IP," then click Start.
7. Quit the control panel.

### Step 3: In Mac OS X—Copy your files

1. Click the Network icon in any Finder window. Your Mac OS 9 computer's name and icon should appear in the Finder window. If it doesn't appear, make sure you have properly completed the previous steps.
2. Double-click your Mac OS 9 computer's icon. The Name and Password dialog appears.
3. Enter the owner name and password you defined in Step 2 into the appropriate text fields, then click Connect. If you entered the name and password correctly, you see the list of volumes connected to your Mac OS 9 computer.
4. You can now navigate around your Mac OS 9 volumes and copy files to your Mac OS X system.
5. When you are done copying your files, you can disconnect from your Mac OS 9 system: Go to the Finder and highlight the Mac OS 9 volume's icon by clicking it. Then choose Eject from the File menu (or type Command-E).
6. Once you have disconnected, you can shut down the Mac OS 9 computer or remove it from the network.

# Mac OS X Basics

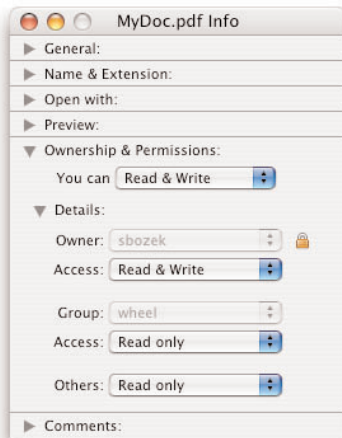
## Folders and directories

Macintosh users are accustomed to the term “folder” in discussions of the computer’s file system. In the Mac OS X world, you may also see the term “directory.” The terms are interchangeable, and this document uses both.

## Permissions

Because Mac OS X is a multiuser system, different users have different “permissions,” or privileges, to access files and folders on an item-by-item basis.

You can see the permissions for an item in the Finder by selecting it and choosing Get Info from the File menu. In the Info window, click the disclosure triangle next to Ownership & Permissions to view the settings for the item. If you are the owner of the item or an administrator, you may also be able to change the item’s permissions.



Welcome to Mac OS X! Users familiar with Mac OS 9 will feel right at home here. You’ll find favorite features as well as exciting new ones. Here’s a summary of how Mac OS X operates, including some ways in which it differs from Mac OS 9.

You can see a handy guide to Mac OS X at [www.apple.com/macosx/learning](http://www.apple.com/macosx/learning).

## Organizing Your Files

Mac OS X is a multiuser operating system, so it can keep the documents and preferences of a computer’s users separated and properly arranged. This means that two people can use the same computer and have a different experience. It also means that the directory structure of Mac OS X is different from that of Mac OS 9.

In addition, you will encounter a number of seemingly duplicate folders throughout the file system. These folders each serve a different purpose and are a necessary part of a multiuser operating system. After reading this section, you’ll be familiar with the Mac OS X file structure. You’ll want a basic understanding of that structure before you copy your files to a new Mac OS X system so that you can make informed decisions about the best place to put each file.

## User-specific folders

User-specific folders are those that are available only to a single user of the system. Each time a user is added to the computer, Mac OS X creates a new folder named after that user. This folder is called a home directory, and it contains all of the user’s files and preferences. When a user logs in to the system, Mac OS X makes his or her home directory active and uses the information in it to set up the user’s desktop environment.

These home directories are stored in the Users folder at the root (top) level of the startup volume. You can quickly navigate to your home directory in a number of ways:

- In any Finder window, click the house icon in the lefthand column.
- In the Finder, choose Home from the Go menu.
- In the Finder, press Shift-Command-H.

In a multiuser environment, security is important. All but two of the folders in your home directory are locked to other users of the system. As long as you use the proper folders, all of the files you save will be accessible only to you.

### Why are there two Desktop folders?

When you start up Mac OS X for the first time on a Mac that has previously started up in Mac OS 9, you may find two Desktop folders. One is in your home directory and is simply called “Desktop.” The other one, at the computer (root) level, is called “Desktop (Mac OS 9).”

If you’re like many users, you prefer to keep certain files and folders on your desktop. Because Mac OS 9 is essentially a single-user system, it typically has only one desktop area. However, Mac OS X allows each user to have an individual desktop. That’s why you’ll see a Desktop folder in each user’s home directory. But when Mac OS X starts up and finds items that were on the Mac OS 9 desktop (where the concept of multiple users is unknown), it can’t assign those items to a specific user, so it puts them at the root level, above the user directories.

To see the files that were originally on your Mac OS 9 desktop, simply open the folder named “Desktop (Mac OS 9).” If there were no files on the Mac OS 9 desktop when you started up the computer in Mac OS X, that folder will not be present.

Note that if you installed Mac OS X on a separate partition from Mac OS 9, your Mac OS 9 desktop files are in a folder named “Desktop Folder” at the root level of the partition in which Mac OS 9 is installed.

### Home directory folders

You will notice that your home directory contains a number of folders with special icons. These folders are used by many applications as default locations for saving files. Each folder’s name describes the types of files it is designed to store. You can actually store any type of file in any of the folders; their names are just a convenient way to help keep your files organized.

Here are some of the folders you’ll see in your home directory when you first use Mac OS X. You can also make new folders as your needs dictate.

- **Desktop.** This folder contains the contents of all the files and folders currently displayed on your desktop. If you place this folder in your Dock, you can view the contents of your desktop without closing your application windows—especially handy if you have a lot of files on the desktop. When you view the desktop from the Dock, you have access to all Mac OS X folder views, including “View as List.”
- **Documents.** This is a place to store files such as letters, financial documents, spreadsheets, and so on. You may notice that some applications also store files here.
- **Library.** This folder holds your application preferences, resources, sounds, and other files needed by applications and the system to create your individual desktop experience. For example, your browser bookmarks are kept here. Each user of the system shares the same browser application, but the bookmarks that the browser uses are taken from the logged-in user’s Library folder.
- **Movies.** Use this folder to store your movie files. If you need to find a movie, simply navigate to your home directory and open your Movies folder. This is the default location that iMovie uses to store your movies.
- **Music.** Use this folder to store your music files. If you need to find a song, navigate to your home directory and open your Music folder. This is the default location that iTunes uses to store your music.
- **Pictures.** Use this folder to store your digital pictures. This is the default location that iPhoto uses to store your photos.
- **Public.** This folder is also available to other users of the system. If you enable Personal File Sharing, files placed in this folder are available to everyone, so don’t store sensitive information here. In the Public folder is a folder called Drop Box. Other users can put files into the Drop Box, but they can’t open it. As the owner of your Drop Box, you can open it to retrieve its contents. This is a way for other users to give you files that are intended only for you to view.
- **Sites.** This folder is open to all users and is used if you want to host a web page on your system. Don’t store sensitive information in this folder.

You may notice a folder called Shared at the same level as the individual users’ folders. This folder is used by applications to store preferences needed by all users. You can also use the Shared folder for files that you want to share with all users of the system. Unlike your Public folder, which by default makes files available on a read-only basis, files in the Shared folder have full read/write access. You can decide which folder to use for each shared file depending on what kind of access you want it to have.

Users in professional environments often want to customize the folder structure on their workstation. This is done for a variety of reasons. Some people want to make it easier to know what came installed on the Mac and what they installed. Others want to keep information organized by usage, such as having all drawing applications in one subdirectory or folder. Whatever your needs or reasons, it is possible to organize your custom applications in folders other than those provided by the initial installation of Mac OS X. It is recommended, however, that you do not remove or relocate the base applications that Mac OS X installs on the system.

### Why are there multiple Library folders?

You might be wondering why there is more than one Library folder. If you've looked inside the various folders, you've noticed that each one has similar contents. There are a number of Library folders because Mac OS X is a multiuser operating system. Having multiple folders allows the system administrator to decide which users should have access to which Library elements.

For example, each Library folder contains a Fonts folder. Which applications and users can use specific fonts depends on which /Library/Fonts folder the fonts are put in. (See "Where to Install Fonts" on page 55 for details.) The same is true of Preferences, Printers, Keyboard Layouts, and other folders that reside in every Library folder.

The libraries and their contents are hierarchical; the settings of the lower-level folders can override or supplement the settings in the higher-level folders. So anything you have in your individual Library folder takes precedence over the Library folder in the System folder, and anything in that folder takes precedence over the Library folder at the top level of the startup drive.

If you want to keep data on your computer that only you have access to, and have the folder title be meaningful to your workflow, you can create custom folders with any name you like, such as My Projects. Or you may want to create an Applications folder to hold applications that only you use. (Note that some applications look for a folder named Applications in which to store files, so if you want to avoid that, you should call your folder something like My Applications.)

The access privileges for user-created folders depend on the folder's location. Any folder or file that you put in the root level of your home directory is available to all users. If you want a folder or file to be available only to you, put it in one of the folders that is locked to other users.

### System-level folders

At the root level of the startup disk are a number of folders used by Mac OS X to configure the operating system itself. Among the most important folders are:

- **Applications.** This folder is the default location for storing applications that need to be available to all users. It therefore has read and write access for users. Most application installer programs use this folder as the default location for storing the application. You can quickly navigate to the Applications folder in a number of ways:
  - In any Finder window, click the Applications icon in the lefthand column.
  - In the Finder, choose Applications from the Go menu.
  - In the Finder, press Shift-Command-A.
- **System.** This folder contains important files that are critical to the operation of the system. Regular users are restricted to read-only access to the files in this folder. You will need administrator privileges to make changes to this folder. Do not make changes to it unless you fully understand their ramifications.
- **Library.** This folder is used to store system configuration files and application preferences that affect all users of the system. You must have administrator privileges to make changes in this folder.
- **Users.** This folder contains the home directories of all users of the system.

Note that if you have installed the Classic environment, the startup disk also has a folder called System Folder. This folder contains the Mac OS 9 operating system and all Mac OS 9 system-level files, such as fonts and control panels.

### Filenames and extensions

Macintosh systems have never required filename extensions to associate a document with the application that created it. Behind the scenes, the Mac OS has used hidden attributes (called file types and creators) to keep track of the type of a document (JPEG or TIFF image, PDF file, Microsoft Word document, Excel spreadsheet, and so on) and the application that should be started when the document is double-clicked.

While this approach has been ideal for Macintosh users, it has sometimes led to compatibility problems when documents are sent to users of Microsoft Windows computers, because Windows requires filename extensions to keep track of document types. Windows "dot extensions" consist of three letters preceded by a period. Common examples of Windows filename extensions for nonexecutable files include .doc for Microsoft Word documents, .pdf for PDF files, and .xls for Microsoft Excel files.

Mac OS X preserves the ideal Mac experience while ensuring full filename compatibility with Windows applications. Mac OS X v10.3 "Panther" automatically adds the proper extension to the filename of any document that is saved in a Mac OS X application. But by default, the extension is not displayed in the Finder or in Open and Save dialogs (unless the person who saved the file explicitly typed the extension in the filename). Yet the filename does have the proper extension, so no renaming or translating is needed when the file is used on a Windows-based system.

If you wish, you can change your Finder preferences to display these hidden filename extensions. Mac OS X can differentiate between files called, for example, "filename" and "filename.doc," so having extensions displayed ensures that you know the exact name of each file. That setting is therefore recommended for professional publishing environments, because it can prevent problems with workflow scripts and version control caused by filename confusion. If you do not want to turn on extension display globally, you can view the extension of a specific document in the Name & Extension field of the document's Info window.

Even though Mac OS X can automatically append file extensions, some applications do not take advantage of this feature. When you're saving files, it's always a good practice to check the "Append file extensions" box if one is available in the Save dialog.

## Memory Management and Allocation

In Mac OS X, you no longer need to allocate memory to each application. The operating system handles all memory management and virtual memory, which is always in use. You will still need to allocate memory for any Classic applications you use, just as you did in Mac OS 9.

## System Preferences

You can now manage a wide range of system customization options in a single program called System Preferences. It's located in the Applications folder on your Mac OS X disk, or you can easily access it at any time from the Apple menu. Third-party utilities and drivers can add their own preference panes to System Preferences, providing one central location for managing your preferences.





## The Dock

Located by default at the bottom of the screen, the Dock gives you instant access to the programs, files, and tools you use most. All open applications are represented by Dock icons. To put your own often-used items within easy reach, simply drag them to the Dock. Similarly, you can remove an item by dragging it out of the Dock. Items you may find useful to add to the Dock include your Desktop folder, Printer Setup Utility, and any application or document folders you use frequently.



As you add items, the Dock expands until it reaches the edges of the screen—at which point the icons shrink to accommodate more items. You can change the size of the Dock at any time from System Preferences. Or you can change the size by dragging the line that divides the Dock.

To make reduced-size icons in the Dock more easily recognizable, Mac OS X includes a magnification option. When you pass your cursor over the icons, they magnify to the level you have set in Dock preferences. You can also make the Dock hide itself when you're not using it. Minimized windows (ones that you're not currently using but want to keep handy for easy access) display a miniature view of the full window. You can make the windows active again with a single click.

The Dock gives you quick access to useful functions. You can use its contextual pop-up menus to quit any application or to navigate to any open window of a selected application. If you've stored a folder in the Dock, clicking and holding its icon allows you to view the files and folders within it. Clicking and holding the Trash icon allows you to empty the Trash, if there is anything in it.

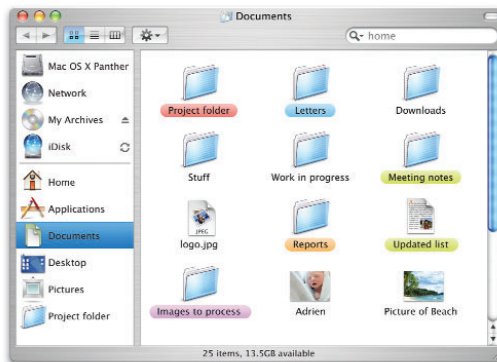
If you prefer, you can place the Dock at the right or left side of the screen instead of the bottom. Dock preferences can be changed by selecting Dock from the Apple menu.

## Finder Windows

Every Finder window can display a toolbar along the top that gives you instant access to various functions. For example, you can move up and down directory levels, switch to a different view, add a color label, and so on. You can turn the display of the toolbar on and off by clicking the button in the upper-right corner of any Finder window, or by selecting Hide Toolbar/Show Toolbar from the View menu. You can customize the toolbar by selecting View > Customize Toolbar.

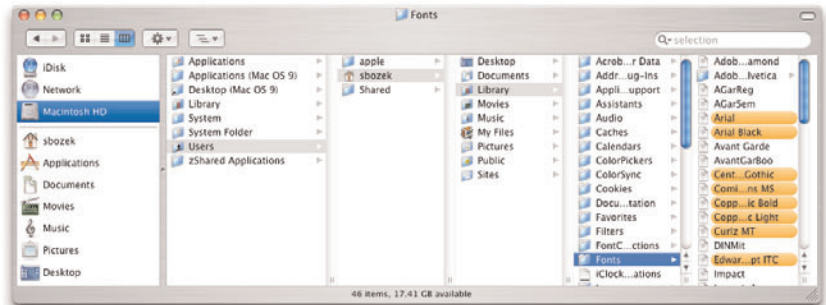


There's a handy column on the left side of Finder windows that displays available disks and servers. You can also use this sidebar to store important applications, folders, and documents.



The column view—a new feature in Mac OS X—lets you see your files in context. The rightmost column can even give you a preview of many common file types. For example, you can watch a QuickTime movie, hear a song, or view a still image—all without launching an application or opening the file. You can change the width of the columns by dragging the bottom of the column dividers. This is the same view that you see in the Mac OS X Open and Save dialogs.

When you use column view for the first time, it may be easiest to start by moving the slider to the far left and then navigating to the right to find the folder you want. This method will quickly get you oriented to this powerful new navigation system.



## Application Menu

Unlike earlier versions of the Mac OS, each Mac OS X application has an application menu. It has the name of the application, and it appears between the Apple menu and the File menu. The application menu contains several items related to the application itself, including the About box, program preferences, relevant Mac OS X services, options to hide or show windows from this and other applications, a Quit command, and other options determined by the application's developer.

## Exposé

Powered by the Mac OS X Quartz graphics engine, Exposé is a major advance in user interface design that will change the way you work with multiple files, applications, and projects. Exposé gives you instant access to any open window with a single key-stroke. You can display all windows as thumbnails, view windows only of the current application, or hide all windows to quickly locate a file on your desktop.

There are three Exposé modes:

**Instantly switch to any open window.** Instead of moving, resizing, hiding, and minimizing many windows just to find the one you need (and then putting them all back after finding it), Exposé lets you get to any window instantly. It scales down all of your open windows and arranges them onscreen so you can see all of them at the same time. Each window retains its contents and proportions, making it easy to identify. Simply move the cursor over any window and click (or deactivate Exposé) to activate the window and return all windows to their normal size and position.



**Instantly switch to any window in the current application.** When you are working on several documents in a single application, Exposé lets you focus on just those windows, instead of every window on your Mac. Rather than displaying all windows, Exposé can show you just the windows of the current application.



**Instantly access the files and folders on your desktop.** When you download files from the web or save email attachments to the desktop, their icons are often obscured by windows. With Exposé, you can get to your desktop files and folders instantly, without disturbing the careful setup of your windows. Exposé temporarily moves all of your windows to the edges of the screen, leaving just your desktop. You can start dragging any desktop icon, and then deactivate Exposé to bring back all your windows. You can then drop the selection onto any window of your choosing.



It's easy to use Exposé:

- To see all your open windows, hold down the F9 key.
- To see all the windows open in your current application, hold down the F10 key.
- To hide all the open windows so you can see the desktop, hold down the F11 key.

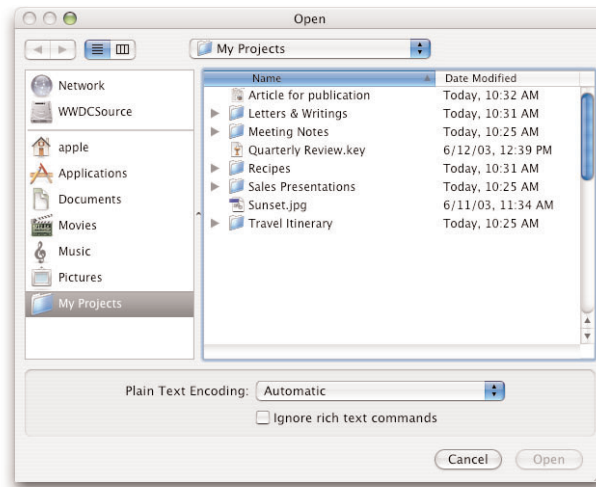
When you press and hold the keys to activate Exposé, the windows return to normal as soon as you release the keys. If you press the activation keys quickly instead of holding them, Exposé stays activated until you press the key again.

You can use System Preferences to modify how you use Exposé:

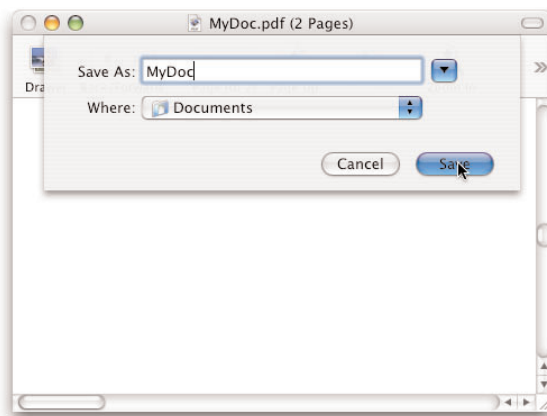
- **Screen corners.** You can activate Exposé simply by moving your mouse to a corner of the screen. You can decide which screen corners activate which Exposé views.
- **Function and modifier keys.** You can set function keys and unused modifier keys to activate Exposé.
- **Multibutton mouse.** You can assign the different Exposé views to the buttons of a multibutton mouse.

## Open and Save Dialogs

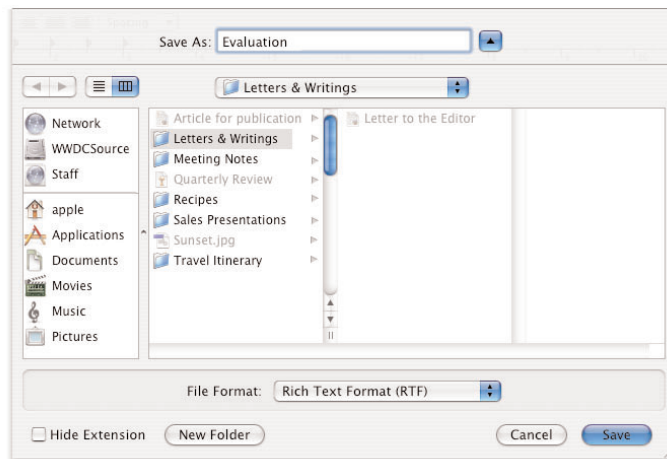
In Mac OS X, Open and Save dialogs look almost identical to Finder windows.



The Save dialog may open in a collapsed view that shows only a pop-up menu containing locations to save files—including the items in the lefthand column of your Finder windows and locations you have recently used—and a place to enter the name of the file to be saved.



If you want to save the file in one of these locations, simply select it in the pop-up menu and enter the desired filename. However, if you want to navigate to some other folder location on your system or network to save the file, you can click the downward-pointing arrow next to the filename to expand the window and display the column view browser, allowing you to navigate to the desired folder. Once you have selected a folder, it is added to your Recent Places list.



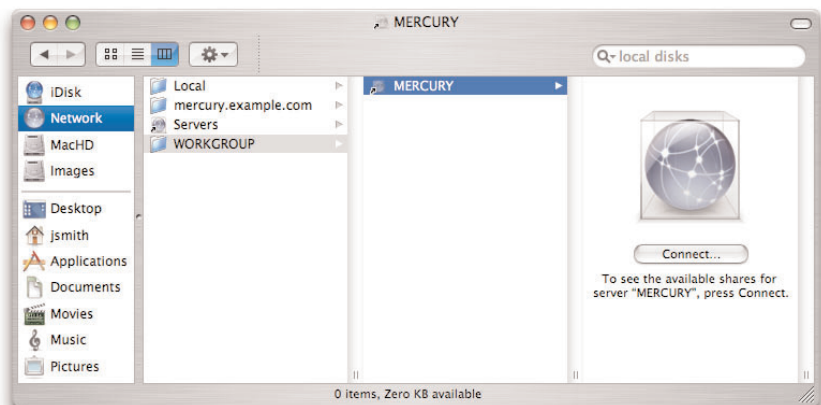
When you use a Mac OS X Open or Save dialog for the first time, it may be easiest to start by moving the slider to the far left and then navigating to the right to find the folder you want. This method will quickly get you oriented to this powerful new navigation system.

## Connecting to a Server

Mac OS X allows you to connect to every major file server protocol on every major platform in use today. This includes Apple, UNIX, Linux, Novell NetWare, and Windows computers and servers. In Mac OS X, connecting to other computers and servers is no longer done through the Chooser as in Mac OS 9. You can browse the Network view in the Finder or you can use the Connect To Server dialog.

### Network view

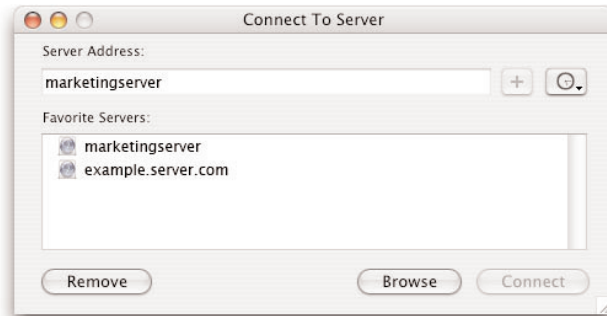
The Network view shows any server that is browsable on your local network. It lists the servers by name and lets you select the one you want without having to type an address. Simply click Connect and complete the connection dialog. This method is most useful when you don't know the server's address or you simply want to see everything that is browsable on the network.



### Connect To Server dialog

To use Connect To Server, you must first know the server's address—that is, its name or IP number. You can get that information from the person who administers the server.

1. From the Go menu, choose "Connect to Server."



2. Type the server's address, click Connect, and complete the connection dialog. (Note that clicking Browse takes you back to the Network view.) The address should be prefaced by the protocol with which you are connecting, such as `afp://` or `smb://`. For example, a complete address might be `afp://fontserver1` or `smb://192.168.0.2`. When you do not specify the protocol, the Connect To Server dialog assumes that you want an Apple File Protocol (AFP) connection.

You can also use Connect To Server to connect to local servers if you prefer it to browsing the Network view. For convenience, the Connect To Server dialog contains a Recent Servers list and a place to list your favorite servers.

For more information on server connectivity in Mac OS X, see the article "Mac OS X 10.3: About Network Browsing and Connected Servers" at [docs.info.apple.com/article.html?artnum=107804](http://docs.info.apple.com/article.html?artnum=107804).

### Force-Quitting an Application

Because of protected memory in Mac OS X, an application that misbehaves does not harm the overall system. If an application becomes unresponsive, you may need to "force-quit" it. As in Mac OS 9, you can force-quit an application by pressing the key combination Command-Option-Escape. Unlike Mac OS 9, which force-quits the frontmost application, Mac OS X opens a window that lists the currently running applications and allows you to choose one or more to force-quit. Note that this list includes the Finder. Because the Mac OS X Finder is an application much like any other, it can be quit and relaunched from this window without affecting other running applications.





## Linking a Document Type to an Application

You may have more than one application that can open a particular type of file. For example, TIFF documents (.tif) open by default in Apple's Preview application. If you have Adobe Photoshop, you may want to have it open these files instead.

Using TIFF files as an example, do the following:

1. In the Finder, select a file that has the .tif filename extension.
2. Choose Get Info from the File menu.
3. In the Info window, click the "Open with" disclosure triangle.
4. In the pop-up menu, select the application that you want this file to be opened with—in this example, Adobe Photoshop.
5. If you want all files with this extension to be opened in Photoshop, click Change All.
6. When the confirmation dialog appears, click Continue.
7. Close the Info window.



### Printing in Classic

If you plan to print from applications running in Classic, you need to make sure that the appropriate printer drivers are available to the Classic environment.

If you are using a non-PostScript printer, you will have to install its printer driver in Classic. If you configure a PostScript printer using Printer Setup Utility, the printer will be available for Classic applications, but if you wish to use Mac OS 9 PostScript drivers, they also need to be reinstalled in Classic. Here are the ways you can do that:

- Download and run the most recent printer driver installer from your printer manufacturer's website.
- Run the installer that shipped with your printer. Keep in mind that this may not be the most current version of the printer driver.
- If you are unable to locate an installer for your printer and the printer was used on your Mac OS 9 system, you can copy the existing driver into Classic. In Mac OS 9, printer drivers are stored in the System Folder: Extensions folder. If you are using a PostScript printer, you will find its PPD file (PostScript Printer Description file) in the System Folder: Extensions: Printer Descriptions folder. Simply copy the files from your old system to the same locations in Classic.

## The Classic Environment

The Classic environment in Mac OS X enables you to run Mac OS 9 applications that have not been upgraded to run in Mac OS X. You can start the Classic environment from the Classic pane in System Preferences or by double-clicking any Classic (Mac OS 9) application. You can also stop, restart, or force-quit Classic from the Classic pane.

### Using the Classic system preference

You can control the behavior of the Classic environment using the Classic pane in System Preferences. The three panes in this preference let you set up and monitor the behavior of the Classic environment.

Use the Start/Stop pane to:

- Set which Mac OS 9 System Folder to use for Classic (in case you have multiple Mac OS 9 systems installed on your Mac).
- Start, stop, restart, or force-quit Classic.
- Have Classic start automatically when you log in. This is useful if you often use Classic applications.
- Have Mac OS X warn you before Classic is started. If you double-click a Classic application to open it, you will be given the chance to stop the process before Classic is started.

Use the Advanced pane to adjust the advanced settings and to troubleshoot the Classic environment. From this pane you can start Classic in special ways, similar to Mac OS 9 itself. The advanced settings include:

- **Use Mac OS 9 preferences from your home.** This function is useful if there are multiple users of the system. With this option checked, when users start Classic the first time, a dialog lets them copy existing preferences from the Mac OS 9 System Folder to the Classic folder in their home Library folder.
- **Put Classic to sleep when it is inactive.** If the Classic environment is running but you don't have any Mac OS 9 applications open, this option allows Classic to go to sleep to reduce its use of your computer. Use this setting to specify how long Classic waits to go to sleep after you quit the last Classic application. If Classic is in sleep, opening a Mac OS 9 application may take a little longer.
- **Rebuild Desktop.** This command rebuilds the Classic desktop file of icons and document-application bindings for the selected startup volume.

The advanced settings that aid in troubleshooting are in the pop-up menu next to the Restart Classic button. These options are:

- **Turn Off Extensions.** Because extensions can sometimes cause unexpected behavior in Mac OS 9, it's useful to be able to launch Mac OS 9 without extensions when troubleshooting problems.
- **Open Extensions Manager.** This option allows you to activate or deactivate specific extensions, rather than simply turning them all off. If you have Conflict Catcher installed in Classic, the system will restart in it instead of in Extensions Manager.
- **Use Key Combination.** This option allows you to define keystrokes that start or restart the Classic environment.

The final pane, Memory/Versions, allows you to view the memory usage of applications running in Classic. This is similar to the information you would find in the "About this Computer" dialog under the Apple menu in Mac OS 9.

# Printing

The printing system in Mac OS X v10.3 “Panther” takes advantage of open standards and open source software, enabling you to produce professional-quality output on a wide range of devices with ease, effortlessly save color-managed PDF files right from the Print dialog, and efficiently share both networked and directly connected printers in a mixed computing environment.

In Mac OS X, all printers are always available from any application. You can switch from printer to printer instantly to meet the needs of each job, without having to open and reconfigure the Chooser. The Printer Setup Utility application, which replaces the Chooser, provides fast access to many different printing-related commands and settings. New support for multithreaded printing allows developers to write their applications so that you can send a job to one printer and immediately print again to another type of printer. The system automatically sends each job to the correct device. Also, even printers that aren’t network enabled can be made available to all users on the network at no additional cost.

## Supported Printing Protocols

The following printing protocols are supported in Mac OS X:

- **AppleTalk.** Many AppleTalk printers are still in use in creative environments because they are easy to set up, support the printing of binary data, and offer back-channel (status) communication.
- **IP printing.** The Internet Printing Protocol (IPP) and the LPR/LPD protocol enable printing to a wide array of printers and print servers across subnets. While both protocols generally print faster than AppleTalk, they differ from each other (and from AppleTalk) in the amount of back-channel communication. To receive status notifications (such as printer error messages) when printing over a network, you should choose either AppleTalk or IPP printing if one of those protocols is supported by your printer; check with the manufacturer. Otherwise, choose LPR/LPD.
- **Bluetooth printing.** If you have a Bluetooth-enabled Macintosh with Mac OS X v10.3.2 or later, the Bluetooth 1.5 update adds the ability to print to supported Bluetooth printers.
- **Windows printing.** Mac OS X v10.3 supports the native Windows printing protocol (SMB) for peer-to-peer printing or sending files to a managed print server on the network. This support allows you to extend the use of your direct-connect printers to Windows users on your local network. Conversely, it also enables Mac users to access a Windows shared printer. To share a printer with Windows users via SMB, use the Sharing pane in System Preferences to enable Printer Sharing, then enable Windows Sharing. This shares all queues. (It is not possible to share individual queues.) Files printed from a Windows system to a Mac use PostScript.

For more details on sharing your printers with Windows users, see the following documents:

- “Windows Compatibility and Mac OS X Technology Brief”  
(available at [www.apple.com/macosx/features/windows](http://www.apple.com/macosx/features/windows))
- “Setting Up to Print to a Printer Shared by a Windows Computer”  
([docs.info.apple.com/article.html?artnum=32329](http://docs.info.apple.com/article.html?artnum=32329))
- “Sharing Your Printer with Windows Users via SMB”  
([docs.info.apple.com/article.html?artnum=32315](http://docs.info.apple.com/article.html?artnum=32315))
- “What Do I Use Instead of the Printing Control Panel?”  
([docs.info.apple.com/article.html?artnum=125025](http://docs.info.apple.com/article.html?artnum=125025))

## Supported Printing Interfaces

In addition to using Ethernet, many printers can be connected directly to your computer via the USB or FireWire port. With a printer set up, you can turn on Printer Sharing in the Sharing pane of System Preferences to allow other computers on your network to use your directly attached printer.

### Rendezvous

The Rendezvous technology built into Mac OS X v10.3 allows computers and other smart devices to create a network instantly by finding and connecting to each other automatically. With Rendezvous, each device broadcasts which services (such as file sharing or printing) it's offering for the use of others, and discovers the services provided by the other devices. For example, two colleagues in a meeting can establish a network to share files simply by turning on their AirPort-enabled PowerBook systems and letting Rendezvous connect them. When a Rendezvous-enabled computer is connected to a wired network, it automatically discovers and lists available Rendezvous-enabled printers.

Rendezvous uses standard protocols such as IP, ARP, and DNS and works with today's most popular connection technologies, including Ethernet, AirPort, and AirPort Extreme. Epson, HP, and Lexmark are integrating Rendezvous into new printers; TiVo now offers Rendezvous-based functionality in its television recording devices; and other manufacturers of peripherals and consumer electronics are planning to release Rendezvous-enabled devices.

## Supported Printers

Mac OS X Panther includes drivers to support hundreds of printers from vendors such as Brother, Canon, Epson, HP, Lexmark, and Xerox. Mac OS X printing is based on the Common UNIX Printing System (CUPS). The wide range of available CUPS-compliant print drivers means that you may be able to use a printer even if the manufacturer has not provided Mac OS X support.

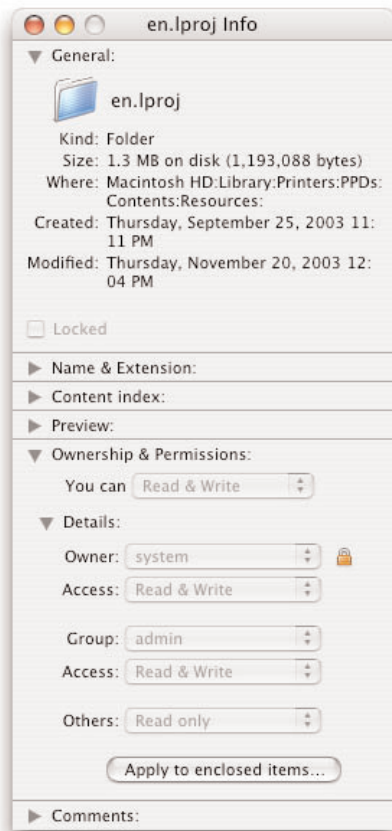
Panther also comes with the Gimp-Print open source printer driver project, which supports hundreds of printers. That means you can probably use your printer without having to install any software. In many cases, Panther even creates a queue for you, so no setup is required. You can check the Mac OS X section of the Gimp-Print website at [gimp-print.sourceforge.net/MacOSX.php3](http://gimp-print.sourceforge.net/MacOSX.php3) for new and updated drivers compatible with CUPS and your printer. Currently more than 500 printer models are supported through Gimp-Print; new ones are always being developed and older ones improved.

For a list of printers and other external devices that are compatible with Mac OS X, see [www.apple.com/macosx/upgrade/devices.html](http://www.apple.com/macosx/upgrade/devices.html).

## PPD Files

A PPD (PostScript Printer Description) file is simply a text file that contains information about a specific model of PostScript printer—the printer's available page sizes, halftone screening settings, output resolution, and the like. The PPD file is used by the system to populate the various controls you set in the Page Setup and Print dialogs.

If you use a PostScript printer, you will need a PPD file for it. If the printer shipped with a print driver installer, that application should install the necessary PPD automatically. However, if you work in the design and print industry, you may need to generate and send PostScript files to printing companies. To do this, you will have to manually install a PPD file for the printer that the printing company will use for the job. When you install PPD files manually, be sure to put them in the appropriate lproj folder for the language you are using on the Mac (see the next section for details).



## PPD file installation

In Mac OS X, a PPD file can be used from any location on your system. However, it's best if you copy it to one of the system's preferred locations. If the PPD file is in a preferred location, Printer Setup Utility either assigns the proper PPD file for your printer when you create it or displays the PPD filename in a pop-up menu for you to select. If a PPD file is not in one of the preferred locations, Printer Setup Utility asks you to browse your system to locate it.

Within the Mac OS X preferred locations, you will notice that there are a number of different folders in which PPD files can be stored. These folders are for localized language versions of PPD files, and they have such names as en.lproj, fr.lproj, ja.lproj, and so on. If the Mac will be used only in English, the English-language PPD is sufficient.

There are four preferred locations in which PPD files can reside. To add or remove files from most of these locations, you must have administrator access privileges.

The example locations given here are for users working in English. If you will be working in another language, check whether there is also a localized version of the PPD for that language. If so, first install the English-language PPD in one of the folders listed below, then install the localized PPD in the equivalent folder for that language, such as fr.lproj for a French-language PPD. Note that if you are installing PPD files in your home directory or the Classic System Folder, there are no lproj folders; all PPDs go into a single folder.

- **<startup volume>/Library/Printers/PPDs/Contents/Resources/en.lproj.** This is where you should install PPD files that will be used only by Mac OS X. PPD files stored here are not available to applications running in Classic.
- **<startup volume>/System/Library/Printers/PPDs/Contents/Resources/en.lproj.** This is where the system keeps any PPD files that it needs. As a rule, you should not add PPD files to this directory. Nor should you remove any of the PPD files in the directory. PPD files installed in this location are not available to applications running in Classic.
- **<home directory>/Library/Printers/PPDs.** If you don't have administrator access to the computer, this is the only place you can install PPDs. Even if you do have admin privileges, you can use this location for PPDs for printers that only you will be using. (You will have to create the PPDs folder inside the Printers folder before you can install PPD files in it.) PPD files installed in this location are not available to applications running in Classic.
- **<startup volume>/System Folder/Extensions/Printer Descriptions.** This is the location where the Classic environment looks for PPD files. PPD files installed here are also available to Mac OS X applications, provided that Classic has been run at least once or the Classic System Folder has been selected at least once in the Startup Disk pane of System Preferences. In other words, Mac OS X must know of the existence of the Classic System Folder to recognize the PPD files in this directory.

For a technical discussion of PPD files in Mac OS X, see [developer.apple.com/documentation/Printing/Conceptual/UsingPPDFiles/ppd\\_concepts/chapter\\_2\\_section\\_1.html](http://developer.apple.com/documentation/Printing/Conceptual/UsingPPDFiles/ppd_concepts/chapter_2_section_1.html).

### PostScript and EPS data

Panther includes industry-leading conversion technology that translates PostScript and Encapsulated PostScript (EPS) data to high-quality PDF data. Any Panther application can benefit from this built-in capability by drawing high-resolution PostScript data instead of a low-resolution bitmap onscreen, and by printing PostScript-quality output on all printers—even non-PostScript devices. Because Mac OS X uses the same PDF-based text and graphics software for both screen display and printing, it ensures that your documents will look the same on the screen as they do when they're printed.

## Printer Setup Utility

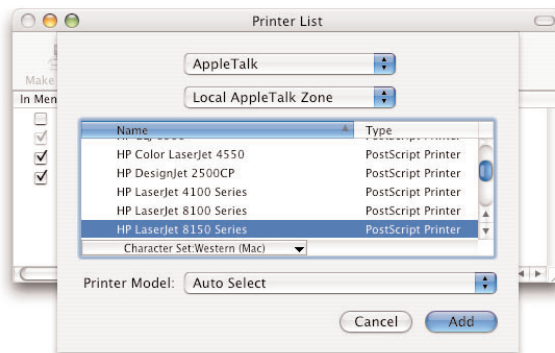
Managing printers in Mac OS X is done with Printer Setup Utility rather than with the Chooser as in Mac OS 9. Printer Setup Utility is located in the Utilities folder in the Applications folder on your system volume.

### Adding and configuring printers

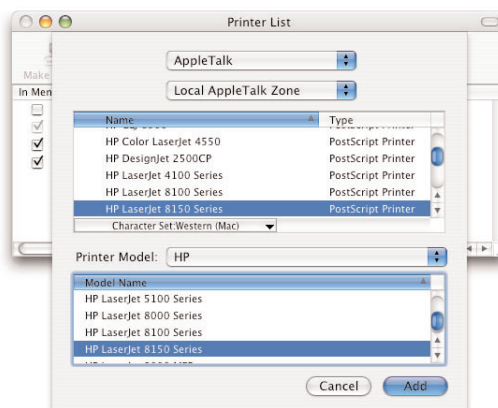
Mac OS X recognizes and configures many USB printers as soon as you connect them to your computer and turn them on. You can use Printer Setup Utility to select and configure network printers. Mac OS X ships with drivers for today's most popular USB inkjet printers and also includes printer description files (PPDs) for more than 200 PostScript printers.

To add a new printer using Printer Setup Utility:

1. Choose Add Printer from the Printers menu (or click the Add button in the Printer List toolbar).
2. In the dialog that appears, use the pop-up menu at the top to choose the printing protocol for communicating with the printer. (Be sure you choose a protocol that is supported by the printer.) If necessary, refine your choice (such as to select an AppleTalk zone or a Windows workgroup) using the context-sensitive second pop-up menu.
3. Choose a printer from the list of devices and servers discovered on the network.
4. Choose a manufacturer's name from the Printer Model pop-up menu. If Mac OS X finds an appropriate PPD for that printer model, it displays the Auto Select option in the Printer Model menu. Click Add to have Mac OS X select the PPD automatically.



5. If Mac OS X cannot find an appropriate PPD, or if you want to make sure which PPD will be used, you can select a PPD manually. Open the Model Name menu and choose the correct PPD, then click Add.

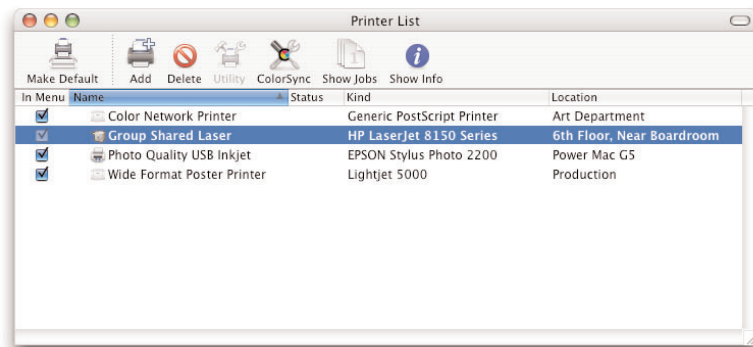


You may subsequently need to choose printer-specific options (amount of installed memory, optional paper trays, and the like) for your PostScript printers.

1. In Printer Setup Utility, select the printer from the printer list.
2. Click the Show Info button in the Printer List toolbar, or choose Printers > Show Info from the Printer Setup Utility menu bar.
3. Choose Installable Options from the pop-up menu.
4. Select the appropriate options for the printer.
5. Click Apply Changes.

### Setting a default printer

In Mac OS X, you choose the destination printer from the Printer pop-up menu in the Print dialog. You can quickly change printers without having to close the Print dialog; simply choose a different printer from the pop-up menu and select the appropriate output options (click the pop-up menu labeled Copies & Pages to see additional options).



If you print to more than one printer, the last printer you used will be selected in the Printer pop-up menu the next time the Print dialog appears. To change the destination device, simply click the Printer pop-up menu and choose a different printer.

In Panther, you can change the default printer from the last printer used to a specific printer. Open System Preferences and click the Print & Fax button. Then click the pop-up menu next to "Selected printer in Print Dialog" and choose a printer. The printers listed are those in the printer list in Printer Setup Utility. To add a new printer, choose Edit Printer List from the menu. Then click the Add button in the Printer List toolbar (or choose Printers > Add Printer). Once you add the new printer, it will be the default printer.

### Managing print jobs using desktop printing

In Mac OS X v10.3, desktop printers have returned to the Mac OS. Using desktop printers, you can drag and drop to print files, immediately get information about what jobs are printing or waiting in queue, or quickly access the printer's utility. Just by glancing at the printer's icon in the Dock, you can tell if your job is printing or if there is an error.

The process of creating a desktop printer is very simple.

1. In Printer Setup Utility, create a print queue by choosing Printers > Add Printer, or create a printer pool by choosing Printers > Pool Printers.
2. Click the printer or pool in the printer list and drag it to the desktop or the Dock.

### Drag-and-drop printing

Once you create a desktop printer, you can drag files onto its icon to print to the associated printer. Files in a number of formats, including PostScript and PDF, will be directly sent to print; other files will prompt the appropriate application to open and present the Print dialog. If you drop a folder on the icon, a list of the folder's contents is printed.

To manage print jobs, simply double-click the desktop printer icon. A shortcut to the printer's management utility is located in the desktop printer's toolbar. Just click the Utility button to check ink/toner levels or perform other hardware-related tasks.

### Queuing jobs for later printing

If you're not connected to your printer when you're ready to print a job, you can hold your jobs so they can be printed at a later time. To do that, follow these steps:

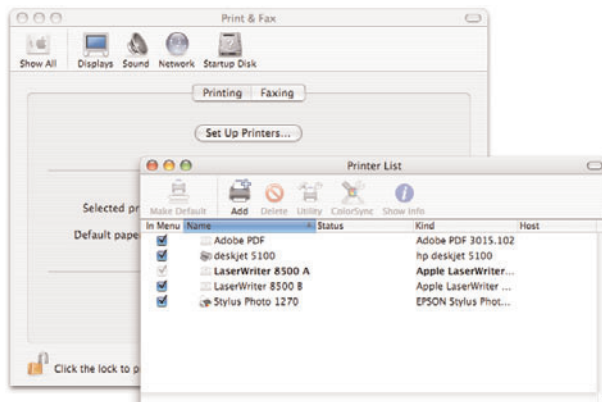
1. Open Printer Setup Utility and select your printer in the printer list or double-click its desktop printer.
2. Choose Stop Jobs from the Printers menu or click the Stop Jobs button in the desktop printer's toolbar.
3. Return to your application.
4. Use the Print command in the application just as though you were printing now.
5. Choose the desired output options, then click the Print button (ignore the ! icon next to the Printer pop-up menu).
6. In the dialog that appears, click "Add to Queue."
7. When you are once again connected to your printer, open Printer Setup Utility and select your printer (or open the desktop printer). Then choose Start Jobs from the Printers menu (or the desktop printer's toolbar).

### Printer Pools and Printer Sharing

New to Panther are printer pools. If the printers you use are often busy and you want to print a document as quickly as possible, you can create a collection of printers called a printer pool. Your document automatically prints to the first available printer in the pool. Because your file may go to any printer in the pool, you should place only identical or at least very similar printers in the pool. It is also helpful if the printers are in the same general physical location.

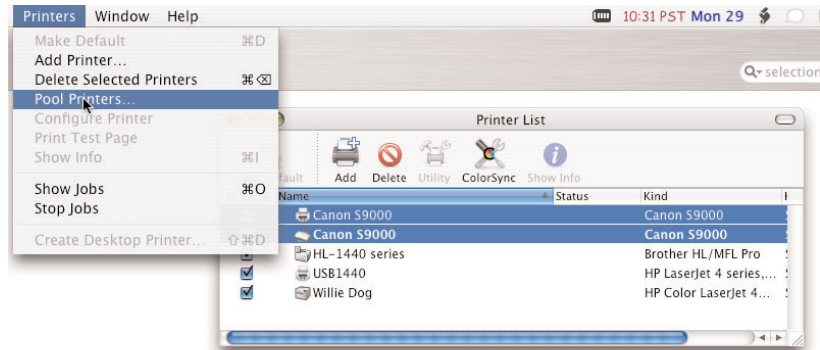
To set up a pool, follow these steps:

1. Open System Preferences and click Print & Fax.
2. Click Printing, then click Set Up Printers.

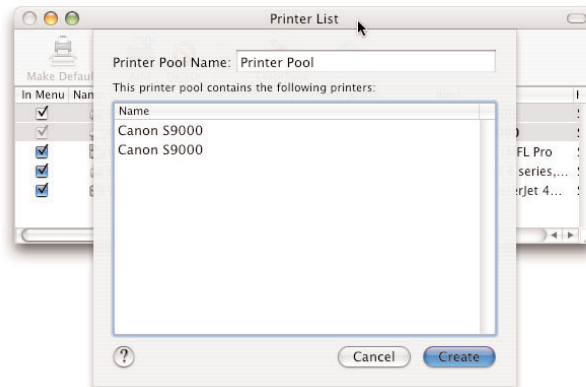




3. Select the printers in the printer list that you want to be in the pool. (Select the first printer, then hold down the Command key and click additional printers.)
4. Choose Printers > Pool Printers.



5. Type a name for the printer pool in the Printer Pool Name field.



6. Drag the printers into the order you prefer. When you print, your computer checks the first printer in the list for availability, then the next, and so on. The printer options for the entire pool are taken from the first printer listed.
7. Click Create.

To let other computers on your local network access the same printers, turn on Printer Sharing:

1. Open System Preferences and click Sharing.
2. In the Services pane, select Printer Sharing and click Start.

All printers in your printer list (in Printer Setup Utility) are shared, whether they are connected directly to your computer or you access them over a network. Shared printers automatically appear in the submenu of the Print dialog on other computers connected to your local network (your IP subnet).

To help others find out where to pick up their printed documents, open Printer Setup Utility (in /Applications/Utilities). If the Printer List window is not open, choose View > Show Printer List. Select a printer, then choose Show Info from the Printers menu and type a clear description of the printer's location in the Location field.

Documents waiting to print on your shared printers are stored on your hard disk. That is, your computer hosts the queue for the printer.

To learn more about setting up printer features, open Printer Setup Utility, choose Mac Help from the Help menu, and search for the feature you're interested in.

Topics include:

- Creating a desktop icon for a printer
- Setting up to print to another Mac OS X user's shared printer
- Assigning a print job to a different printer
- Setting up to print to a printer shared by a Windows computer via SMB
- Setting up to print to an IP Printing network printer

## ColorSync Profiles

In Mac OS X, ColorSync is fully integrated into the operating system. In fact, Mac OS X v10.3 is the only operating system that fully supports the ICC version 4 standard for managing color. This integration makes it easy for developers to build color management features into their applications, resulting in greater productivity and higher-quality results.

You can assign an output profile to your printer using ColorSync Utility, then choose where and how color is converted for your output device right from the Print dialog. You can even use Preview to see a color-accurate onscreen "soft proof" of how your file will print, including all settings you chose in the Print dialog.

A new Color Management Module (CMM) in Mac OS X increases the speed and precision of color transformations. It takes advantage of the power of the Velocity Engine to dramatically speed up the most common color calculations, and the Apple CMM uses multiprocessing whenever possible for further performance enhancements. As a result, color matching in Mac OS X v10.3 is nearly twice as fast as in Mac OS 9.

If you have been using ColorSync in Mac OS 9, you can move your existing generic profiles to your Mac OS X system. (See the next section for information on profile locations supported in Mac OS X.) "Generic" profiles are those installed by applications that describe virtual devices, not actual devices. For example, the ColorMatchRGB.icc and USWebCoatedSWOP.icc profiles installed by Adobe Photoshop are generic profiles. Any custom profile for a specific color device—such as a printer, scanner, or display—should be re-created on the Mac OS X system.

### Profile locations

Where you install profiles in Mac OS X depends on which users you want to have access to them. Here are the available locations:

- For all users of the same Mac system:  
/Library/ColorSync/Profiles/
- For each individual user of the Mac system:  
/Users/<username>/Library/ColorSync/Profiles/  
(also referred to as ~/Library/ColorSync/Profiles/)
- For access over a managed network:  
/Network/Library/ColorSync/Profiles/

Note that the operating system installs profiles in a read-only location, /System/Library/ColorSync/Profiles/. Do not put your own profiles in this directory.

### Custom Quartz filters

Several Quartz filters are included in Panther, and you can also create your own custom filters. To create a new filter:

1. Open ColorSync Utility.
2. Select Filters from the toolbar.
3. Click the Add button.

You can then choose your filter settings and decide whether to treat text, bitmap images, vector graphics, and smooth shaders equally or differently.

If you choose "View file with filter," be sure to enable the Preview checkbox.

**Tip:** In the Filters pane of ColorSync Utility, you'll see a button labeled Domains. If you click the PDF Workflow checkbox, your custom Quartz filters will appear under the Save As PDF button in the Print dialog of every Mac OS X application. (The PDF workflow button is hidden by default, but is enabled if the system detects the existence of a /Library/PDF Services or ~/Library/PDF Services directory.)

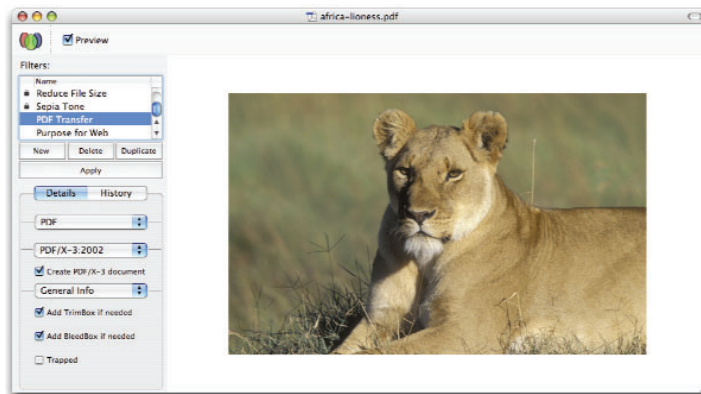
**Tip:** If you have an unlocked filter, you can create custom transforms for it. In the Filters pane, click the Color button, then choose Custom from the "Intermediate transform" pop-up menu. (The Custom option is at the top of the list.)

### Quartz filters

Quartz filters offer more advanced color matching capabilities. In addition, they can be used to add special color effects or to sharpen, blur, or change the resolution of images. You can even use a filter to create an industry-standard PDF/X file. You can also apply Quartz filters when you print a file or save it as a PDF document.

By applying Quartz filters at print time, you change how the document looks when it's printed without modifying the document itself.

1. Open the document you want to print.
2. Choose File > Print.
3. Choose ColorSync from the Copies & Pages pop-up menu.
4. Choose an option from the Color Conversion pop-up menu. Choose Standard if you want the Mac you're using to control the color management of the printed output (available only when a profile has been registered for the printer). Choose In Printer if you want the printer you're using to control the color management of the printed output. (Non-PostScript printers use only standard color matching.)



5. If desired, choose an option from the Quartz Filter pop-up menu. Either choose an existing filter from the list or choose Add Filters. Choosing Add Filters opens your document in ColorSync Utility, where you can create a new filter (see sidebar). When you are finished using ColorSync Utility, quit the application; do not click Apply. Return to the open document, choose File > Print, choose the ColorSync option, then choose the new filter from the updated Quartz Filter pop-up menu.
6. In most cases, you can now click Preview to see a color-accurate soft proof that includes the effects of the Quartz filter you've selected. When you're done looking at the proof, close the Preview document window or quit the Preview application to return to the application you're printing from.
7. Click Print.

### Printing as PDF or PostScript

Mac OS X Panther includes PostScript-to-PDF conversion technology licensed from Adobe Systems that translates PostScript and Encapsulated PostScript (EPS) data to high-quality PDF data. This technology is integrated into Quartz 2D, the powerful graphics system in Mac OS X. Quartz 2D draws PDF-based text, bitmapped graphics, and vector graphics on the screen as well as on printers. Any Panther application can take advantage of Quartz 2D to draw high-resolution PostScript/EPS data onscreen or to print PostScript-quality output on all printers, including non-PostScript devices.

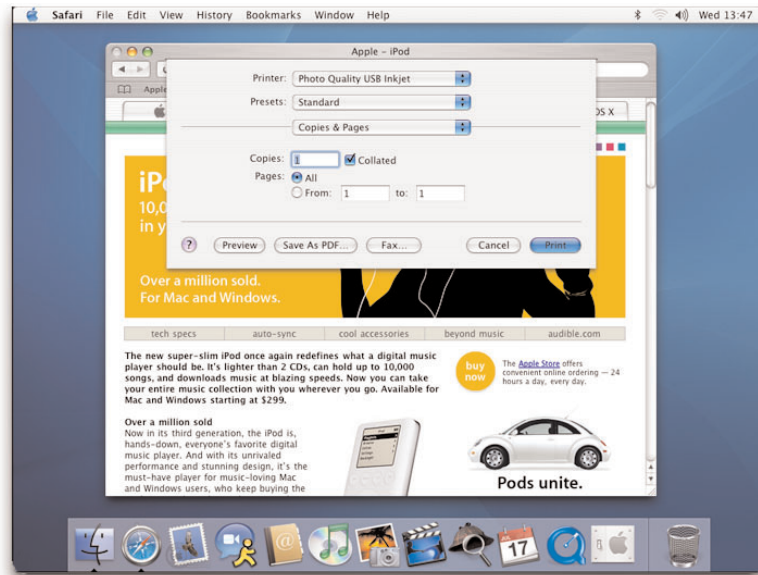
### PostScript and EPS data

In addition to its PDF file generation capability, Mac OS X v10.3 “Panther” incorporates technology licensed from Adobe Systems to convert PostScript (.ps) and Encapsulated PostScript (.eps) files into Portable Document Format (.pdf) files.

Using the Adobe PDF technology in Panther:

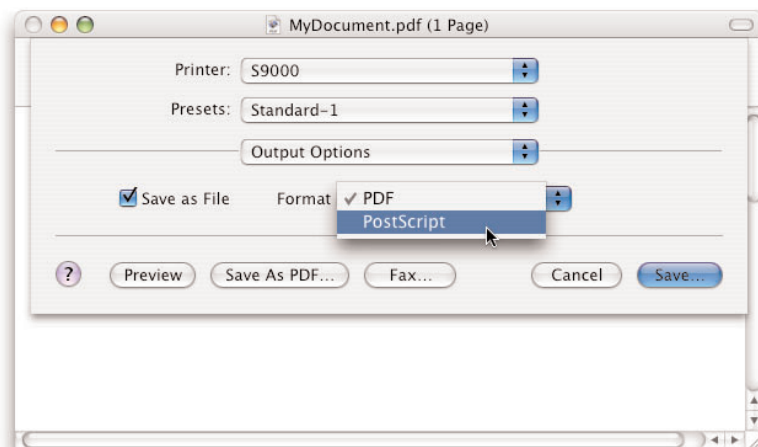
- Preview can convert individual files.
- AppleScript Image Events and the `pstopdf` command-line tool can batch process multiple files.
- The printing system can image high-quality PostScript data on a raster printer (such as an inkjet printer).

Because PDF technology is built directly into the operating system, you can make PDF files from any Mac OS X application—a great way to exchange documents with clients and colleagues. After choosing Print from the File menu, simply click the Save As PDF button instead of the Print button, and your document is converted to a PDF file that is readable by Adobe Acrobat Reader, Mac OS X Preview, and other PDF viewers.



You can also save a document as a PostScript file. Just follow these easy steps:

1. Choose Print from your application’s File menu.
2. In the Print dialog, look for the pop-up menu that says Copies & Pages. Choose Output Options.
3. Click the “Save as File” checkbox.
4. Choose PostScript from the Format pop-up menu. If the PostScript option is dimmed (not available), you have not set up a PostScript printer in Printer Setup Utility.
5. Click Save. Your document is saved as a PostScript file.



### Folders and folder aliases in PDF workflows

Folders or aliases of folders can also be used in the PDF workflow. If you place a folder or alias in a PDF Services folder on your local hard drive (/Library/PDF Services or ~/Library/PDF Services) and then select it from the PDF pop-up menu when you print, the folder or folder alias triggers a copy action. That is, the printing system creates a PDF file and places it in the designated folder. The name of the PDF file is the document's title as specified by the application that generated it, plus the .pdf extension. If there is a naming conflict, the name is made unique within the folder by appending a serial number.

For example, you might create an alias of your iDisk Public folder and put it in the ~/Library/PDF Services directory. You can then rename the alias to something meaningful, such as "Copy PDF to Public Folder." This item now appears as a choice in the PDF workflow pop-up menu in the Print dialog. When you choose "Copy PDF to Public Folder" from the menu, the printing system creates a PDF file and copies it to your iDisk Public folder.

### PDF Workflows

In Mac OS X, it's easy to save a document as a PDF. All you need to do is open the Print dialog and click the Save As PDF button. Simply type a name for the PDF file, choose where you want to save it, and click Save. Since the release of version 10.2.4, Mac OS X has also offered advanced options for how to prepare the PDF file and what to do with it. For example, you can specify which application should open the PDF file, or you can optimize the file for onscreen viewing.

The PDF workflow button that provides these advanced options is hidden by default. The button appears if the system detects the existence of either the /Library/PDF Services or the ~/Library/PDF Services directory. To enable this button, you must manually create a PDF Services folder in one of those locations.

Once you've created a PDF Services folder, you can access PDF workflow options by clicking the PDF button in the Print dialog. All available options appear in a pop-up menu.

You can add a menu item to the PDF workflow pop-up menu simply by adding it to any of the following directories:

- /Library/PDF Services
- ~/Library/PDF Services
- /Network/Library/PDF Services. Although any file you put in this directory shows in the workflow pop-up menu, the menu itself is visible only if the /Library/PDF Services or ~/Library/PDF Services directory exists. The system does not check for a /Network/Library/PDF Services directory when it determines whether to hide or show the PDF workflow button.

You can place the following items in any of those directories:

- A folder or an alias to a folder
- An application or an alias to an application
- A UNIX tool or an alias to a UNIX tool
- An AppleScript file or an alias to an AppleScript file

The type of item placed in one of the directories determines what the item does when you select it from the PDF workflow menu. For example, if the item is a location (such as a folder), the PDF file is copied to that location.

For more details on PDF workflows, including examples of how to use them to increase your productivity, see [developer.apple.com/documentation/Printing/Conceptual/PDF\\_Workflow/PDF\\_Workflow.pdf](http://developer.apple.com/documentation/Printing/Conceptual/PDF_Workflow/PDF_Workflow.pdf) and [developer.apple.com/documentation/Printing/Conceptual/PDF\\_Workflow/pdfwf\\_intro/chapter\\_1\\_section\\_1.html](http://developer.apple.com/documentation/Printing/Conceptual/PDF_Workflow/pdfwf_intro/chapter_1_section_1.html).

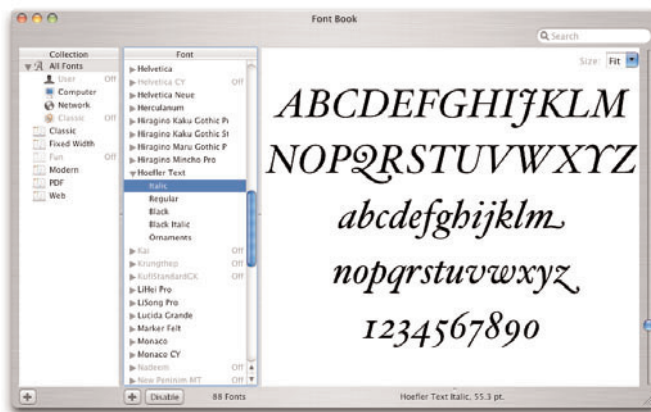
# Working with Fonts

## Mac OS X font highlights

- Extensive font and character library
- Support for standard font formats such as OpenType, TrueType (Mac and PC), Adobe Type 1 PostScript (Mac), and PostScript Multiple Master instances
- More than 100 included fonts
- Broad international language support, with professional-quality fonts for Japanese, Chinese, Thai, Korean, Arabic, and Cyrillic-based character sets
- Full support for the Unicode 4.0 character set

Mac OS X v10.3 “Panther” offers exciting type capabilities for design and print professionals, including support for several different font formats, new capabilities for rendering fonts, and the new Font Book application. Mac OS X currently supports fonts in the following formats: OpenType, Mac and Windows TrueType, Mac PostScript Type 1, and Multiple Master created instances.

Font menus can grow quite long, making it difficult to find and use the fonts that are so important to your projects. Font Book makes it easier to manage and find the fonts you need. Managing fonts in Mac OS X Panther is similar to managing photos in iPhoto. You create collections of fonts (similar to iPhoto albums), and then use the collections to manage the fonts you want to use on your system at any given time.



Font Book is a powerful application for working with the fonts you need. It enables you to install and preview fonts, search through them, create collections of fonts, and disable, enable, and remove fonts. For example, Font Book makes it easy to customize which fonts you see in each Mac OS X application, giving you quick access to the fonts you need while not cluttering the font menu with ones you don't.

Font Book works best for users who would like to put all of their fonts in it and then use it to build customized font collections. Font Book will easily handle most users' day-to-day font needs. Creative professionals who frequently deal with many fonts from many different clients may be using a third-party font manager. Because Font Book is a separate application rather than part of the operating system, it does not interfere with third-party font managers.

For more information about Font Book, see Appendix G. For information about third-party font managers, see Appendix H. For a comprehensive overview of fonts and font technology in Mac OS X, see the white papers available at [www.apple.com/pro](http://www.apple.com/pro) and [www.apple.com/macosx/features/fontbook](http://www.apple.com/macosx/features/fontbook).

### Keynote

Apple's Keynote presentation software, which is increasingly popular among graphic arts professionals, makes full use of the advanced font and graphics capabilities in Mac OS X, including the Font panel. Keynote is more than just a presentation tool. You can use it to build digital design portfolios, animated storyboards, and dynamic photographic shows. The high-quality graphics support in Keynote allows creative professionals to import assets from QuickTime, Adobe Photoshop, Adobe Illustrator, Macromedia Flash, and Apple's iLife applications.

## Where to Install Fonts

In Mac OS X, fonts can be installed in a number of places in the file system. This is due in part to the fact that Mac OS X is a multiuser operating system. A font can be installed in a location that is private to a single user, one that can be shared by all users of a computer, or even one that's available to Classic applications.

Font Book makes font installation easy and seamlessly manages fonts in any of the system locations. Double-clicking a font file (or a group of fonts) in the Finder opens a preview of the font, with the option to install it in just one click. Where the font is installed and whether it is moved into the system location or copied to the location is controlled by the preferences you set for Font Book before starting to use it to manage fonts. Moving fonts is the default preference, but many creative professionals may want them copied instead.

Once a font is installed, you can preview it in different ways from the Preview menu:

- **Sample.** Shows the font using a standard alphabetical list of characters.
- **Repertoire.** Displays the entire list of characters available in the font.
- **Custom.** Illustrates what a custom string of text looks like in the font. (This is the only mode that allows you to type into the preview window.)

In all font preview modes, you can zoom in and out to view a font in a wide range of sizes.

A Mac OS X system has the following built-in font locations. In organizing your fonts, note that Mac OS X recognizes fonts contained in subfolders inside these folders.

- **Computer Fonts folder (/Library/Fonts/).** This is the equivalent of the traditional Fonts folder in Mac OS 9. Fonts in this folder are available to everyone who uses the computer. However, only a user with administrator access can change the contents of the folder. Fonts in this folder are not available to Classic applications.
- **User Fonts folder (~/.Library/Fonts/).** Only the individual user can use these fonts. Also, they are not available to Classic applications.
- **Classic Fonts folder (<Classic System location>/System Folder/Fonts/).** If you're running both Classic and Mac OS X applications and you don't use a font manager, this is the place you should put all your fonts. Both Classic and native Mac OS X applications can use these fonts.
- **System Fonts folder (/System/Library/Fonts/).** This folder contains the fonts used by Mac OS X for menus, dialogs, and icons. It should not be used for your own fonts. You can see the fonts here, but you can't easily modify this folder. (The document "Using and Managing Fonts in Mac OS X" at [www.apple.com/creative/fonts](http://www.apple.com/creative/fonts) describes how to do so.) Do not remove the font Lucida Grande from this folder, or the computer will not start up.
- **Adobe fonts folder (/Library/Application Support/Adobe).** This folder contains additional fonts available only to Adobe applications. The fonts can be moved to a more central location where they can be managed by a font manager.

### Japanese system fonts

For Japanese localized systems, do not remove the following fonts:

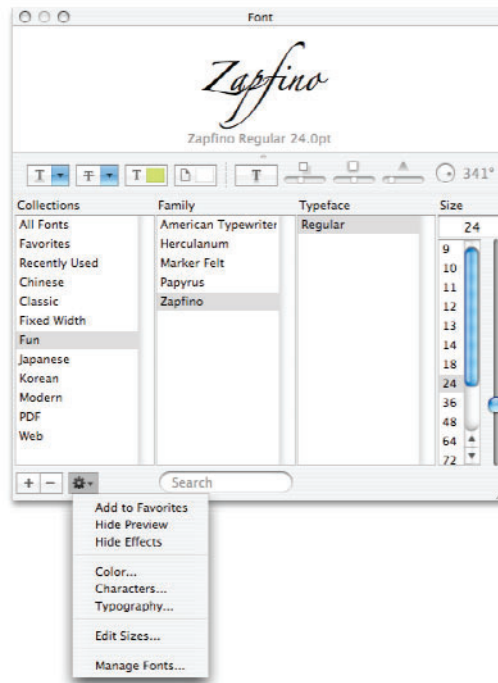
- Hiragino Kaku Gothic Pro W3
- Hiragino Kaku Gothic Pro W6
- Hiragino Mincho
- Lucida Grande

### Unicode

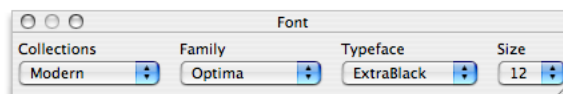
Because it is based on the Unicode Standard, Mac OS X supports multiple languages—including Japanese, Chinese, Traditional Chinese, and Korean—in the same document, without requiring additional software. The Unicode Standard supports 96,000 characters, enough for all the world's languages and symbols. As long as an application supports Unicode, it can include characters from different languages and different alphabets in a single document or web page and deliver it over multiple platforms, languages, and countries. The Unicode Standard is supported in many operating systems, all modern browsers, and many other products. It therefore represents one of the most significant advances in global software technology.

### Font Panel

New to Mac OS X is the Font panel. In some applications built for Mac OS X (such as Apple Mail and TextEdit), the Font panel organizes fonts into useful collections. You can organize your own font collections—for example, by client or job—or add fonts to a favorites menu. Professional applications such as Adobe InDesign and QuarkXPress use their own font selection tools.



You can use the Font panel to add effects such as underlining, strikethrough, foreground and background color, and shadows to your fonts. You also get direct access to the new Typography panel, which allows you to vary font features such as kerning and number spacing and to create effects such as ligatures and swashes. A menu in the bottom-left corner of the Font panel provides direct access to Font Book and adds access to the Typography panel. Once you've set your defaults, you can shrink the Font panel to show only pop-up menus and leave it conveniently in a corner of your screen.





## Character Palette

In addition to the Font panel, Mac OS X has a feature called the Character Palette. The Character Palette is useful when you need to find a specific character or symbol, regardless of font. In addition to providing a view of characters by font as the Font Book preview does, the Character Palette lets you view individual characters grouped in various categories.



You can view the Character Palette in three ways:

- **Special Characters.** In Mac OS X Panther, the Edit menu in many applications has an item called Special Characters that displays this palette.
- **International menu.** If you have enabled the Input Menu in the International pane of System Preferences, you have a menu in the menu bar for accessing the Character Palette along with other input methods.
- **Font panel menu.** Select the Characters item from the Action menu in the lower-left corner of the Font panel.

To use the Character Palette from the Mac OS X menu bar, you must first turn on the palette in the International preference pane. Do the following:

1. From the Apple menu, choose System Preferences.
2. Select the International pane.
3. Select the Input Menu tab.
4. Click the Character Palette checkbox.

To open the palette, choose Show Character Palette from the Input menu (the one with the Character Palette symbol or the flag).

To enter a character, choose the items you want to see from the View pop-up menu. Select the category of characters in the left column and double-click the character or symbol you want to enter in the right column.

Click the triangle at the bottom of the palette to see more options, such as the font you want to use.

### Mac OS 9 and font suitcases

When organizing your fonts in Mac OS X, you may encounter a font file that started as a font suitcase on a Mac OS 9–based computer. Such suitcases sometimes contain both TrueType and PostScript versions of the same font name. The Mac OS X font utilities that are currently available will open and use both fonts that have the same name, creating a conflict.

To prevent problems, the best practice is to extract all screen fonts from the suitcase and then install the specific fonts you need in your font manager. You can either open the suitcase in a Finder window on a Mac that has been started up in Mac OS 9 or earlier and extract the fonts that way, or you can find and install a copy of Font/DA Mover 4.1 and run it in the Classic environment to disassemble the suitcase.

## Font Managers

If the fonts you use change from day to day or project to project, using a font manager will greatly simplify your workflow. If you decide to use a font manager in Mac OS X and you also have one installed in Mac OS 9, be sure to disable the font manager in Mac OS 9. If you were using ATM Deluxe as your font manager and you have to disable it, you will need to install ATM Light to get smooth type in Classic applications.

Font Book and third-party font managers can exist on the same Macintosh system. However, only one of them should be used to activate and deactivate fonts.

## Other Mac OS X Font Features

Mac OS X comes with some Unicode TrueType fonts that have a dfont extension. These are TrueType fonts with all their information in the data fork rather than in the resource fork as in older Macintosh TrueType fonts. dfonts work only on Mac OS X systems and only in Mac OS X (not Classic) applications.

Many dfonts, such as Zapfino, contain extended characters in the Unicode part of the font that designers may want to use. To access the extended characters in the font, an application must be Unicode enabled. Adobe InDesign and TextEdit are Unicode-enabled applications. You can use the Character Palette to see the extended characters.

If you have documents that use other versions of the same named font (such as Helvetica) in a PostScript version rather than in the included dfont version, you will want to make sure that the same font is used for output as was used during the original design of the document. Otherwise, the differences between the versions may cause type to reflow or glyphs to be substituted. To ensure that the correct version of the font is used, you can do one of the following:

- Activate the replacement font in Font Book.
- Remove the font and replace it with your version.
- Remove the font and use a third-party font manager to open the new version.
- Convert the output file to a PDF and embed all fonts.

To simplify verification of which font is actually in use, and to get a “font missing” alert message from an application when a file created by that application is opened, many users remove or disable all nonessential fonts, then open the set of fonts sent with the job. In this situation, when you open the file, you’ll see an alert for any fonts that are in the document but not in the font set you received from your client. This is a very fast way to verify the fonts necessary for printing the document and to ensure that only the customer’s font versions are used.

Font Book can be used to disable fonts without removing them, although this “disabling in place” approach is not recommended in a prepress environment because fonts in the system-level font folders are automatically active unless they are explicitly deactivated through Font Book. Mac OS X disables individual fonts by creating a preferences file called com.apple.ATS.plist for each user. This file tells the operating system which fonts are disabled. Although fonts installed in the system-level font folders can be overridden by a font manager, you will not get a “missing font” warning from an application if the system font is always on. In addition, if the Font Book preference file is accidentally deleted or rebuilt, any fonts in the system-level font folders revert to their active state. You may not notice this reactivation, creating a risk of accidental font substitution by the once-again-active font.

Essential fonts for Roman language Mac OS X systems include Lucida Grande, Last Resort, Keyboard, Monaco, and Geneva. Do not remove any of those fonts; in particular, if you remove Lucida Grande, the computer will not start up.

Remember that if you use dfonts and you will be printing the final piece on a different system, the output system will have to be a Mac OS X system that either already has these dfonts loaded or is able to load your dfonts. If the job is to be output on a Mac OS 9 system, you need to make sure that the service bureau has a Mac OS 9 version of the dfont with exactly the same font metrics and glyph shapes as your Mac OS X version. (Installing your dfonts on the output system is not necessary with dfonts that are embedded in PDF documents. Those will print fine from any system that can print PDF files.)

Font rasterization is now built into the operating system, so Adobe Type Manager is not needed for that purpose. (You will need to install ATM Light in the Mac OS 9 System Folder to get smooth type in Classic applications, because ATM Deluxe does not work on Mac OS X systems.)

Beginning with Mac OS X v10.2, support for single-instance Multiple Master fonts has been built into the operating system. However, Adobe InDesign 2, Photoshop 7, Illustrator 10, and Acrobat 6 do not currently recognize these instances if they are installed in one of the standard Mac OS X font locations. These applications support Multiple Master fonts only if they are placed in one of the Adobe-specific directories, /Library/Application Support/Adobe/Fonts/ or ~/Library/Application Support/Adobe/Fonts/.

# Sharing Files and Computers

Mac OS X makes it easy to work with users of other systems in a number of ways.

If possible, you should have your system administrator set up Mac OS X Server, Apple's powerful, flexible platform for workgroup services. Mac OS X Server combines the latest open source technologies with Apple's industry-leading manageability and ease of use. The result is an open, UNIX-based server platform that's easy and affordable to deploy and maintain. And because it is based on open standards, Mac OS X Server can easily integrate with your existing network infrastructure and provide services for mixed-platform environments.

If you don't have access to Mac OS X Server, you can use built-in Mac OS X features along with third-party software as needed.

## Public Folder

You can make your Public folder accessible to other users by turning on Personal File Sharing in the Sharing pane of System Preferences. By default, your Public folder and the folders within it are the only ones that can be shared. For alternative solutions, see Appendix H.

**Important:** If you choose to change the access privileges of folders other than your Public folder, take care that you do not inadvertently allow other users access to personal files or confidential information.

In addition to Personal File Sharing, which uses the Apple File Protocol, files in your Public folder can be shared with Windows computers via Samba, and with a wide range of platforms through FTP.

If you have a .Mac account, you can put files in the Public folder of your iDisk, where they can be viewed or copied by anyone who knows your .Mac member name and can access iDisk Public folders. For wider access, use the HomePage application in .Mac to set up a file-sharing page that allows everyone with Internet access to copy items from your Public folder, regardless of whether they are .Mac members or what type of computer they use.



### iChat AV

iChat AV, a new feature in Mac OS X Panther, introduces a video conferencing solution that makes it easy to have natural conversations with other Panther users over the Internet—perfect for reviewing comps or anything else where visual interaction is important. Because iChat AV is compatible with AOL Instant Messenger, you can also chat with clients and colleagues who use AOL, simply by signing on to iChat AV with your .Mac or AIM user account.

iChat AV features high-quality, full-screen video; crystal-clear, full-duplex audio; a familiar, easy-to-use interface; and setup that is immediate and effortless.\* iChat AV works with iSight and other FireWire-based cameras, including DV camcorders. In addition to audio and video conferencing, you can use iChat AV to transfer files that are too large to send via email, such as for reviewing work with satellite offices or clients.

iChat uses two methods to connect users: over an external chat network, such as AOL, or over an internal network. Apple's Rendezvous technology allows iChat users to automatically discover other users on the network who are available for text, audio, or video conferencing. You don't need to enable or open your firewall to other chat protocols to use iChat on an internal network. For instance, a production or traffic manager could receive a file from a designer and instantly transfer it to another user using iChat over Rendezvous, speeding up the workflow.

## Drop Box

To give a copy of a file to someone who uses the same computer or a different computer that's networked to yours, you can copy it to the person's Drop Box folder.

To give a file to someone who uses your computer, open the person's Public folder (in his or her home folder in the Users folder on your hard disk) and copy (Option-drag) the file to the Drop Box folder.

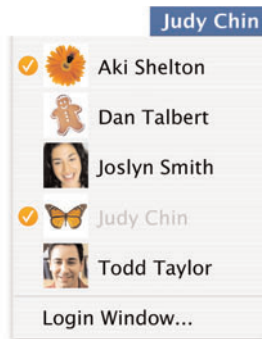
To give a file to someone who uses another computer on your network, choose "Connect to Server" from the Go menu and connect to the user's computer. (Guest logins work fine for this; you don't need to be a registered user of the computer.) Then drag the file to the Drop Box folder. If you can't find someone's Public folder on the network, make sure the person has file sharing turned on.

## Shared Folder

At the same level as the individual users' folders is a folder called Shared. This folder is often used by applications to store preferences needed by all users, but it can also be a convenient place to store data files that all users of the computer need access to.

## Fast User Switching

With the Fast User Switching capability in Panther, you can share a Mac with other users quickly and effortlessly. Fast User Switching resolves the conflicts experienced in households, offices, and schools where people share computers by allowing users to quickly switch between active accounts without having to quit applications and completely log out. While another user works on the computer, your account remains active in the background, with applications running, documents open, and active tasks like file transfers continuing.



While an account is switched out, the UNIX-based security technology in Mac OS X ensures that all of the user's data and applications remain completely secure. The new user cannot access the documents of the account that is switched out.

# Appendix A: Mac OS X Quick Reference

## Finder Commands and Shortcuts

Some of the keyboard shortcuts in the Mac OS X Finder are different from those in Mac OS 9. Here's a reference chart for some of the most-used ones.

Shortcut	Mac OS 9 function	Mac OS X function
Command-H	Search Internet	Hide Finder
Option-Command-H	—	Hide other applications
Command-N	Make new folder	Make new Finder window
Shift-Command-N	—	Make new folder
Command-P	Print window	—
Command-L	—	Make alias
Command-M	Make alias	Minimize window
Command-C	Copy (item names only)	Copy (items or names)
Command-V	Paste (in item names only)	Paste (items or names)
Command-Y	Put away (desktop item)	—

Some shortcuts have been added in Mac OS X to support new Finder features. Mac OS X Panther ships with the following default shortcuts, but you can customize keyboard shortcuts for the system as well as for individual applications.

Shortcut	Mac OS X function
Command-[	Go back
Command-]	Go forward
Command-1	Icon view
Command-2	List view
Command-3	Column view
Shift-Command-A	Go to Applications folder
Shift-Command-C	Go to Computer folder
Shift-Command-G	Go to folder (enter name)
Shift-Command-H	Go to home folder
Shift-Command-I	Open iDisk folder
Command-K	Connect to server
Command-Option-T	Show/Hide toolbar

You'll find a list of Mac OS X keyboard shortcuts at [docs.info.apple.com/article.html?artnum=75459](https://docs.info.apple.com/article.html?artnum=75459).

## Mac OS 9 vs. Mac OS X Organization

Mac OS X stores items in slightly different locations than Mac OS 9. Here's a listing of some of the major changes.

For items in Library folders, check three places: the hard disk Library folder, the System Library folder, and the home Library folder. Still can't find something? Use the Find command from the File menu in the Finder.

Mac OS 9 element	Mac OS X equivalent
Chooser printer options	Printer Setup Utility in Utilities folder in Applications folder
Chooser AppleShare options	Connect to Server in Finder Go menu or Network icon in Finder windows
Fonts folder in System Folder	Fonts folder in Library folder
Sounds	Sounds folder in Library folder in home folder
Utilities folder	Utilities folder in Applications folder
Apple Extras folder	Applications (Mac OS 9) folder
Internet folder	System Preferences
Mac OS 9 applications	Applications (Mac OS 9) folder
Desktop items	Desktop folder
Documents folder	Documents folder
Sleep, Restart, and Shut Down	Apple menu
Special menu	Apple menu
Finder preferences	Finder application menu
Application preferences	Application menu in the application
Control panels	System Preferences
File Sharing	Sharing pane in System Preferences
Software Update control panel	Software Update pane in System Preferences
SimpleText	TextEdit
TCP/IP control panel	Network pane in System Preferences
AppleTalk control panel	Network pane in System Preferences
AirPort control panel	Network pane in System Preferences
Modem control panel	Network pane in System Preferences
Remote Access control panel	Network pane in System Preferences
Location Manager	Network pane in System Preferences
Multiple Users control panel	Accounts pane in System Preferences
Assign Startup items	Startup Items in Accounts pane in System Preferences
Extensions Manager	No longer necessary
Disk First Aid/Drive Setup	Disk Utility in Utilities folder in Applications folder
Favorites Apple menu item	Favorites folder in Library folder in home folder
Find command in Finder File menu	Find command in Finder File menu

## Hard Disk Contents

The following folders, which are at the computer level, are available to all users of the computer.

- **Applications.** Mac OS X applications available to all users of the computer.
- **Applications (Mac OS 9).** Mac OS 9 applications, Internet, Utilities, and Apple Extras folders.
- **Documents.** Folders and files stored in Documents folder with Mac OS 9.
- **Library.** Fonts, plug-ins, preferences, and other items for all users of the computer.
- **System.** Mac OS X system software files.
- **System Folder.** Mac OS 9 system software files.
- **Users.** Your home, homes of other user accounts, and the Shared folder where you can share files with others.
- **Desktop (Mac OS 9) folder** (located on the desktop). Items previously on the Mac OS 9 desktop.

## Home Folder Contents

Home is where you keep your own files. You can use these default folders and add new ones to organize your files.

- **Desktop.** Items on the Mac OS X desktop for your home.
- **Documents.** Your document files and folders.
- **Library.** Fonts, plug-ins, preferences, and other items for your use.
- **Movies.** Location to store movies.
- **Music.** Location to store audio files.
- **Pictures.** Location to store image files.
- **Public.** Folder where other users can view your files; Drop Box folder for others to leave files for you.
- **Sites.** Your web pages that can be viewed by others using Web Sharing.



# Appendix B: Supported Devices

## **Open source software projects**

Open source software is simply software whose source code is available to anyone interested in looking at it. Open source software is developed in a collaborative way with contributions from programmers all over the world. Open source applications are usually of very good quality and are free to the end user. For more information, visit the Open Source Initiative website at [www.opensource.org](http://www.opensource.org).

Right out of the box, Mac OS X supports a wide range of printers, cameras, storage media, and other external devices. Check the list at [www.apple.com/macosx/upgrade/devices.html](http://www.apple.com/macosx/upgrade/devices.html) for the latest information or visit the sites listed here for information on Mac OS X support for specific types of devices.

## **Printers**

Go to [www.apple.com/macosx/upgrade/printers.html](http://www.apple.com/macosx/upgrade/printers.html).

If you have a printer that doesn't currently have a driver included with Mac OS X, you can check [gimp-print.sourceforge.net/MacOSX.php3](http://gimp-print.sourceforge.net/MacOSX.php3) to see whether your printer is supported by Gimp-Print. Gimp-Print is an open source programming project that provides printer drivers for a variety of printers, including Canon, Epson, Lexmark, and PCL printers.

## **Scanners**

Go to [www.apple.com/macosx/upgrade/scanners.html](http://www.apple.com/macosx/upgrade/scanners.html).

See Appendix H for additional resources for scanner drivers.

## **Digital cameras**

Go to [www.apple.com/macosx/upgrade/cameras.html](http://www.apple.com/macosx/upgrade/cameras.html).

## **Monitors and projectors**

Go to [www.apple.com/macosx/upgrade/monitors.html](http://www.apple.com/macosx/upgrade/monitors.html).

## **Storage devices**

Go to [www.apple.com/macosx/upgrade/storage.html](http://www.apple.com/macosx/upgrade/storage.html).

## **Input devices**

Go to [www.apple.com/macosx/upgrade/input.html](http://www.apple.com/macosx/upgrade/input.html).

# Appendix C: Working with a Multiuser System

Several people can share a Mac OS X–based system by logging in to their individual user accounts. Each user has a home directory, which can be located on the computer or on a network server. Each user’s system and application preferences (such as bookmarks and desktop views) are kept in his or her home directory, providing a customized experience for each person. Each user can control access to his or her private files while safely sharing selected files with other users. All users sharing the computer also have access to a common Shared folder. A designated administrator can control the access of other users, such as to restrict access to certain programs and functions.

Automatic login can be enabled on a Mac OS X system, but you should be cautious about enabling it if more than one person uses the computer. If the auto-login account has administrator privileges, all users starting up the Mac would have those privileges. They would also have access to the automatically logged-in user’s documents. In addition to the potential security ramifications, any other user would have to log out and log back in to access his or her own account and files. If you do want to use auto-login on a multiuser Mac, it would be best to set up a restricted guest account for this purpose. Authorized users can then log out of the guest account and back in as themselves to get their individual privileges and documents.

## **Administration and system security**

The first user account created on your computer is designated an “administrator.” Administrators are users with special privileges: They can create new user accounts, install software, and change general computer settings.

If you forget the administrator password, you can reset it using the Mac OS X CD. Start up from the Mac OS X Disc 1 CD and choose Reset Password from the Installer menu.

If you need a higher level of security, you can use Open Firmware Password Protection, which prevents anyone (including you) from accessing the computer without the Open Firmware password. For information, see [docs.info.apple.com/article.html?artnum=106482](http://docs.info.apple.com/article.html?artnum=106482).

You can require a password to access the computer after the screen saver appears, in case users log in and leave the computer unattended. Use the Desktop & Screen Saver pane in System Preferences to turn this feature on.



If you are a mobile user and you work on sensitive documents, you can protect those documents with FileVault, a new feature in Mac OS X Panther. FileVault secures the contents of your home directory with powerful AES-128 encryption. Encryption and decryption take place in the background, so FileVault won't slow down your work.

# Appendix D: Support Programs and Maintenance Tips

When you purchase a new Apple computer, you receive 90 days of telephone support and one year of service coverage at an Apple-authorized repair center. Your new computer also comes with some great tools to help you use it more effectively. You can use the onscreen Mac Help Center to find step-by-step instructions and troubleshooting information. Product manuals and online resources are also available at [www.apple.com/support](http://www.apple.com/support).

## Apple Support and Purchasing Options

In addition to built-in support, Apple offers a full range of award-winning service and support programs and purchasing plans. These options provide creative professionals and their organizations with long-term peace of mind and economical ways to keep their software current.

- **AppleCare Protection Plan.** You can purchase the AppleCare Protection Plan to extend the complimentary coverage on your Mac to three years from the computer's purchase date. This comprehensive plan includes expert telephone assistance, onsite repairs for desktop computers,\*\* global repair coverage for portable computers, web-based support resources, and powerful diagnostic tools at an economical price. One phone call with an AppleCare representative can help troubleshoot most issues with your Apple hardware, Mac OS X, and many of Apple's built-in applications.

The AppleCare Protection Plan must be purchased while your Apple system is within its one-year warranty. It is recommended that you purchase the plan when you purchase your system to take maximum advantage of the coverage it provides. For more information about this and other Apple support products, visit [www.apple.com/support/products](http://www.apple.com/support/products).

- **Apple Volume Licensing.** The Apple Volume License Program offers organizations the most cost-effective means of acquiring multiple licenses for a specific release of Apple software. Customers can enter the program with a minimum purchase of 10 software licenses. Software eligible for volume license discounts includes Mac OS X, Mac OS X Server, Final Cut Express, Final Cut Pro, DVD Studio Pro, Keynote, Soundtrack, AppleWorks, QuickTime, and QuickTime Pro. (Software and documentation is not included in the license fee but can be purchased separately.) For more information, visit [store.apple.com/AppStore/WebObjects/BizCustom?qprm=78313&family=VolLicense](http://store.apple.com/AppStore/WebObjects/BizCustom?qprm=78313&family=VolLicense).
- **Apple Maintenance Program.** The Apple Maintenance Program is a three-year subscription entitling customers to every major release of a particular Apple software product delivered during the term of the maintenance contract. Eligible products include Mac OS X, Mac OS X Server, Final Cut Express, and Keynote. The program is cost-effective and offers tiered pricing. To enroll, you must be using the most current

major release of the software. The Apple Maintenance Program is the ideal way to manage your organization's software investment while benefiting from future Apple software innovations. For more information, visit [store.apple.com/AppleStore/WebObjects/BizCustom?qprm=78313&family=Maintenance](http://store.apple.com/AppleStore/WebObjects/BizCustom?qprm=78313&family=Maintenance).

## System Maintenance Tips

Because Mac OS X is based on the UNIX operating system, system maintenance is somewhat different than with Mac OS 9. A number of standard UNIX utilities—many of which now have easy-to-use Macintosh graphical interfaces—and Macintosh-specific utilities are included with Mac OS X.

To keep Mac OS X running well, use Software Update or visit the Apple website regularly for security, operating system, and Apple application updates. You can set Software Update to check for updates daily, weekly, or monthly.

### Fixing file system errors

Many file system errors are minor and not even noticeable, but occasionally they may prevent the computer from starting up in a normal state. This could occur after an improper shutdown, a forced restart, or a power interruption.

If your system does not complete its startup successfully, you should use a disk repair utility. First try a feature introduced in Mac OS X v10.2 called Safe Boot. It may allow you to restart successfully using a reduced version of system software. During this restart, a disk check and repair are performed that may resolve your issue. If they do, you do not need to take any further action.

Follow these steps to see whether Safe Boot will resolve the issue:

1. Restart the computer (using the Power button or Reset/Interrupt button if necessary).
2. Immediately after the system startup sound, press and hold the Shift key until Safe Boot appears on the screen. (Note that there may be a considerable delay before this happens, particularly on larger startup volumes, because the disk check and repair take place before Safe Boot appears.)
3. After the system is fully started up, restart again normally.

If the restart is successful, you do not need to do any more troubleshooting.

### Disk Utility

If the Safe Boot disk repair is not successful, try verifying and repairing the internal disk using Disk Utility from a Mac OS X startup CD.

1. Insert your Mac OS X CD or Restore DVD disc, then restart the computer while holding down the "c" key.
2. When the system has started up, choose Disk Utility from the Installer menu.  
**Important:** Do not click Continue in the first screen of the Installer. If you do, you must restart from the disc to access Disk Utility.
3. Click the First Aid button.
4. Click the disclosure triangle to the left of the hard disk icon to display the names of your hard disk volumes and partitions.
5. Select your Mac OS X volume, if it isn't already highlighted.
6. Click Repair. Disk Utility checks the disk.
7. Start up the computer again, this time from your normal startup disk.

### Repairing permissions

Sometimes the privileges or permissions of items in the file system become modified in such a way that an application may crash or not function properly. Disk Utility can repair the permissions of operating system files and directories.

1. Open Disk Utility (in /Applications/Utilities/).
2. Click the First Aid button.
3. Click the disclosure triangle to the left of the hard disk icon to display the names of your hard disk volumes and partitions.
4. Select your Mac OS X volume, if it isn't already highlighted.
5. Because this is your system volume and you are running Disk Utility from it, the normal Repair Disk and Verify Disk options are disabled, but you can select Verify Disk Permissions or Repair Disk Permissions.
6. Click Repair Disk Permissions. Disk Utility repairs the permissions on the volume.

To ensure that permissions are properly set, you may want to repair permissions after you install a new application or a software update.

### Backing up your files

Mac OS X has built-in functionality for creating a master backup of your base system configuration. This base configuration can include all of your installed applications and any customizations you make to your system. You can then create a disk image from which you can restore your system configuration in case the hard drive ever becomes damaged. The restoration is performed with Disk Utility. It can be performed across a network or from another disk that the target computer is started up from.

Third-party file backup products are also available; see Appendix H for information.

### Disk optimization

In the past, many Mac users have relied on disk optimization to improve access times when reading files from a hard drive. As files are changed and the hard drive fills up, parts of a single file may be stored in different locations on the volume. In other words, the file becomes fragmented.

Disk optimization streamlines the physical locations of files by collecting file fragments and putting them back together in contiguous parts of the drive. Rearranging files (and metadata) improves data access times and minimizes the time required to move the hard drive's read/write head. However, if a failure (such as power loss) occurs during optimization, files can be damaged, and you will need to restore them from a backup copy.

Once you have migrated to Mac OS X, you may not need to optimize your disk at all. Here's why:

- Hard disk capacity is generally much greater now than a few years ago. With more space available, the file system doesn't need to fill up every nook and cranny.
- The Mac OS Extended (HFS+) file system format avoids reusing space from deleted files as much as possible. This avoids prematurely filling small areas of recently freed space.
- Mac OS X v10.2 and later versions include delayed allocation for volumes that use the Mac OS Extended format. This design allows a number of small allocations to be combined into a single large allocation in one area of the disk.

- Fragmentation was often caused by continually appending data to existing files. With faster hard drives and better caching, as well as changes to the ways applications work on Mac OS X, many applications simply rewrite the entire file each time. Mac OS X Panther can also automatically defragment such slow-growing files.
- Aggressive read-ahead and write-behind caching means that minor fragmentation has less effect on perceived system performance.
- Mac OS X systems have hundreds of thousands of small files, most of which are rarely accessed. Optimizing them is a major effort for very little practical gain. There is also a chance that one of the files designated for rapid reads during system startup might be moved during defragmentation, which would actually decrease performance.

For all of those reasons, there is usually little benefit to defragmenting a hard drive on a Mac OS X system. However, if your disks are almost full and you often modify or create large files, there's a chance they could be fragmented. In this case, they might benefit from defragmentation. A number of third-party utilities are available for this purpose.

# Appendix E: Troubleshooting

Here are some basic suggestions for troubleshooting a Mac OS X–based system. If you try these recommendations and the problem persists, check out additional Apple support options at [www.apple.com/support/products](http://www.apple.com/support/products) and the Apple support database at [www.info.apple.com](http://www.info.apple.com). Also check the support website of the developer of a product you are having a problem with.

You can find information about books on using and troubleshooting Mac OS X at [www.apple.com/macosx/resources](http://www.apple.com/macosx/resources).

## New Hardware or Software

If you installed new hardware or software shortly before the problem started, try the following suggestions.

### Hardware

- Check the RAM, storage drives, adapter cards, and USB devices.
- Remove the device and retest for the problem.
- Swap user-changeable components (such as RAM) with other like hardware that is not experiencing the problem.
- In a professional publishing environment, it's recommended that you keep at least 5GB to 7GB of disk space available at all times. Performance issues are sometimes due to low disk space.

### Software

Potential problem sources include virus software, fonts, utilities, and application preferences.

- Run Repair Disk Permissions in Disk Utility before and after every software installation.
- Check the developer's website to make sure that you have the latest version of the software and that it is compatible with Mac OS X v10.3. Uninstall the suspicious application and retest without it.



Sometimes software problems are specific to a certain user account. To determine whether this is the case, create a new user, then log in as that user and test for the problem again. If the problem no longer occurs, you may want to move your data to the new account and delete the old one. Follow these steps:

1. Log in as the original user.
2. Move all of your data to the Shared folder.
3. Log out.
4. Log in under the new account.
5. Move the data from the Shared folder to the appropriate folders in your new account.
6. Delete the old account, including any folders it owned.

As always, be sure to back up your hard drive before deleting data.

## Preferences

Sometimes the preferences for an application become corrupted. In this case, you need to throw out the corrupted file and create a new preferences file for that application.

Preference files are typically stored in two places in the system. The first location is a user's Library/Preferences folder (`~/Library/Preferences`); preferences stored here are not shared by other users. The other location is the startup volume's Library/Preferences folder (`<startup volume>/Library/Preferences`); it contains preferences shared by all users. In either folder, look for an `<application name>.plist` file that contains your custom settings for an application. Move the file out of the folder so that the application can't find it and open the application again. The software creates a new preferences file. If this fixes the problem, delete the old preferences file.

Check with the developer of your application for advice on when to perform such a task and which settings it affects. You can also search the Apple support site ([www.info.apple.com](http://www.info.apple.com)) using the query term "plist" to see which items in Mac OS X might be affected by a damaged plist file.

## System Caches

To improve the performance of Macintosh systems, various pieces of information are stored in caches for fast access. Occasionally, one of these caches can be damaged. Typical problems resulting from a damaged cache include fonts that display incorrectly or printers that no longer seem to function. You can delete damaged caches in the Finder.

## Clean Installation

When none of the preceding steps works and you have established (by running Disk Utility) that the hard disk is not damaged, you will need to archive your data and perform a clean installation of Mac OS X.

If the problem you are experiencing is network related, do not keep your current network settings as part of the reinstallation. If you use the Archive and Install option, you may need to reinstall some applications, but for the most part, your data will be preserved. The previous System folder is placed at the top level of your hard drive. It is no longer usable, but you can move items out of it into the new System folder. Do not delete the previous System folder until you are sure you have copied all the files you need from it. See the section "Installing Mac OS X" for details on the Archive and Install option.

Additional troubleshooting resources can be found in Apple's Knowledge Base: [docs.info.apple.com/article.html?artnum=25392](https://docs.info.apple.com/article.html?artnum=25392).

If you need more information about system font caches (fontTablesAnnex), see [docs.info.apple.com/article.html?artnum=25398](https://docs.info.apple.com/article.html?artnum=25398).

# Appendix F: Formatting Your Hard Disk

## Formatting terms

**Format (Erase).** When you format or erase a disk, important data structures on the disk are rewritten, effectively deleting all of the files and folders it previously contained.

**Partition.** To divide a single hard disk into two or more virtual drives, called volumes. Each volume appears as a separate disk icon in the Finder. (A partition is the same as a volume.)

**Volume.** An entire unpartitioned hard drive or a partitioned section of one.

You will rarely need to reformat a hard disk before installing Mac OS X. However, if you encounter serious problems while verifying the file system, or if the disk is not currently in Mac OS Extended (HFS+) format, you will need to reformat it.

Formatting a volume on your hard disk permanently erases all the files contained in it, so make sure you have a current backup of any important files before you reformat.

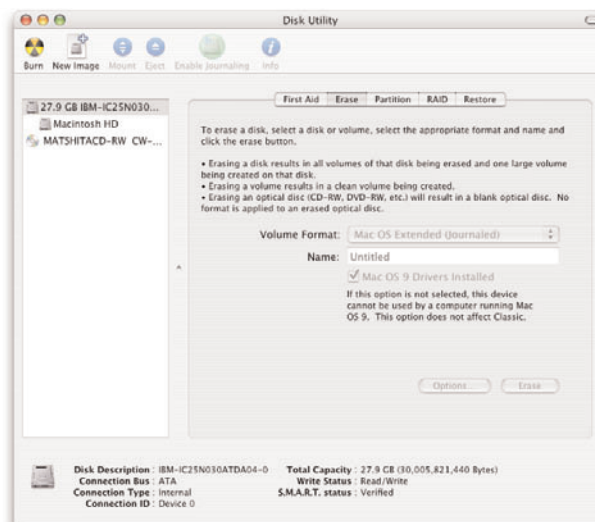
## Using Disk Utility

The Mac OS X CD contains an application called Disk Utility that allows you to format and partition your disk. This section guides you through the formatting and partitioning process. Choose the appropriate section below depending on whether the disk is already partitioned and whether you want to end up with one or more volumes.

### Erase a disk and create a single volume

This task completely erases all files and volumes from the disk, whether it currently contains one or multiple volumes. A single large volume is created.

1. Make sure you have a backup copy of your important files.
2. Start up your computer from the Mac OS X Disc 1 CD. (To start the computer from a CD, press the "c" key after you hear the startup chime and hold it until the Apple logo appears on the screen.)
3. From the File menu, choose Open Disk Utility.
4. Click the Erase button.



**To partition or not to partition?**

For most Mac OS X users, a single partition (or volume) is recommended. When you get a new Mac, it contains a single volume. However, if you are accustomed to working with multiple volumes in Mac OS 9, you can continue to do so in Mac OS X.

Using a single volume on your drive simplifies file organization. If you decide to partition the drive, you need a good strategy. Think about how you work and where you're going to store files. Then decide on an appropriate size for each volume. If you don't get the sizes right, you may eventually end up with one volume completely filled while another is nearly empty. If this happens, you'll have to repartition the drive (erasing its contents) or change the way you organize your files.

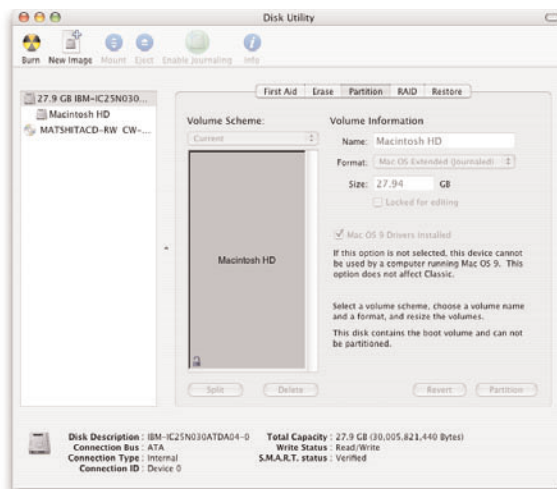
You can install Mac OS X on a drive that contains multiple volumes. Mac OS X works in any volume as long as there is enough space. If necessary, you can erase the contents of some volumes and retain the data on others.

5. Select the disk you want to erase from the list on the left side of the Disk Utility window. (In the list, volumes have names next to their icons; disks have sizes.)
6. In the Volume Format pop-up menu, choose Mac OS Extended.
7. In the Name field, enter a name for the volume that will be created.
8. Click the Install Mac OS 9 Drivers checkbox to install the drivers.
9. Click Erase to erase the disk.

**Erase a disk and create multiple volumes**

This task completely erases all the files from a disk. All existing volumes are erased and are replaced by new volumes that you define.

1. Make sure you have a backup copy of your important files.
2. Start up the computer from the Mac OS X Disc 1 CD. (To start the computer from a CD, press the "c" key after you hear the startup chime and hold it until the Apple logo appears on the screen.)
3. From the File menu, choose Open Disk Utility.
4. Click the Partition button.

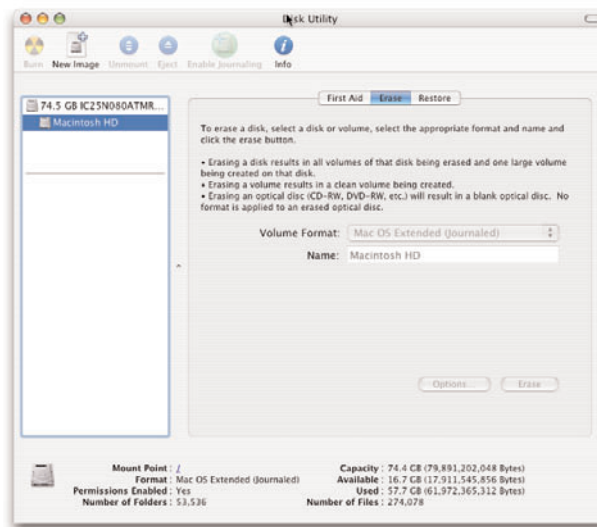


5. Select the disk you want to partition from the list on the left side of the Disk Utility window. (In the list, volumes have names next to their icons; disks have sizes.)
6. In the Volume Scheme pop-up menu, select the number of volumes you want to create.
7. Change the size of the volumes by dragging the volume divider bars or by selecting a partition and entering a value into its Size field.
8. Name each volume by selecting it and entering a name into its Name field.
9. Set the format of each volume to Mac OS Extended using the Format pop-up menu.
10. Click the Mac OS 9 Disk Drivers Installed checkbox to install the drivers.
11. Click Partition to partition the disk.

### Erase files from a single volume

This task completely erases all the files from a single volume of a partitioned system. The volume is not resized, and other volumes on the disk are not affected.

1. Make sure you have a backup copy of your important files.
2. Start up the computer from the Mac OS X Disc 1 CD. (To start the computer from a CD, press the “c” key after you hear the startup chime and hold it until the Apple logo appears on the screen.)
3. From the File menu, choose Open Disk Utility.
4. Click the Erase button.



5. Select the volume you want to erase from the list on the left side of the Disk Utility window. (In the list, volumes have names next to their icons; disks have sizes.)
6. In the Volume Format pop-up menu, select Mac OS Extended.
7. In the Name field, enter a name for your volume.
8. Click Erase to erase the volume.

### Additional Resources

You can find additional resources in the Apple Customer Support Library ([www.apple.com/support](http://www.apple.com/support)).

For more information on fixing file system errors, check [docs.info.apple.com/article.html?artnum=106464](http://docs.info.apple.com/article.html?artnum=106464) or [docs.info.apple.com/article.html?artnum=107392](http://docs.info.apple.com/article.html?artnum=107392).

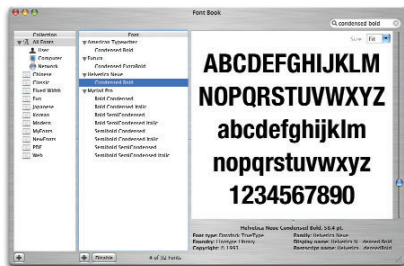
For more information on repairing permissions, check [docs.info.apple.com/article.html?artnum=106712](http://docs.info.apple.com/article.html?artnum=106712) or [docs.info.apple.com/article.html?artnum=125109](http://docs.info.apple.com/article.html?artnum=125109).

For more information on backing up your files, check [docs.info.apple.com/article.html?artnum=25498](http://docs.info.apple.com/article.html?artnum=25498).

# Appendix G: Font Book

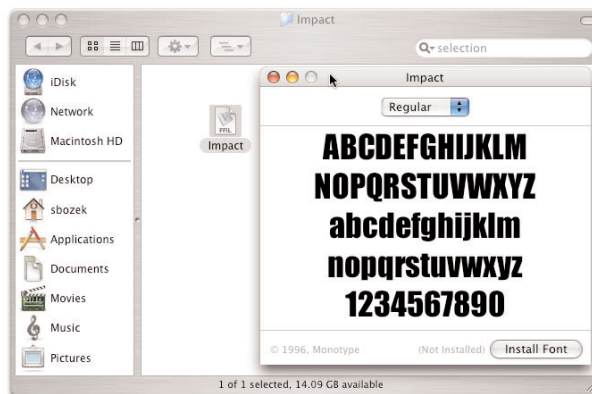
## Searching for fonts

Font searching in Mac OS X Panther enables you to quickly find the fonts you need, even with a library of thousands of fonts. You can search for fonts by their family name, such as Helvetica or Times, or by the typeface name, such as Bold, Condensed, or Italic. The latter can be very useful for finding the right style of font even if you don't know the name. In the example below, a search for Condensed Bold shows only those families and typefaces with fonts that are both bold and condensed.



Mac OS X now includes Font Book, a separate application that provides a wide range of powerful font management capabilities. If you are not currently using a third-party font management application, it is recommended that you add your fonts to Font Book. This will allow you to begin creating font sets, called collections, for specific tasks, projects, and software applications.

Font Book displays fonts that are in any of the approved Mac OS X font locations. See “Where to Install Fonts” on page 55 for more information on how to select the best locations for your needs.



## Font Collections

Font Book gives you the ability to create groups of fonts, called collections. These collections help to organize your fonts so that they are easier to find and integrate into your workflow. Several collections are provided with Mac OS X; you can also create your own. Collections are mainly used in the Font panel to limit the fonts that you view, but you can also use them to enable or disable large groups of fonts on your system.

### Organizing fonts in Font Book

If you're a professional designer who deals with thousands of fonts, creating collections is the only way to organize your font libraries. The following are some ways you can use collections to manage large libraries.

- **Alphabetically.** Organize fonts in alphabetical groups, such as A–D, E–H, and so on. This is the simplest method of organization, but it allows for fast navigation when searching for a font name.
- **By project name.** Create a collection of fonts that you plan to use for a particular project, so you see only the fonts you need.
- **By client.** Many clients require a specific set of fonts for all of their projects. Creating a collection makes it easier to enable the fonts you need when working on these projects.

Because you can create any number of collections, you can use all of these techniques and more to organize your fonts. Individual font families can be placed in multiple collections.

### All Fonts collection

The default collection of fonts on your system is All Fonts. This collection shows all the fonts that are available to you on a particular computer, whether they're installed on the computer just for you or shared with everyone on the network. This is a special collection because it displays fonts as they are stored and shared on your system.

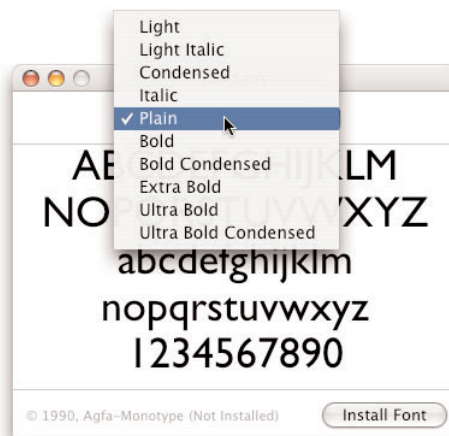
- **User.** These fonts are installed in the user's Fonts folder under Library. They are available only to the user who installs them.
- **Computer.** These fonts are installed in the System Fonts folder under /System/Library/Fonts and in Library/Fonts and are shared with all users on the system.
- **Network.** If you are on a network with a server that shares fonts, those fonts appear in this collection.

### How to Install Fonts in Font Book

There are two ways to add fonts to Font Book. With both options, fonts are automatically activated when they're installed. You can later disable specific fonts temporarily, allowing you to control which fonts are active for a specific job without having to physically remove the ones you don't need.

### Selecting in the Finder

To add a font to Font Book from the Finder, begin by viewing your available fonts in a Finder window. Double-click the font you want to add. Font Book displays a preview of the font. (If the font you want to add is a PostScript font, be sure to double-click the screen font, not the printer font.) A pop-up menu above the font sample indicates the available styles for that font.



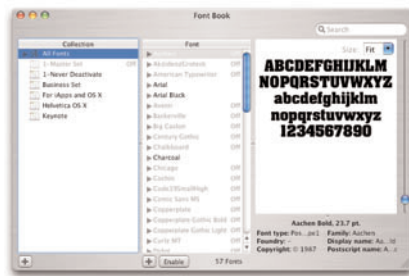
To install the selected font, click Install Font. Where the font is installed depends on the settings in your Font Book preferences.

### Previewing fonts

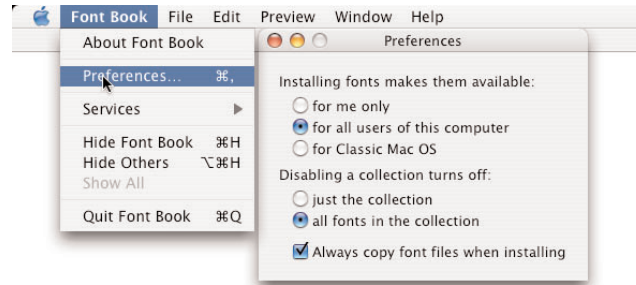
Once a font is installed, you can preview it in different ways from the Preview menu:

- **Sample.** Shows the font using a standard alphabetical list of characters.
- **Repertoire.** Shows the entire list of characters available in the font.
- **Custom.** Shows what a custom string of text looks like in the font. (This is the only mode that allows you to type into the preview window.)

In all font preview modes, you can zoom in and out to view a font in a wide range of sizes.



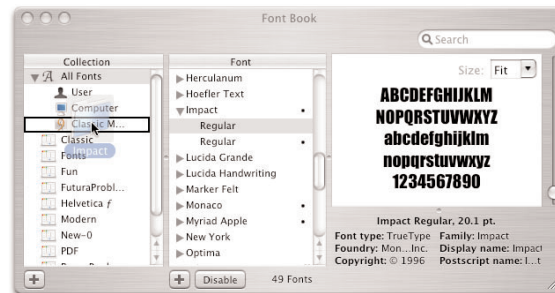
At the bottom of the preferences window is a checkbox labeled “Always copy font files when installing.” If this preference is off (the default setting), any fonts that are installed on the current hard drive by Font Book are moved into the designated installation location, and any organization associated with the previous disk location or directory is lost. If the font is on a separate volume, it is copied to the designated Font Book installation location.



If the Classic environment is installed on your system, there are three possible locations for fonts to be installed; the default behavior can be set through Font Book preferences as described earlier. If Classic is not installed, the radio button “for Classic Mac OS” is still available, but the installation defaults to “for all users of this computer,” and the font is installed in the <startup volume>/Library/Fonts directory.

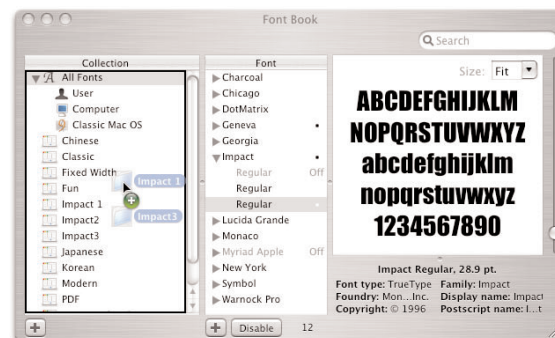
If “for me only” is selected, the installation location is ~/Library/Fonts/.

You can override the preferred installation location by dragging the font (or the folder containing the font) directly to the desired location.



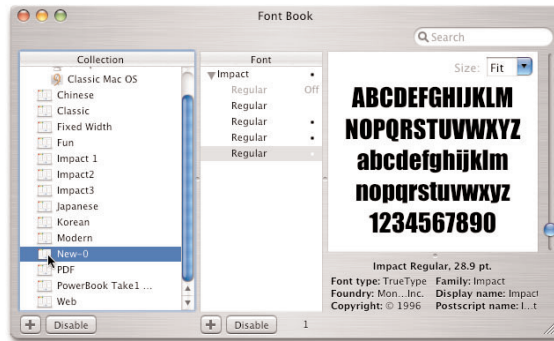
### Dragging and dropping

Alternatively, you can drag a folder containing fonts into the Collection list in Font Book. If only one folder is dragged to the list, the new collection maintains the name of the top-level directory.





If two or more folders are dragged, the directories are combined into one set with a new name assigned by Font Book. (Note that creating collections by dragging folders from the Finder rather than selecting fonts from the font list may result in duplicate fonts being added to Font Book. See the section “Duplicate Fonts” for tips on how to handle duplicate fonts.)



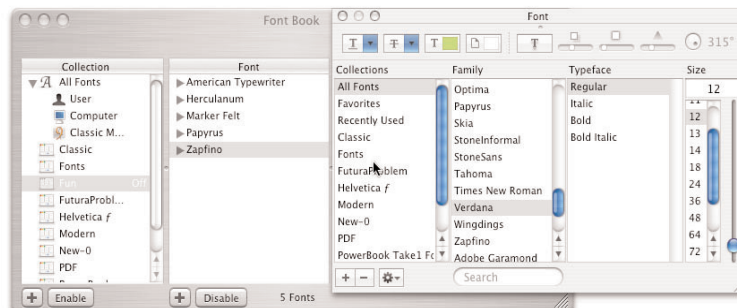
## Disabling Fonts

With Font Book, fonts can be stored in the various font directories in Mac OS X without being activated. This activation and deactivation is controlled by Font Book; you cannot tell the state of the font by viewing it in the Finder.

As mentioned earlier, fonts are automatically activated as soon as they are added to Font Book. To disable a font (or an entire collection), simply select it and click the Disable button at the bottom of the font or collection window.

(Note that there are two possible behaviors for the Disable button for a collection. If the preference is set to “just the collection,” that font collection is disabled in the Mac OS X Font panel. However, the fonts are still active for all other application menus. If “all fonts in the collection” is selected, disabling turns off the collection and the fonts in the collection.)

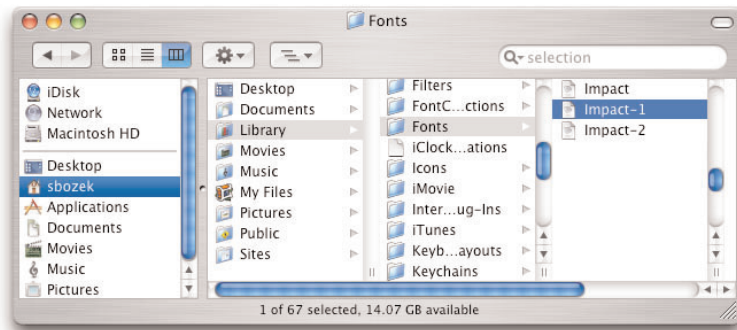
To reactivate a font or collection, select the desired item and click the Enable button at the bottom of the window. The disabled font is marked as “Off” next to its name. Font Book automatically toggles the button’s label between Disable and Enable as appropriate.



## Duplicate Fonts

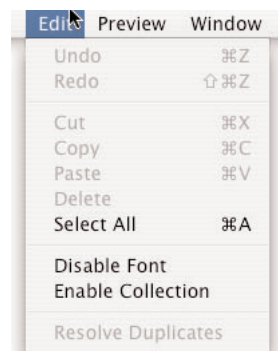
If you frequently receive groups of fonts for specific jobs, you should add the set, do the job, then delete the set and the fonts associated with it before adding another set. This will keep your System folder free of duplicate fonts.

However, if you do end up with duplicate fonts, Mac OS X appends numbers to their names to avoid confusion. The number is incremented every time you add a font of the same name to the same directory. For example, a prepress shop might load 10 jobs in a day. If all the sets contain Helvetica fonts, by the end of the day your font folder will have 10 copies of Helvetica, labeled Helvetica through Helvetica-9 when you view the folder in the Finder.



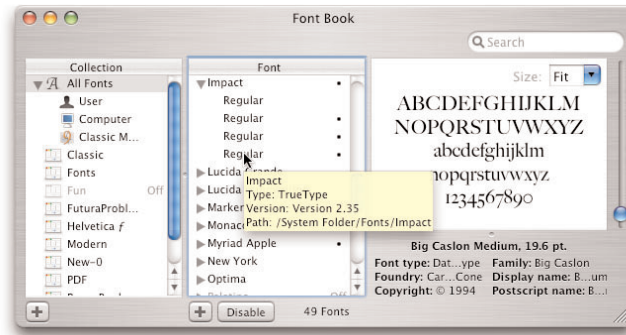
In the Font panel and in font lists, only the active Helvetica will show. Font Book, however, gives you access to all of the duplicate fonts—although without the suffix numbers that distinguish them in the Finder. Therefore, you need a way to select the desired version of Helvetica for each job you do. Font Book offers both automatic and manual methods of activating a specific font from among duplicate fonts.

To automatically resolve duplicate fonts within Font Book, select Edit > Resolve Duplicates. Be sure that you have not selected a font from the list before choosing Resolve Duplicates. Font Book will automatically make the last font loaded in ~/Library/Fonts the active font.



Alternatively, you can resolve duplicate fonts manually. To do this, click the specific font you want to activate, then choose Edit > Resolve Duplicates. The font you selected will be activated, and all of the duplicates will be deactivated.

Each duplicate font is replicated in every set. To help you tell the fonts apart when you're choosing one to activate, position your cursor over one of them in the list. A yellow "hover note" appears that displays detailed information about the font, including its location.



Whether you choose an active font from among the duplicates automatically or manually, you will see that all instances of the font except one have a dot next to their names. The one without the dot is the active font.

# Appendix H: Additional Resources

With the powerful new features and refinements in Mac OS X Panther, it's likely you will have all the tools you need to migrate to, manage, and troubleshoot a Mac OS X system. However, there may be occasions when you need additional functionality for specific print, design, publishing, or other creative tasks. This section lists a selection of Apple and third-party products that may be useful to you. Please note that this section is provided for informational purposes only; Apple neither endorses nor supports third-party products listed in this guide.

## Websites

- [www.apple.com/pro](http://www.apple.com/pro). Resources for creative professionals. Stories, information papers, links to seminars, and more.
- [www.apple.com/macosx](http://www.apple.com/macosx). Information about Mac OS X Panther applications and featured technologies.
- [www.apple.com/downloads](http://www.apple.com/downloads). Software downloads for Mac OS X.
- [www.apple.com/guide](http://www.apple.com/guide). An online catalog of more than 23,000 hardware and software products for the Mac.
- [www.info.apple.com](http://www.info.apple.com). Apple's support site and Knowledge Base for questions and troubleshooting.
- [www.versiontracker.com](http://www.versiontracker.com). A commercial catalog site for Mac OS X software and updates. Offers automatic notification of recently released updates.
- [www.macosxlabs.org](http://www.macosxlabs.org). Website for the Higher Education Mac OS X Lab Deployment Initiative. The goal of Mac OS X Labs is to simplify the task of installing and maintaining Mac OS X in computer labs.

## Printed and electronic books

- [www.apple.com/macosx/resources](http://www.apple.com/macosx/resources). Information about helpful books to get the most out of Mac OS X.
- *Mac OS X Panther Killer Tips* ([www.peachpit.com](http://www.peachpit.com)). A collection of tips and hidden secrets for the pro who needs results fast.
- *The Mac OS X Conversion Kit: 9 to 10 Side by Side, Panther Edition* ([www.peachpit.com](http://www.peachpit.com)). Lefthand pages show how you did a particular task in Mac OS 9; righthand pages show you how to accomplish the same task in Panther.
- The X Lab ([www.thexlab.com](http://www.thexlab.com)). *Troubleshooting Mac OS X*, an advanced troubleshooting resource.
- *Panther Tips & Tricks* ([www.maclifestyle.com](http://www.maclifestyle.com)). Electronic book that helps you save time learning how to use Mac OS X like a pro.

### Advanced font management

- FontAgent Pro ([www.insidersoftware.com](http://www.insidersoftware.com)). Repairs and organizes fonts.
- Font Reserve and Suitcase ([www.extensis.com](http://www.extensis.com)). Tools to help you find, preview, and activate the fonts you need quickly.
- Master Juggler ([www.alsoft.com/MasterJuggler/index.html](http://www.alsoft.com/MasterJuggler/index.html)). A professional-level font manager for Mac OS X that gives you access to your entire font library and lets you store, preview, and activate only the fonts you want to use.

### Font utilities

- Adobe Type Manager Light ([www.adobe.com](http://www.adobe.com)). A free utility that allows your fonts to look good at all sizes in Classic applications.
- Apple Font Tools ([developer.apple.com/fonts/OSXTools.html](http://developer.apple.com/fonts/OSXTools.html)). Free Mac OS X command-line tools.

### Windows connectivity

- Thursby Software ([www.thursby.com](http://www.thursby.com)). Mac and Windows networking software with enhanced features.

### File sharing

- SharePoints ([www.hornware.com](http://www.hornware.com)). Peer-to-peer solution that makes it easy to share any Mac OS X folder.

### File backup utilities

- Carbon Copy Cloner ([www.bombich.com](http://www.bombich.com))
- Data Backup X ([www.prosofteng.com/products/data\\_backup.php](http://www.prosofteng.com/products/data_backup.php))
- FWB Backup ToolKit ([www.versiontracker.com](http://www.versiontracker.com))
- Norton SystemWorks for Macintosh ([www.symantec.com](http://www.symantec.com)). Includes Retrospect Express.
- Retrospect ([www.dantz.com](http://www.dantz.com))
- Tri-BACKUP ([www.tri-edre.com](http://www.tri-edre.com))

### Scanners

If your scanner is not directly supported by Mac OS X, here are some third-party options:

- SilverFast Ai ([www.silverfast.com](http://www.silverfast.com))
- VueScan ([www.hamrick.com](http://www.hamrick.com))

Third-party scanner drivers are available at [www.apple.com/downloads/macosx/drivers](http://www.apple.com/downloads/macosx/drivers).

### Maintenance utilities

Mac OS X includes two disk repair utilities: Disk Utility and the command-line tool `fsck`. See the article “About Using Disk Utility and `fsck` for File System Maintenance” ([docs.info.apple.com/article.html?artnum=106214](http://docs.info.apple.com/article.html?artnum=106214)) for guidelines on how and when to use each tool.

Always back up your data before running any disk maintenance or troubleshooting software. Also check the developer’s site to ensure that any tool you plan to use is compatible with your version of Mac OS X.

- Disk Warrior ([www.alsoft.com](http://www.alsoft.com))
- Drive 10 and Tech Tool Pro ([www.micromat.com](http://www.micromat.com))
- Font Cache Expunger ([www.elara.com](http://www.elara.com))
- Norton Utilities for Macintosh ([www.symantec.com](http://www.symantec.com))
- Panther Cache Cleaner ([www.northernsoftworks.com](http://www.northernsoftworks.com))
- Printer Setup Repair ([www.fixamac.net](http://www.fixamac.net))

#### **Other tools**

- Print Window ([www.swssoftware.com](http://www.swssoftware.com)). Allows you to print folder listings from the Finder.
- Trash It ([www.nonamescriptware.com](http://www.nonamescriptware.com)). An AppleScript script that force-deletes stubborn Trash items.
- WindowShade X ([www.unsanity.com](http://www.unsanity.com)). Adds window-shade and other minimizing enhancements to Finder windows.

# Appendix I: Migration Checklist

## 1. Evaluate your hardware.

(This item is for upgraders only. If you are migrating to a new Macintosh, you can skip to Item 2.)

Make sure your Mac is capable of running Mac OS X.

**Does the computer have a processor upgrade card?**

No     Yes (will **not** work with Mac OS X)

**Does it meet the following requirements?**

At least 128MB of physical RAM (1GB recommended)

A built-in display or a display connected to an Apple video card

At least 2GB of disk space (8GB recommended)

## 2. Check that your third-party hardware and peripherals will work with Mac OS X.

Item	Built-in Mac OS X support	Third-party driver needed
1. _____	<input type="checkbox"/>	<input type="checkbox"/>
2. _____	<input type="checkbox"/>	<input type="checkbox"/>
3. _____	<input type="checkbox"/>	<input type="checkbox"/>
4. _____	<input type="checkbox"/>	<input type="checkbox"/>
5. _____	<input type="checkbox"/>	<input type="checkbox"/>
6. _____	<input type="checkbox"/>	<input type="checkbox"/>

## 3. Evaluate your image editing and page assembly software.

Title	Version	Mac OS 9 only	Optimized for Mac OS X	Latest version to run in Mac OS X
1. _____	_____	<input type="checkbox"/>	<input type="checkbox"/>	_____
2. _____	_____	<input type="checkbox"/>	<input type="checkbox"/>	_____
3. _____	_____	<input type="checkbox"/>	<input type="checkbox"/>	_____
4. _____	_____	<input type="checkbox"/>	<input type="checkbox"/>	_____
5. _____	_____	<input type="checkbox"/>	<input type="checkbox"/>	_____
6. _____	_____	<input type="checkbox"/>	<input type="checkbox"/>	_____

**4. Evaluate your font management software.**

Title	Version	Mac OS 9 only	Optimized for Mac OS X	Latest version to run in Mac OS X
1. _____	_____	<input type="checkbox"/>	<input type="checkbox"/>	_____
2. _____	_____	<input type="checkbox"/>	<input type="checkbox"/>	_____
3. _____	_____	<input type="checkbox"/>	<input type="checkbox"/>	_____

**5. Evaluate your Internet applications.**

Title	Version	Mac OS 9 only	Optimized for Mac OS X	Latest version to run in Mac OS X
1. _____	_____	<input type="checkbox"/>	<input type="checkbox"/>	_____
2. _____	_____	<input type="checkbox"/>	<input type="checkbox"/>	_____
3. _____	_____	<input type="checkbox"/>	<input type="checkbox"/>	_____
4. _____	_____	<input type="checkbox"/>	<input type="checkbox"/>	_____
5. _____	_____	<input type="checkbox"/>	<input type="checkbox"/>	_____
6. _____	_____	<input type="checkbox"/>	<input type="checkbox"/>	_____

**6. Evaluate your business applications.**

Title	Version	Mac OS 9 only	Optimized for Mac OS X	Latest version to run in Mac OS X
1. _____	_____	<input type="checkbox"/>	<input type="checkbox"/>	_____
2. _____	_____	<input type="checkbox"/>	<input type="checkbox"/>	_____
3. _____	_____	<input type="checkbox"/>	<input type="checkbox"/>	_____
4. _____	_____	<input type="checkbox"/>	<input type="checkbox"/>	_____
5. _____	_____	<input type="checkbox"/>	<input type="checkbox"/>	_____
6. _____	_____	<input type="checkbox"/>	<input type="checkbox"/>	_____

**7. Evaluate your extensions and control panels.**

Check your extensions to make sure that Mac OS X has equivalent features (see page 9) and list those for which there is no equivalent. Check with the developers of these extensions to find out whether similar software is offered for Mac OS X.

Item	Built-in Mac OS X support	Third-party software needed
1. _____	<input type="checkbox"/>	<input type="checkbox"/>
2. _____	<input type="checkbox"/>	<input type="checkbox"/>
3. _____	<input type="checkbox"/>	<input type="checkbox"/>
4. _____	<input type="checkbox"/>	<input type="checkbox"/>
5. _____	<input type="checkbox"/>	<input type="checkbox"/>
6. _____	<input type="checkbox"/>	<input type="checkbox"/>



### 8. Evaluate your AppleScript scripts.

List your AppleScript scripts. Once you have upgraded to Mac OS X, you will need to make sure they still work.

- |          |          |
|----------|----------|
| 1. _____ | 4. _____ |
| 2. _____ | 5. _____ |
| 3. _____ | 6. _____ |

### 9. Record your Mac OS 9 network settings.

#### TCP/IP settings

IP address (or DHCP): \_\_\_\_\_ DNS servers: \_\_\_\_\_  
Subnet mask (or DHCP): \_\_\_\_\_ Domain name: \_\_\_\_\_  
Router (or DHCP): \_\_\_\_\_ Not used:

#### PPP settings

IP address: \_\_\_\_\_ DNS servers: \_\_\_\_\_  
Subnet mask: \_\_\_\_\_ Domain name: \_\_\_\_\_  
Router: \_\_\_\_\_ Not used:

#### PPPoE settings

Service provider: \_\_\_\_\_ Password: \_\_\_\_\_  
Account name: \_\_\_\_\_ Not used:

#### AppleTalk settings

AppleTalk zone (if any): \_\_\_\_\_ Node ID: \_\_\_\_\_  
Network ID: \_\_\_\_\_

### 10. Record your email settings.

Email address: \_\_\_\_\_ Password: \_\_\_\_\_  
User name: \_\_\_\_\_ Incoming mail server: \_\_\_\_\_  
Outgoing mail server: \_\_\_\_\_ IMAP or POP account: \_\_\_\_\_

### 11. Check off each of the final steps as you complete them.

- Back up your files.
- Verify your file system.
- Update Mac OS 9.
- Update firmware.

You are now ready to upgrade to Mac OS X or migrate to your new Mac OS X system.

## For More Information

For more information about Mac OS X, visit [www.apple.com/macosx](http://www.apple.com/macosx). Specific information about upgrading to Panther from earlier versions of the Mac OS is provided at [www.apple.com/macosx/upgrade/questions/howto.html](http://www.apple.com/macosx/upgrade/questions/howto.html).

\*Audio and video conferencing requires a compatible Internet service provider; fees may apply.

\*\*Onsite repair coverage is not available in all locations.

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