



Fonts in Mac OS X

Find, install, and manage all the fonts you need.

What's New in Tiger

- **Font automation.** Automate font management as part of your workflow using Automator and AppleScript.
- **Font validation.** Identify duplicate, malformed, or corrupt fonts using the new Font Validation pane in Font Book.
- **Font export.** Archive fonts to make it easier to exchange them with colleagues.
- **Personal font libraries.** Specify your own locations for font collections anywhere on the system.
- **More comprehensive search.** Find the fonts you need using more precise criteria, including language, copyright, style, and font type.

Features

- **Font Book.** Install, preview, and manage fonts with a simple-to-use application.
- **Standards support.** Use all the standard font formats, including OpenType, TrueType, and Adobe Type 1 PostScript. Character sets are encoded in the Unicode 4.0.1 standard.
- **Extensive font library.** Take advantage of over one hundred professional-quality typefaces, with support for Roman, Asian, Middle Eastern, Indic, and Cyrillic character sets.
- **Advanced text rendering.** Enjoy the highest readability on screen and in print. Mac OS X offers resolution-independent font rendering with subpixel anti-aliasing. Glyph variations and advanced typographical features of fonts are easily accessible.

Mac OS X version 10.4 "Tiger" delivers unmatched capabilities for beautifully rendering, quickly finding, and easily managing the fonts you need for your creative projects and workflows. Fonts are an important element of any document. Whether you're working on an advertisement, a newsletter, a book layout, or an invitation, the right font can enhance any professional or personal communication.

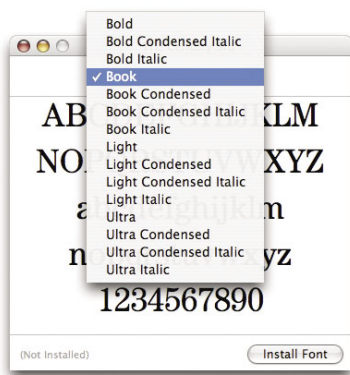
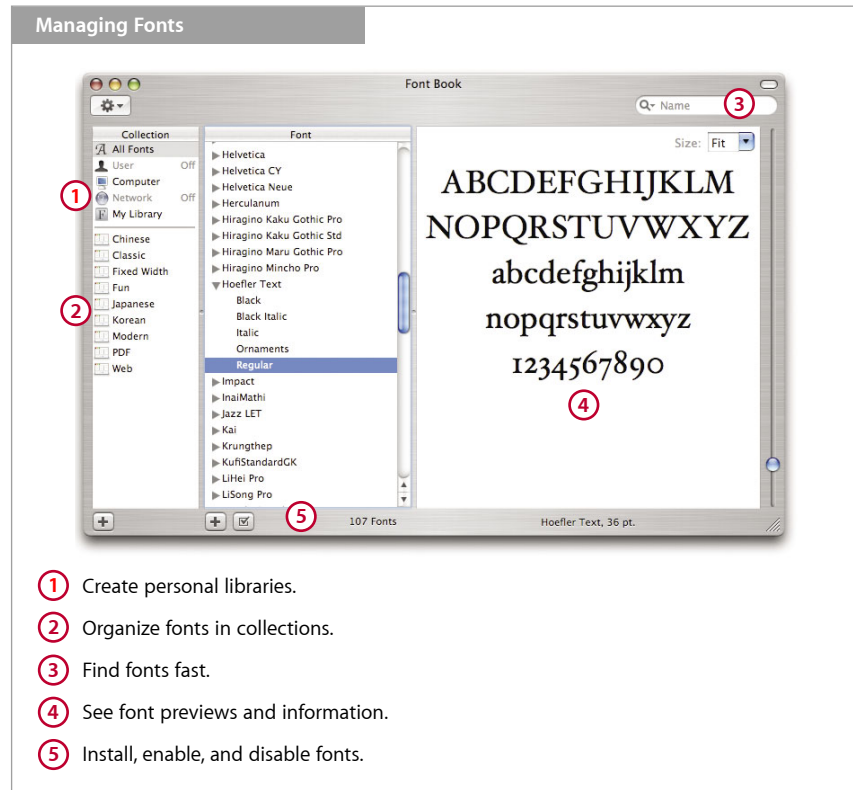
To help you manage your projects, Apple provides tools for specifying the exact fonts for your jobs. Mac OS X uses advanced techniques to make text crisp and easy to read on the screen and print them in the best resolution your printer offers. To help you gain complete control over the look of your fonts, easy-to-use utilities allow you to specify the exact style and layout. Tiger delivers everything you need to make fonts an integral part of your projects:

- **Easy management.** You can create font collections with Font Book, a powerful tool for installing, finding, collecting, and enabling the fonts you need. Font Book is even more flexible and powerful in Mac OS X Tiger, giving you the ability to automate font management tasks using AppleScript and the new Automator application.
- **Beautiful rendering.** Text is created through resolution-independent rendering and subpixel anti-aliasing. Controls let you access the advanced features built into many fonts, including ligatures, glyph variants, and more. You can take it one step further by applying shadows, colors, and other effects to your fonts and then saving them as styles for use across multiple applications.
- **Extensive font library.** More than one hundred professional-quality typefaces are included with Mac OS X Tiger, with an estimated market value of thousands of dollars. These fonts provide a broad range of characters and glyphs that support dozens of language scripts, including Japanese, Chinese, Korean, Thai, Arabic, Hebrew, Russian, Greek, and many more. The fonts also include many special-purpose character symbols, including scientific, mathematic, phonetic, Braille, and more.
- **Support for standards.** Mac OS X provides native support for most font standards, including OpenType, TrueType, and Adobe Type 1 PostScript fonts. The character sets are based on the standard coding scheme defined in the latest version of the Unicode standard, 4.0.1, so that Mac OS X can display nearly every character in the world.

With Mac OS X Tiger, you can easily apply these powerful font capabilities to make your words stand out.

Font Book

Font libraries can grow quite large, requiring you to manage them like your personal music and photo libraries. The Font Book application makes it easier to install, find, and activate the fonts you need by providing a familiar interface for creating collections of fonts and viewing previews of their character sets. Managing fonts in Mac OS X Tiger is similar to managing music in iTunes. You create collections of fonts (like playlists), and then use the collections to manage the fonts you want to use on your system at any given time.



Invite the whole family

When you double-click a font that contains multiple typefaces in the Finder, a single font preview pane appears. Use the pop-up list at the top to cycle through the typefaces you selected.

Preview and installation

Font Book makes font installation easy. In Tiger, it's also more scalable, allowing you to install thousands of fonts without affecting system performance. Double-clicking the font you want to install in the Finder opens a preview of the font, with the option to install it in just one click. You can even add folders of fonts in Font Book by selecting Add Fonts from the File menu.

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

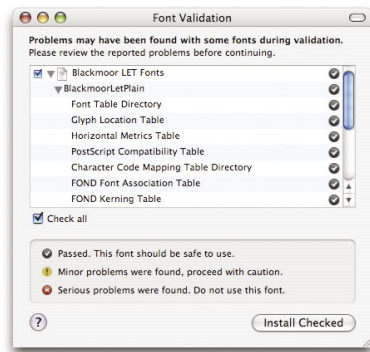
- **Sample.** See the font as a standard alphabetical list of characters.
- **Repertoire.** See the entire list of characters available in the font.
- **Custom.** Type whatever you want in this preview to see exactly what a piece of text will look like.

In all font preview modes, you have the option of resizing the font dynamically, so that you can zoom in and out of font previews to see what the font really looks like.

Font validation

Mac OS X Tiger makes it much easier to identify fonts that may cause problems in displaying or printing documents when you use them with your applications and the operating system. By default, Font Book validates a font when it is installed. Each font file is composed of a series of attributes that the system needs to display and print the font. To determine whether a font is valid, it checks the font files to make sure that these attributes are correctly formatted. The following are some of the attributes that Font Book checks when validating a font.

Font Table Directory	Table directory of the OpenType and TrueType font formats.
Glyph Location Table	OpenType and TrueType data table storing the offsets to the locations of the glyphs in the font.
Horizontal Metrics Table	OpenType and TrueType data table containing the advance width and left-side bearing of the font.
PostScript Compatibility Table	OpenType and TrueType data table containing additional information needed to use the font on PostScript printers, including the FontInfo dictionary entry and PostScript names of all the glyphs.
Character Code Mapping Table Directory	OpenType, TrueType, or synthesized data table defining the mapping of character codes to the glyph index values used in the font; it may contain more than one subtable, each supporting a different character encoding scheme.
Intercharacter Spacing Table	TrueType data table containing the values that control the intercharacter spacing for the glyphs in a font.
Font Name Table	OpenType, TrueType, or synthesized data table containing strings associated with the font, including copyright notices, font names, family names, and style names.



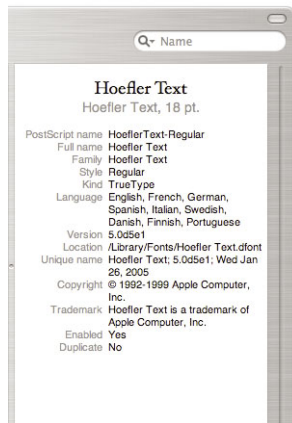
Font Validation pane

New in Mac OS X Tiger: Check the status of your fonts either before or after you install them.

After Font Book validates the font, a pane displays the results. Depending on what is found, you will see one of the following for each font:

- **Passed.** The font is safe to use and can be installed without problems.
- **Minor problems.** This result means only that duplicate fonts have been found. Because Mac OS X handles duplicate fonts without any problems, this alert simply indicates that you may want to remove one of the fonts.
- **Serious problems.** You should not install this font. Contact the original font vendor to obtain a properly formatted font. If you need to send an error report to the vendor, you can create one by selecting Save Report from the File menu.

If the font passes validation, you can check the box next to the font to enable the Install button and continue the installation.



Font information

You can view much more detailed information about each font through the new Font Info view.

Searching for fonts

In Mac OS X Tiger, you can now search on more specific font attributes to find exactly what you're looking for, even with a library of thousands of fonts. Font Book lets you search on the font name, PostScript name, and family name separately. You can search on language, kind, and other attributes of a font. Searching on the copyright name is useful if you want to find the fonts from a particular company, such as Adobe or ITC.



Font libraries

In Font Book, you can view your fonts in two different ways: libraries and collections. Libraries are the places where fonts are stored on your system or on a network. Libraries also specify which users and applications have access to the font.

Built-in font libraries

Mac OS X organizes fonts into separate folders, based mainly on who has access to the font. The following libraries are built into Font Book.

- **All Fonts.** This library shows all the fonts that are available to you on this computer, whether they're just for you, for everyone using the computer, or shared with everyone on your local network.
- **User.** These fonts are available only to the user who installs them.
- **Computer.** These fonts 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 library. (See the sidebar "Sharing fonts on the network.")
- **Classic.** When the Classic environment is turned on, you also see the library of fonts that Mac OS 9 uses. You can add fonts to Classic by putting them into this library. Fonts in this folder are accessible only to Classic, and none of the fonts in the other libraries are accessible to Classic.

Custom font libraries

A new feature in Tiger, custom font libraries allow you to keep your fonts wherever you want on the system, separate from the built-in locations for the user, computer, and network. This gives you the ability to manage the fonts in the file system however you choose, while taking advantage of the management capabilities that Font Book offers, such as enabling and disabling fonts.

Sharing fonts on the network

If you have a system using Mac OS X Server v10.3 or later, you can set up fonts to be shared across multiple computers (with the proper licenses).

- Install the fonts in a folder called Fonts on the system running Mac OS X Server.
- In Workgroup Manager, click Share Points in the Sharing section and select the folder that contains the fonts.
- Click Network Mount.
- For the "Use for" setting, select Shared Library to share your Fonts folder under /Network/Library.

For more information, refer to the Mac OS X Server File Services Administration Guide.

Font collections

Collections are groups of fonts that have something in common, whether it be associated styles or fonts for a particular purpose. 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.

Built-in collections

Mac OS X includes a number of preset collections to help you get started with viewing only the fonts you need at a particular time. These collections are categorized by various attributes, including different languages (Chinese, Japanese), styles (Modern, Fun), and special purposes (PDF, Web).

Creating your own collections

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 re-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.

Exporting fonts

Occasionally when you're working on documents as part of a team, it can be difficult to make sure everyone is using the same font. Font export, another new feature in Mac OS X Tiger, makes the process easier. In Font Book, you can select the properly licensed fonts you would like to share with someone (remember, don't steal fonts). Font Book creates a folder of those fonts, allowing you to move them to another computer.

Enabling and disabling fonts

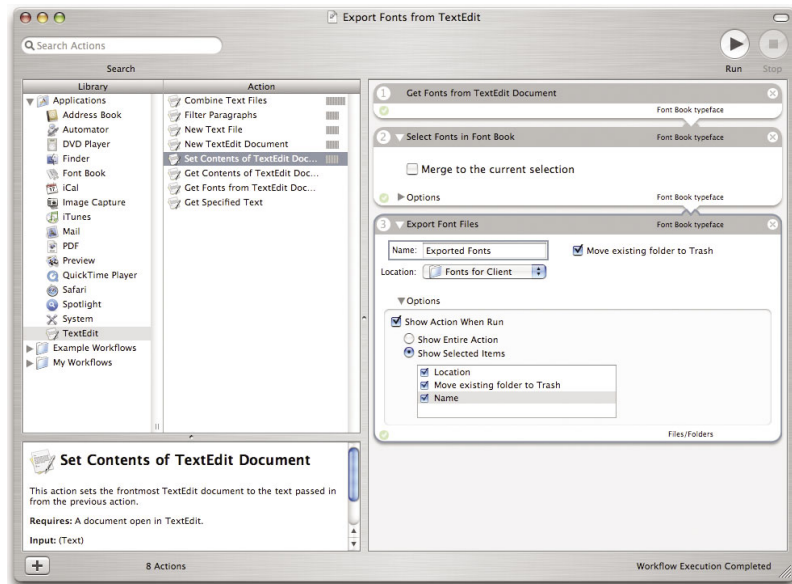
You can use Font Book to enable and disable individual fonts or collections of fonts to specify which ones are currently available to applications. This is especially useful when you have many fonts installed, including multiple versions of the same font families. If you're familiar with the concept of font activation in other font management applications, Font Book works in essentially the same way. For example:

- Font Book allows you to shorten the list of fonts to only those that you want to use. For example, if you want to enable only fonts of a particular language, you can select fonts from other languages and disable them.
- Some projects require specific versions of font families. For example, if more than one version of Helvetica is installed, Font Book allows you to enable the exact version you want to use.
- Font Book enables and disables fonts dynamically, allowing you to switch between font sets without restarting applications.

With new AppleScript and Automator support in Tiger, you can automate the process of enabling and disabling fonts from anywhere in the system.

Automating font management

In Mac OS X Tiger, you can automate Font Book and the underlying font system through AppleScript and the new workflow automation tool, Automator. This allows you to easily integrate font management into your workflow.



Automator includes a number of actions specifically for managing the fonts on your system. With the new font management actions, you can do the following:

- Scan a TextEdit document for the fonts it uses
- Search for fonts based on specific criteria
- Activate and deactivate fonts individually or as groups
- Create collections, libraries, and archives of fonts
- Create text reports about your fonts that include font metadata and other information
- Validate fonts
- Remove fonts

You can combine these actions to create font management workflows, or add them to existing workflows to make font management a part of the process. You can save workflows as stand-alone applications that run as soon as you launch them. For example, you can create a workflow that exports an archive of the fonts used in the currently open TextEdit file (as in the example above). In addition, you can set up the workflows to respond to other actions. For example, you can create a plug-in for the Print Workflow, so that you can set up the fonts exactly as you want before you print a document.

With Automator and the built-in font actions, you can now automate what you previously had to do manually. And because Automator is extensible, developers can write additional actions that deal with the fonts in their files and applications.

Removing fonts

Sometimes you may want to remove a font from your system because it's a duplicate or you just don't want it on the system. Remove any non-system font by simply selecting Remove Font in the Font Book menu.

Important: It is recommended that you do not remove any font that came with Mac OS X, because it may be required by the system. If you don't think you'll need a particular font, simply disable it. (Some system fonts are protected with file locks and cannot be removed, such as Lucida Grande, Geneva, and other system fonts for different languages.)

Using Fonts in Mac OS X

Once you have the fonts you need installed and enabled on your system, they are available in all of your applications. The way fonts are selected in an application can vary. Some applications have a menu item titled "Font," either by itself or in a Format menu. Others have a pane devoted to formatting text, of which one portion allows you to select fonts and sizes. Regardless of how your application allows you to choose fonts, the only fonts you see are those enabled through Font Book.

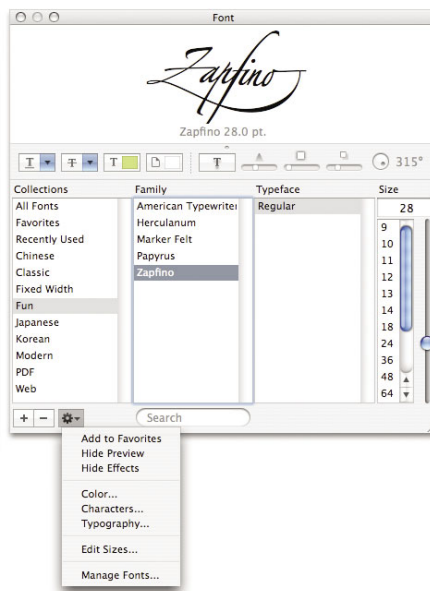
Font panel

Mac OS X offers a way for developers to incorporate a standard font selection interface in their applications. It's called the Font panel. You'll find a variety of applications that use Apple's Font panel, including Mail, TextEdit, Keynote, Pages, and OmniGraffle.



Four degrees of shadowing

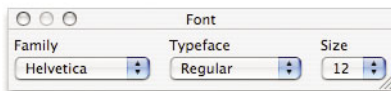
In the Font panel, you can turn on font shadowing and use four independent controls to affect the shadow's darkness, blur, offset, and angle.

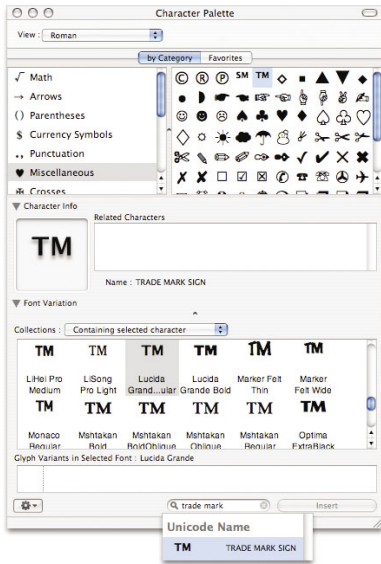


In Tiger, you can add effects such as underlining, strikethrough, foreground and background color, and shadows (see sidebar) to your fonts via the Font panel. A menu in the bottom-left corner provides direct access to Font Book and to the Typography panel, described later.

Resizing the Font panel

The Font panel can be resized to a very small window, which offers pop-up lists of only the essential font attributes. This can be useful for managing your screen real estate when all you need to do is select different font sizes and styles.





Character variations

The Character Palette gives you an easy way to preview and select all of the characters available on the system, independent of which font they belong to. In Tiger, you can search for a specific character by typing its Unicode name or the character code, if you know it.

Character Palette

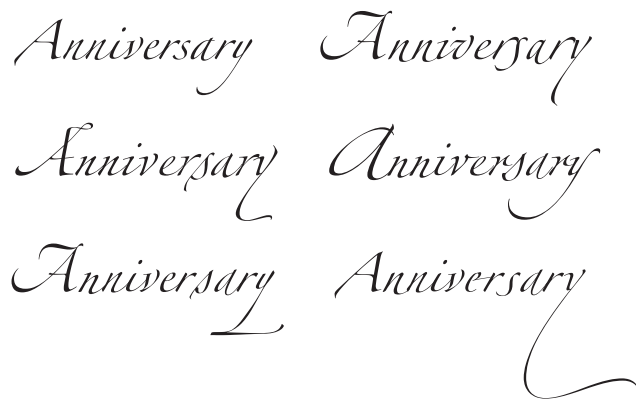
The Character Palette is useful when you need to find a specific character or symbol, regardless of font. In addition to providing a view of characters by font, like the Font Book preview, the Character Palette lets you view individual characters grouped in various categories (see the “Character variations” sidebar for one use of this palette). You can view the Character Palette in three different ways:

- **Special characters.** In Mac OS X Tiger, most applications’ Edit menus have an item called “Special characters,” which 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.

Typography panel

The Font panel gives you the ability to specify variations and typographical features of fonts created by the original font designers. This panel is accessible from the Action menu in the lower-left corner of the Font panel. The Typography panel changes depending on the font you have selected in the Font panel. Controllable typographic features include ligatures, style variations, kerning, number spacing, fraction rendering, swashes, number and letter case, and many more.

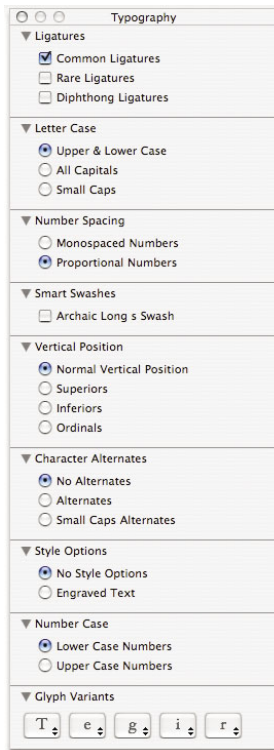
The following are two examples of how fonts can change based on settings in the Typography panel.



An example of six variations of the word “Anniversary” in the Zapfino font.



An example of capital letter variations in the Papyrus font.



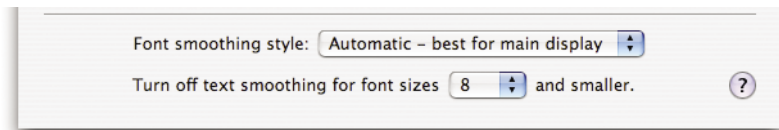
Stylistic control

This is the Typography panel for the Hoefler Text font, included with Mac OS X Tiger. It's one of several fonts with an extensive array of options that you can set on a character-by-character basis.

Advanced type services

Mac OS X uses an advanced font rendering engine called Apple Type Services (ATS). ATS is one of the key elements of the Quartz graphics and imaging system in Mac OS X. It provides the following technologies for displaying and printing fonts.

- **Resolution-independent font handling.** All fonts on the system can be represented at any size and scaled without loss of quality. Printed and displayed fonts are rendered with the best quality the device can produce.
- **Anti-aliasing.** Fonts are displayed using subpixel filtering to eliminate a “jaggie” appearance.
- **Optimization for LCD screens.** Advanced anti-aliasing (font smoothing) algorithms are used for LCDs to account for differences in screen geometry. You can choose the level of anti-aliasing by following these steps:
 1. Open System Preferences and select the Appearance pane.
 2. At the bottom of the pane, choose the font smoothing style that matches your screen.
 3. Select the smallest font size for which you do not want the system to use anti-aliasing.



Fonts and Characters

In addition to extensive capabilities for managing, using, and rendering fonts, Mac OS X includes a wealth of font and character content.

Support for industry standards

Mac OS X delivers industry-leading support for popular font formats.

- **PostScript Type 1 (with double-byte support).** Adobe PostScript fonts launched the desktop publishing industry and are used today by publishers, corporations, and government agencies for high-quality output to laser printers, image-setters, and plate-setters. Each PostScript font requires two files, one for the screen and one for use by the printer's RIP (raster image processor). Mac OS X is the only operating system that provides native PostScript Type 1 font support.
- **OpenType.** OpenType fonts (extension .otf) can contain 65,000 different glyphs, so type can be set in non-Roman languages such as Japanese, Chinese, and Korean. There are Mac- and Windows-specific OpenType formats; Mac OS X supports both.
- **TrueType.** TrueType fonts (extension .ttf) are typically used in home and office environments. A single file contains both screen and printer font information. Mac OS X supports both Mac- and Windows-specific TrueType formats.
- **Multiple Master.** This special type of PostScript font allows variation of one or more font parameters (such as weight) to create a large number of custom styles, also known as instances. Mac OS X can activate already created instances of Multiple Master fonts.

Roman fonts

“Roman fonts” is a common term for a group of fonts used to represent most Western, Latin-based languages, such as English, French, German, and Spanish. Over \$1000 worth of Roman fonts are included with Mac OS X. The following new fonts have been added in Mac OS X Tiger:

- Helvetica Multiple Master font
- Times Multiple Master font
- More symbols in Apple Symbol, including Braille characters
- Chalkboard Bold

Additional language and script support

Mac OS X supports fonts and character sets in approximately 60 languages. It provides one of the most complete sets for CJK (Chinese, Japanese, Korean)—as many as 32,500 characters for the Simplified Chinese font alone. In addition, over \$10,000 worth of Japanese fonts are included. New and improved language support in Tiger includes the following:

- New InaiMathi font to support the Tamil language script
- New Japanese fonts, including the AquaKana, HiraKakuPro, and HiraMinPro families
- Helvetica and Times extended to support the Unicode Greek and Cyrillic character sets

Unicode support

Mac OS X Tiger supports the latest version of the Unicode standard, version 4.0.1, published in March 2004. Unicode 4.0.1 extends the character repertoire to encode more than 96,000 characters. The character repertoires of Unicode 4.0.1 and International Standard ISO/IEC 10646 are fully synchronized.

The comprehensive repertoire of Unicode is what makes broad support for languages in Mac OS X possible. With support for Unicode 4.0.1, you can rest assured that Mac OS X can handle the most highly developed character encoding model in existence, one that covers all of the world’s languages and brings compatibility with all other modern computer systems.

Mac OS X Version 10.4 “Tiger”: Power of UNIX, Simplicity of Macintosh

Mac OS X Tiger delivers unmatched capabilities for beautifully rendering, quickly finding, and easily managing fonts. In addition, Tiger offers more than 200 innovative new features, including Spotlight, a new desktop search technology that instantly finds anything on your computer; Dashboard, which provides desktop accessories that instantly appear on your screen with the touch of a key; and iChat AV, a multiperson video conferencing system that makes it easy to keep in touch with friends, family, and colleagues around the world.

For More Information

For more information about Mac OS X, fonts, and other Mac OS X technologies, visit www.apple.com/macosex.