



MAC OS Font Management Best Practices Guide



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Disclaimer: Fonts are software and are subject to license restrictions. Any recommendations in this guide regarding moving and using fonts should be considered with respect to the license included with the fonts.

Why do you need to manage fonts?

If you are a design professional—if you create documents or graphics or do any of the 1,001 other things that designers do on computers—you probably have hundreds or even thousands of fonts. You probably use the same group of fonts for a specific set of projects, and you may have different versions of the same font for different clients.

You need to be aware of your fonts, know where they are, and know how and when to use them.

Here are some of the reasons that you need to manage your fonts:

- Different projects may require different versions of the same font. This can be especially true if you are working on projects for multiple clients.
- Fonts use system resources, so the more fonts you have loaded, the less you can do with your computer.
- Applications that you install could make changes to your fonts without your knowledge.
- Tracking down corrupt fonts can take valuable production time.
- When you have a lot of fonts, the **Font** menus in your applications can take a long time to scroll through. (Some people would put this at the top of this list.)

If you have a large collection of fonts, effective font management is critical.

Using a font manager can help with all these and provide additional benefits, such as:

- You can search and compare fonts to find the best one for the job at hand.
- You can quickly build font previews for client approval.
- See how new fonts will work within existing web projects.

About This Guide

This guide is designed to help Macintosh users understand more about managing their fonts. It contains recommendations and instructions that can help you configure your system to minimize font problems and improve your work efficiency.

It covers:

- Choosing a font manager
- Collecting your fonts
- Dealing with duplicate and corrupt fonts
- Planning ahead for new fonts

Conventions

Because much of the information in this guide is technical in nature, it is important to present that information clearly and unambiguously. We use the following conventions to help convey exact meaning:

- **Code Font:** text that you are to type (such as in a Terminal session) is shown in **this typeface**.
- **File Names:** When possible, we'll give exact file names, including their extensions.
- **Files and Folders:** File and folder name and paths are shown in **this typeface**. When we present a full path, it will start with a slash character (/) indicating the root of the hard disk, such as **/Library/Fonts/**. A relative path will start with a base folder name, such as **My Fonts/System Fonts/**. Paths that start in the current user's home directory are given using the tilde character (~): **~/Library/Fonts/** is equivalent to **/Users/currentUser/Library/Fonts/**. A path that ends with a folder name will end with a slash, whereas a path that ends with a filename will not. Individual file and folder names will be identified in the text (the **Fonts** folder; the file **Andale Mono**).

Is there more than one on your team?

If you manage multiple users in a workgroup, you may benefit significantly from the use of a team-based font management system, such as Suitcase TeamSync or Universal Type Server. Investigate a cloud-based system like Suitcase TeamSync or an on-premise solution at www.extensis.com.

Font Management Best Practices

A good font manager should be almost invisible in your workflow, so that font activation and deactivation takes place without your intervention.

Most of the remainder of this guide is devoted to discussing the following best practices.

Use a Font Management Application

A good font manager can address all of the aforementioned issues and provide additional utility as well. Depending on your needs, you can get a font manager for an individual computer, or one of the team-focused font management solutions for multiple users in your organization.

Collect Your Fonts

To effectively manage your fonts, you should strip down your system to the basic required fonts, eliminate duplicates, identify and replace corrupt fonts, upgrade very old fonts, and add them to your font manager.

Plan for Acquiring Fonts

When you buy new fonts or software that includes fonts, you should take steps to add the fonts to your font manager.

Choosing a Font Management Application

You should evaluate what you need a font manager to do. Mac OS has basic font management functionality available through its Font Book application. Though the built-in font management capabilities don't go far enough for design professionals.

Basic Functionality of a Font Manager

A font manager's main purpose is to make fonts available when they are needed, and remove them from use when you are done with them.

When a font is available for use, it is called an **active** font, and the process of making it available is called **activation**. When the font is removed from availability, it is **deactivated**. This is the major feature of a font manager and other capabilities revolve around the notion of activating and deactivating—or **managing**—fonts.

Some important features to look for in a font manager are:

- Ability to manage fonts in System font folders
- Ability to manage user-specified sets of fonts
- Ability to automatically activate fonts used in a document you open
- Ability to handle special required system fonts
- Ability to access various 3rd-party font libraries (ie. Typekit, Google Fonts, etc.)
- Works in the background with no user intervention necessary

Other features that can help your workflow include:

- Ability to preview fonts in multiple configurations
- Ability to print font specimens
- Ability to search for fonts based on any of several criteria
- Ability to store fonts in a common, protected location
- Ability to activate fonts in place, without moving them
- Ability to collect fonts for redistribution
- Ability to troubleshoot fonts
- Ability to clean system and application font caches

MANAGE FONTS IN OS FONT FOLDERS

The Mac OS has several locations where it normally stores and looks for fonts. On a typical system, there will be three folders where fonts may be stored:

- The System fonts folder, **/System/Library/Fonts/**
- The Local fonts folder, **/Library/Fonts/**
- The User fonts folder, **~/Library/Fonts/**

The System fonts folder is generally reserved for fonts required by the operating system and shouldn't be modified casually. The Local fonts folder is where other generally available fonts are stored.

The User fonts folder holds fonts that are private for each user; if your computer has two user accounts Joe and Mary, there can be fonts in **/Users/Joe/Library/Fonts/** that are only available to Joe, and fonts in **/Users/Mary/Library/Fonts/** that are only available to Mary.

A good font manager will identify and separately manage fonts in these locations.

Note: Mac OS hides the user **Library** folder (and hence the **Fonts** folder as well). For more information, see *Appendix B: The Hidden User Library* on page 23.

MANAGE SETS OF FONTS

By the time you get your computer set up and software installed, you will have several hundred—and possibly thousands—of fonts.

Many designers find it convenient to group fonts they use for certain tasks, either by client or by job. This makes it easy to activate, deactivate, and collect the fonts you need when you need them.

AUTOMATIC FONT ACTIVATION

One of the critical features font managers perform is the ability to detect the fonts used in a document and automatically activate them when you open that document.

This type of activation is based on the font information available in the document—usually the font's PostScript name. While this is convenient, it can occasionally activate a different version of a font than the one you expect.

Most commercial font managers include a second, more robust form of automatic activation that relies on plug-ins installed for certain applications—typically design applications like Photoshop and QuarkXPress. The plug-in looks at additional information about fonts used in the document in order to determine the correct font to activate. This makes it possible for the font manager to activate the same font (and more importantly, the correct font) consistently in each document.

CONFLICTING SYSTEM FONTS

The operating system identifies fonts by a name that is internal to the font. A conflict occurs if there are two fonts that are active that have the same internal name.

Two required system fonts on Mac OS, Helvetica and Helvetica Neue, often have the same internal name as other versions that designers may prefer. Mac OS goes to great lengths to see to it that it versions of these fonts don't get disabled or removed.

A good font manager will recognize the need to use different versions of these system fonts and correctly handle the activation for you.

BACKGROUND OPERATION

To make font management a mostly hands-off process, professional font managers include a background component that is always running; it does all the font activation and deactivation work automatically. You only need to use the application's interface to perform specific tasks like creating sets or comparing fonts side by side.

FONT PREVIEW AND PRINTING

When you choose a font for a project, one consideration is how the font looks and acts: the shape and relative size of the glyphs, character and line spacing, and so on. A good font manager will let you look at font samples under many conditions: with your own sample text, in multiple sizes and styles, and even in the context of your project.

In addition to previewing fonts, many designers like to keep a type specimen book, both for their own use and for clients to peruse. An added benefit of some font managers is the ability to print custom font specimens.

SEARCHING FOR FONTS

When you have thousands of fonts available, it can seem overwhelming to try to find the right one, or to decide between a few. A good starting point can be to narrow the field using a search with multiple criteria.

A font manager can limit the list of fonts by name, classification, style, foundry, or other criteria, so that you can easily see a subset of your fonts.

PRIVATE FONT STORAGE AND IN-PLACE ACTIVATION

In order to keep your fonts safe as well as easy to maintain, font managers offer the option of copying your fonts to a private folder, where the application can activate them but where they are safe from casual outside access. This gives the advantage of keeping all your fonts in one place and keeping them separate from required system fonts.

There may be times when you need to make sure that some fonts are not added to your main collection. For instance, if you have fonts that you only have the right to use temporarily for specific projects, such as a custom corporate font, font managers allow you to add and use fonts with *in-place activation* where fonts are activated from their location on disk.

COLLECTING AND EXPORTING FONTS

Font managers will usually allow you to select fonts and copy them to another folder for use elsewhere, either to install on another computer or to deliver to a print shop with a document. (Many font licenses specifically prohibit this, so carefully read your font or software license to determine what you can and cannot do with your licensed fonts.)

FONT TROUBLESHOOTING

Fonts, like any other file on your computer, can become corrupted even though you do everything properly. If you experience odd behavior related to how text is displayed, you could have a corrupt font.

Font managers can look inside a font to determine if it has gone bad. Some will even scan fonts for issues when you install them, rather than let you find out later that a font is corrupt.

CLEANING FONT CACHES

Mac OS and many applications use a font cache to quickly access font information that is frequently used. Files in a font cache can become damaged. If a font appears garbled or you start to have other font-related issues, you may have a corrupt cache.

Professional font managers will be able to clear the font caches for Mac OS and design applications.

What About Basic “Font Managers?”

FONT BOOK

While Font Book provides basic font management capabilities, it doesn't have the flexibility of a professional font manager. If you have more than a few hundred fonts, it quickly becomes difficult to use.

However, even though you won't use it for your font management needs, don't delete it. Font Book is integrated with Mac OS.

TYPEKIT

One of the more interesting typographic features included with Adobe Creative Cloud is Typekit. Starting as a web font service, Typekit is now integrated into many of the critical design applications in Creative Cloud.

Typekit now allows you to “sync” fonts from the service for desktop use through a website, and is something that even Adobe will refer to as a “font manager.” While this website manages the delivery of fonts from Typekit to your desktop, it is limited in function to just that – adding and removing fonts from Typekit.

If you have fonts that you have licensed from other type foundries or other font retailers, you will need a font manager to manage these.

A professional font manager allows you to seamlessly work with both fonts from Typekit as well as other sources.

Gathering Your Fonts

Before you start managing your fonts, it is a good idea to get them together, separate the wheat from the chaff, and make backup copies. The process you use will be similar whether you are starting from a “clean” system (either a new purchase or a computer that has been wiped and had the operating system reinstalled), or you are working with a production system that already has software and fonts installed.

The steps in preparing your fonts to be managed are:

- Back up your system
- Pare down your system fonts
- Upgrade old fonts
- Add fonts to your font manager
- Find and remove duplicate fonts
- Find and replace corrupt fonts

Back Up Your System

Before embarking on any project that requires you to move or delete files or install new software, you should make sure that your computer is adequately backed up so that you can return your system to its previous state if something goes wrong.

Update Your System

The first step in managing your fonts is to make sure that your operating system is up to date; some updates make changes to the installed fonts and applications that use them.

Open the **Mac App Store** and make sure that you have installed required updates.

Pare Down Your System Fonts

If you have been working for a long time on your machine, it’s likely that you’ve added quite a few fonts to your machine. If you aren’t using a font manager, fonts are added directly to one of the Mac OS system font folders.

Many applications also install fonts into system font folders automatically, so like any good hoarder, it’s likely that you are keeping around more than you realize.

Some font managers, such as Suitcase Fusion, allow you to deactivate fonts in system font folders. This can alleviate the need to remove many non-essential fonts in System Font locations. If you are using a font manager with these abilities, consider deactivating fonts in place prior to spending a considerable amount of time cleaning your system font folders.

WHY PARE DOWN SYSTEM FONTS?

Keeping too many fonts on your system can lead to many different issues. Too many fonts active would at one time lead to your machine into a hasty meltdown and crash. Thankfully, those days are mostly behind us. Today Mac OS is more robust, and activates fonts differently, which leads to fewer system crashes. That being said, there are some issues with keeping too many fonts active on your system at one time.

A very basic, but important issue with too many fonts is that your font menus quickly become an unwieldy mess. While Adobe has tried to implement features to help you look for fonts in long lists, it can still be more than a little problematic to find your favorite fonts when they are buried in a mess of too many fonts.

What extension, please?

Often, you will need to differentiate between font files that have an extension (such as the *.tf* in *Arial.ttf*) and those that do not. To do this, you will need to enable file extensions in the Finder:

1. Choose *Finder > Preferences*.
2. Click the *Advanced* icon.
3. Enable *Show all filename extensions* (*Show all file extensions in macOS 10.5*).
4. Close the *Finder Preferences* window.

This shows the extensions of all your files, not just your font files: *.doc* or *.docx* for Word files, *.app* for applications, and so on. If you find this distracting, you can disable filename extensions in the *Finder Preferences* when you have finished gathering your fonts.

Many applications also build their font lists upon launch. This includes Microsoft Office applications on Mac OS. When you have too many fonts active at the same time on your machine, it can lead to extremely long load times when launching applications. By trimming down your system font folders to just the essentials, you can ensure fast launch times for all of your applications. That is as long as you don't activate thousands of fonts with your font manager – you wouldn't do that, would you? (of course not!)

HOW TO CLASSIFY FONTS TO REMOVE

You can separate the fonts on your computer into different categories:

- Fonts required by Mac OS and its applications
- Fonts installed by Mac OS that are not required by the operating system or its applications
- Core web fonts
- Optional fonts (including fonts installed by Adobe Creative Cloud and Microsoft Office)

You can create three folders on your Desktop: *Other OS fonts*, *Core web fonts*, and *Optional fonts*.

SELECTING AND MOVING NON-CRITICAL OS FONTS

Many fonts that are installed by default in Mac OS can be removed without affecting the operating system. They can be imported into your font manager and turned on as you need them.

If you do not feel comfortable removing fonts from your operating system, you can skip this step. Every version of Mac OS introduces new fonts that are installed by default, and the list of required fonts for each version is different. If some fonts that are listed below are removed, your machine may not be able to start normally or system menus and applications may not function properly.

Copy the fonts into the **Other OS Fonts** folder, then drag them into the Trash from the operating system font folder. Some versions of Mac OS will not let you empty the Trash until you have restarted your machine.

ABOUT SYSTEM INTEGRITY PROTECTION

Removing fonts from the operating system is harder in OS X El Capitan (10.11) and Mac OS Sierra (10.12). The *System Integrity Protection* feature prevents users—even Administrators and the root user—from moving files into and out of operating system folders. If you want to remove unwanted fonts from the operating system, you must turn off *System Integrity Protection*, remove the fonts, then turn System Integrity Protection back on.

You should not use your machine normally with *System Integrity Protection* turned off. Mac OS relies on *System Integrity Protection* to keep your machine safe from malicious programs and attacks. For more information and instructions for turning off *System Integrity Protection* to remove unwanted fonts, see [this article from Apple](#).

COLLECTING THE CORE WEB FONTS

While many website designers are choosing to implement web fonts on their websites, many websites still require certain fonts to be installed for the page to display appropriately. You will likely want to keep these core fonts to ensure your web browsing is consistent.

Open the **/Library/Fonts/** folder and move the following files into the **Core web fonts** folder:

- *Andale Mono.ttf*
- *Arial Black.ttf*
- *Arial Bold Italic.ttf*
- *Arial Bold.ttf*
- *Arial Italic.ttf*
- *Arial.ttf*
- *Brush Script.ttf*
- *Comic Sans MS Bold.ttf*
- *Comic Sans MS.ttf*
- *Courier New Bold Italic.ttf*
- *Courier New Bold.ttf*
- *Courier New Italic.ttf*
- *Courier New.ttf*
- *Georgia Bold Italic.ttf*
- *Georgia Bold.ttf*
- *Georgia Italic.ttf*
- *Georgia.ttf*
- *Impact.ttf*
- *Tahoma Bold.ttf*
- *Tahoma.ttf*
- *Times New Roman Bold Italic.ttf*
- *Times New Roman Bold.ttf*
- *Times New Roman Italic.ttf*
- *Times New Roman.ttf*
- *Trebuchet MS Bold Italic.ttf*
- *Trebuchet MS Bold.ttf*
- *Trebuchet MS Italic.ttf*
- *Trebuchet MS.ttf*
- *Verdana Bold Italic.ttf*
- *Verdana Bold.ttf*
- *Verdana Italic.ttf*
- *Verdana.ttf*
- *Webdings.ttf*

REQUIRED FONTS IN MAC OS SIERRA (10.12)

A list of all fonts installed by Mac OS Sierra v10.12 is available on the Apple website:

<https://support.apple.com/en-us/HT206872>

These fonts are required in the */System/Library/Fonts/* folder for your machine to operate normally.

- *Apple Color Emoji.ttc*
- *Avenir.ttc*
- *Courier.dfont*
- *Geneva.dfont*
- *Helvetica.dfont*
- *HelveticaNeue.dfont*
- *HelveticaNeueDeskInterface.ttc*
- *Keyboard.ttf*
- *LastResort.ttf*
- *LucidaGrande.ttc*
- *Menlo.ttc*
- *Monaco.dfont*
- *PingFang.ttc*
- *SFCompactDisplay-Black.otf*
- *SFCompactDisplay-Bold.otf*
- *SFCompactDisplay-Heavy.otf*
- *SFCompactDisplay-Light.otf*
- *SFCompactDisplay-Medium.otf*
- *SFCompactDisplay-Regular.otf*
- *SFCompactDisplay-Semibold.otf*
- *SFCompactDisplay-Thin.otf*
- *SFCompactDisplay-Ultralight.otf*
- *SFCompactRounded-Black.otf*
- *SFCompactRounded-Bold.otf*
- *SFCompactRounded-Heavy.otf*
- *SFCompactRounded-Light.otf*
- *SFCompactRounded-Medium.otf*
- *SFCompactRounded-Regular.otf*
- *SFCompactRounded-Semibold.otf*
- *SFCompactRounded-Thin.otf*
- *SFCompactRounded-Ultralight.otf*
- *SFCompactText-Bold.otf*
- *SFCompactText-BoldItalic.otf*
- *SFCompactText-Heavy.otf*
- *SFCompactText-HeavyItalic.otf*
- *SFCompactText-Light.otf*
- *SFCompactText-LightItalic.otf*
- *SFCompactText-Medium.otf*
- *SFCompactText-MediumItalic.otf*
- *SFCompactText-Regular.otf*
- *SFCompactText-RegularItalic.otf*
- *SFCompactText-Semibold.otf*
- *SFCompactText-SemiboldItalic.otf*
- *SFNSText.ttf*
- *SFNSTextCondensed-Black.otf*
- *SFNSTextCondensed-Bold.otf*
- *SFNSTextCondensed-Heavy.otf*
- *SFNSTextCondensed-Light.otf*
- *SFNSTextCondensed-Medium.otf*
- *SFNSTextCondensed-Regular.otf*
- *SFNSTextCondensed-Semibold.otf*
- *SFNSTextCondensed-Thin.otf*
- *SFNSTextCondensed-Ultralight.otf*
- *SFNSText.ttf*
- *SFNSTextCondensed-Bold.otf*
- *SFNSTextCondensed-Heavy.otf*
- *SFNSTextCondensed-Light.otf*
- *SFNSTextCondensed-Medium.otf*
- *SFNSTextCondensed-Regular.otf*
- *SFNSTextCondensed-Semibold.otf*
- *SFNSTextItalic.ttf*
- *Symbol.ttf*
- *Times.dfont*
- *ZapfDingbats.ttf*

REQUIRED FONTS IN OS X EL CAPITAN (10.11)

You can remove all of the fonts from the */Library/Fonts/* folder.

OS X v10.11 adds several new font families to the */System/Library/Fonts/* folder that are required for your machine to operate normally. These fonts need to be in the */System/Library/Fonts/* folder:

- *Apple Braille.ttf*
- *Apple Color Emoji.ttf*
- *AppleSDGothicNeo.ttc*
- *AquaKana.ttc*
- *ArialHB.ttc*
- *Avenir.ttc*
- *Courier.dfont*
- *Geneva.dfont*
- *Helvetica.dfont*
- *HelveticaNeue.dfont*
- *HelveticaNeueDeskInterface.ttc*
- *Hiragino Sans GB W3.ttc*
- *Hiragino Sans GB W6.ttc*
- *Keyboard.ttf*
- *LastResort.ttf*
- *LucidaGrande.ttc*
- *Menlo.ttc*
- *Monaco.dfont*
- *PingFang.ttc*
- *SFNSText-BoldItalicG1.otf*
- *SFNSText-BoldItalicG2.otf*
- *SFNSText-BoldItalicG3.otf*
- *SFNSText-Heavy.otf*
- *SFNSText-HeavyItalic.otf*
- *SFNSText-Light.otf*
- *SFNSText-LightItalic.otf*
- *SFNSText-Medium.otf*
- *SFNSText-MediumItalic.otf*
- *SFNSText-Regular.otf*
- *SFNSText-RegularG1.otf*
- *SFNSText-RegularG2.otf*
- *SFNSText-RegularG3.otf*
- *SFNSText-RegularItalic.otf*
- *SFNSText-RegularItalicG1.otf*
- *SFNSText-RegularItalicG2.otf*
- *SFNSText-RegularItalicG3.otf*
- *SFNSText-Semibold.otf*
- *SFNSText-SemiboldItalic.otf*
- *Symbol.ttf*
- *Times.dfont*
- *ヒラギノ角ゴシック Wo.ttc*
- *ヒラギノ角ゴシック W1.ttc*
- *ヒラギノ角ゴシック W2.ttc*
- *ヒラギノ角ゴシック W3.ttc*
- *ヒラギノ角ゴシック W4.ttc*
- *ヒラギノ角ゴシック W5.ttc*
- *ヒラギノ角ゴシック W6.ttc*
- *ヒラギノ角ゴシック W7.ttc*
- *ヒラギノ角ゴシック W8.ttc*
- *ヒラギノ角ゴシック W9.ttc*
- *SFNSText-Black.otf*
- *SFNSText-Bold.otf*
- *SFNSText-Heavy.otf*
- *SFNSText-Light.otf*
- *SFNSText-Medium.otf*
- *SFNSText-Regular.otf*
- *SFNSText-Semibold.otf*
- *SFNSText-Thin.otf*
- *SFNSText-Ultralight.otf*
- *SFNSText-Bold.otf*
- *SFNSText-BoldG1.otf*
- *SFNSText-BoldG2.otf*
- *SFNSText-BoldG3.otf*
- *SFNSText-BoldItalic.otf*

REQUIRED FONTS IN OS X YOSEMITE (10.10)

You can remove all of the fonts from the */Library/Fonts/* folder.

These fonts need to be in the */System/Library/Fonts/* folder:

- *Apple Color Emoji.ttf*
- *AppleSDGothicNeo-Bold.otf*
- *AppleSDGothicNeo-Regular.otf*
- *Courier.dfont*
- *Geneva.dfont*
- *Helvetica.dfont*
- *HelveticaNeue.dfont*
- *HelveticaNeueDeskInterface.ttc*
- *Keyboard.ttf*
- *LastResort.ttf*
- *LucidaGrande.ttc*
- *Menlo.ttc*
- *Monaco.dfont*
- *Symbol.ttf*
- *Times.dfont*

REQUIRED FONTS IN OS X MAVERICKS (10.9)

You can remove all of the fonts from the */Library/Fonts/* folder. These fonts need to be in the */System/Library/Fonts/* folder:

- *Apple Color Emoji.ttf*
- *AppleSDGothicNeo-Bold.otf*
- *AppleSDGothicNeo-Regular.otf*
- *Courier.dfont*
- *Geneva.dfont*
- *Helvetica.dfont*
- *HelveticaNeue.dfont*
- *HelveticaNeueDeskUI.ttc*
- *Keyboard.ttf*
- *LastResort.ttf*
- *LucidaGrande.ttc*
- *Menlo.ttc*
- *Monaco.dfont*
- *Symbol.ttf*
- *Times.dfont*

REQUIRED FONTS IN OS X MOUNTAIN LION (10.8)

You can remove all but one font from the */Library/Fonts/* folder:

- *AppleGothic.ttf*

These fonts need to be in the */System/Library/Fonts/* folder:

- *Apple Color Emoji.ttf*
- *Courier.dfont*
- *Geneva.dfont*
- *Helvetica.dfont*
- *HelveticaNeue.dfont*
- *HelveticaNeueDeskUI.ttc*
- *Keyboard.ttf*
- *LastResort.ttf*
- *LucidaGrande.ttc*
- *MarkerFelt.ttc*
- *Menlo.ttc*
- *Monaco.dfont*
- *Symbol.ttf*
- *Times.dfont*

If you have installed Microsoft Office it may have moved some of your fonts. Look inside the */Library/* folder for a folder named **Fonts Disabled**; if it exists, then open it and move any fonts that are on the **Core web fonts** list above into the **Core web fonts** folder. If you are prompted that one of the fonts already exists, replace that font; the one that Office disabled is the more desirable Apple font.

GATHERING ADOBE FONTS

If you are using Adobe Creative Cloud, fonts for these applications are available to be synced from the Adobe Typekit and are no longer installed by default. For details, see:

<http://www.adobe.com/products/type/creative-cloud-fonts.html>

If you are using Creative Suite 6, create a folder on your Desktop named **Adobe CS6 fonts**.

Adobe CS6 installs fonts to the Local fonts folder. This means the Adobe fonts are mixed in among other installed fonts. They should still be easy to identify: all the Creative Suites include a version of Adobe Caslon Pro, whose filenames all start with **ACaslonPro**, and they would have all been installed at approximately the same time.

If you have Creative Suite 6:

1. Open the Local fonts folder, */Library/Fonts/*.
2. Choose **View > As List**.
3. Click the head of the column labeled Date Modified.
This sorts the files by their modification date, which for font files is usually the date they were installed.
4. Find one of the fonts whose name starts with **ACaslonPro**. Select all the fonts whose Date Modified fall within a couple of minutes of this file and move them to the **Adobe CS6 fonts** folder.

If you want to be more precise, check Adobe's web site:

- **Fonts Installed by Adobe's Creative Cloud**
(<http://www.adobe.com/products/type/creative-cloud-fonts.html>)
- **Fonts included with Adobe's Creative Suite 6**
(<http://www.adobe.com/products/type/creative-suite-6-installed-fonts.html>)

MICROSOFT OFFICE FONTS

Microsoft Office installs a lot of fonts that you can use with the Office applications and in other projects.

Note: Microsoft Office applications build a list of available fonts when they start. To ensure that your documents and templates display the appropriate fonts, be sure to activate any required fonts using your font manager **before** you start an Office application.

Keeping Office up-to-date

*Be sure you update your copy of Microsoft Office to the latest version available using the Microsoft AutoUpdate . Choose **Help > Check for Updates** in any Office application.*

OFFICE 2008 AND 2011

Office 2008 and 2011 install fonts in */Library/Fonts/Microsoft/* and move existing fonts with conflicting names to */Library/Fonts Disabled/*.

Two font families are important to Office applications, namely the *Calibri* and *Cambria* families. These families are used as the default fonts for many applications, and while they may be able to be removed and replaced with automatically activated sets in your font manager, it's easy to keep them in the system folder.

You can move the remaining fonts in the Microsoft folder from */Library/Fonts/* to the **Optional fonts** folder.

OFFICE 2016

Fonts included with Microsoft Office 2016 are installed inside each application package. This means that each application can have its own set of custom fonts that ship with it, and are activated when required for a template, etc.

This can be problematic if you have a preferred version of a font that is automatically being activated by one of the Office applications.

Control-Click (Right-click) and choose **Show Package Contents** for each of the Office 2016 applications to locate each folder.

[application]/Contents/Resources/Fonts/

Two font families are important to Office 2016 applications, namely the *Calibri* and *Cambria* families. These families are used as the default fonts for many applications, and while they may be able to be removed and replaced with automatically activated sets in your font manager, it's easy to keep them in each application's *Fonts* folder.

You can move the remaining fonts from each application's *Fonts* folder to the **Optional fonts** folder.

Note that when Office 2016 updates itself, it replaces the fonts inside the application bundle, so you may need to remove these fonts again after an update.

GATHERING OPTIONAL FONTS

After the above steps, there may be fonts left in the following locations:

`/Library/Fonts/`
`/Library/Fonts Disabled/`
`~/Library/Fonts/`
`/Library/Application Support/`

Open `/Library/Fonts/` and move any files into the **Optional fonts** folder on the Desktop.

Do the same with files in the `/Library/Fonts Disabled/` folder.

Open your User fonts folder. On Mac OS the User Library folder is normally hidden; hold down the **Option** key when you click the **Go** menu to reveal the **Library** menu item.

Select all font files and move them to the **Optional fonts** folder.

Open the `Apple/Fonts/` folder if it is present. You may see a folder named **iWork** and a folder named **iOS**. The **iWork** folder contains fonts that are also included with the **iWork** suite of programs; Apple installs fonts here even if you don't have **iWork**. The **iOS** folder contains some fonts that are used on the iPhone, iPad, and iPod Touch.

If you have iWork installed, then you should archive the `Apple/Fonts/iWork/` folder, since those fonts are already installed. (To archive the folder, drag it to the Desktop, compress it, and copy the compressed archive to a suitable backup storage medium.)

Copy the **iOS** and **iWork** folders to the **Optional fonts** folder on the Desktop.

Look in the `/Library/Applications/` folder for other vendors who may have included a **Fonts** folder and move those fonts to the **Optional fonts** folder as well. (Skip the Adobe folder if it is present; locating Adobe Creative Suite fonts is discussed under *Gathering Adobe fonts* on page 12.)

PREPARE TO SHARE

We recommend adding your font folders to your font manager so that you can be activated as required in the future. Alternately, you can add them to a server-based font manager so that they are available to your entire team as needed.

Upgrade Old Fonts

While it isn't always feasible to move clients from using one font to another, there is a case to be made for migrating to OpenType fonts when possible:

- OpenType fonts can be used on both Macs and PCs, making cross-platform document management easier.
- PostScript Type 1 and Mac TrueType fonts can only be used on a single platform, and if you open a Mac document that uses these fonts on Windows, some characters—like curly quotes—may be mapped to different characters.
- Most modern type foundries produce OpenType fonts; some do so exclusively.
- OpenType fonts use a single file, so installation and management is easier. Older PostScript fonts use two files: a screen font and a printer font.

Using your font manager, you can keep legacy fonts available and activate them when a project calls for them.

The Times, they are a-changin'

So are the Helveticas, the Garamonds, and even the Arians. In fact, the past few versions of macOS (and Windows, too) have shown a distinct move towards using OpenType fonts instead of some of the older digital font formats.

Font foundries are embracing this format almost exclusively. When you shop for new fonts, you will almost definitely be able to find what you want in the OpenType bin, while the PostScript and TrueType bins have fewer and fewer to choose from.

The reasons for this are inherent in the construction of OpenType: Adobe and Microsoft designed it to combine the features of existing font technologies like PostScript and TrueType, and expanded it with features needed by digital designers, like ligatures, contextual letterforms, and most importantly, support for the Unicode character set.

For an in-depth comparison of OpenType with other font formats, see Appendix C: Font Formats on page 25.

Adding Fonts to Your Font Manager

WHERE TO KEEP FONTS

Font managers will generally have two options for storing fonts: copying them to a private folder, or leaving them in their original folder.

For most of your workflow, we recommend letting the font manager copy fonts to its own private folder, and only keeping fonts in their original folders for special cases, such as clients who require font segregation, or using fonts on a temporary basis.

Set the default for your font manager to use its private folder. In Suitcase Fusion:

1. Choose **Suitcase Fusion > Preferences**.
2. Under Font Vault Options, select “Copy added fonts to the Vault.”
3. Close the Preferences window.

Note: While these examples use Suitcase Fusion to illustrate processes, most font managers will have similar features.

GROUPING FONTS

In its most basic configuration, your font manager will have two groups of fonts that form the basis of your font activity: fonts in the System folders, and fonts outside these folders.

In Suitcase Fusion, non-system fonts are listed in a *library*; the default library is called Font Library.

Your font manager should have a way to create sub-groupings of fonts within its library for easier recognition. (In Suitcase Fusion, these groups are called *sets*.)

We want to create a set for each of the font folders you created earlier (except the **Legacy fonts** folder), then add the fonts from each folder to the set.

In Suitcase Fusion, you can create the set and add the fonts for it in one step: drag the desired folder from the Finder into the Font Library. Suitcase creates a set with the same name as the folder, and adds all the fonts in the folder to the set.

If your font manager has a similar feature, use it; otherwise, make a set with the same name as each folder, then add the fonts from the folder into the set. (You may need to add the fonts to the general library first, then move them to the set.)

ADDING FONTS IN PLACE TEMPORARILY

For those times when you don't want to add fonts to the font manager's private folder (for a quick fix to a job or to keep a client's fonts segregated from your other fonts), you will need to add fonts in place, so that the font manager works with them where they are.

Suitcase Fusion allows you to add fonts in place on a temporary basis. To use this feature, drag the fonts or folder to the Suitcase Fusion Dock icon. The fonts will only be available until you log out of your Mac account, or shut down or restart your computer.

This feature allows you to quickly use a set of fonts, such as for a quick job for a client, without adding them to the Font Vault and without needing to change your preferences.

Identifying Duplicates

The bane of font management is having duplicate fonts. A duplicate can mean two fonts that may have the same names and identical internal structures, and it can also mean two fonts that have the same name yet which may have different metrics, available glyphs, and other internal differences.

If you have two fonts with the same name (such as the two Helveticas shown below), you probably have different projects that rely on one or the other version. If you delete one version, you may end up with a project that looks like the second example: text wraps differently and ultimately may cause pagination differences. For this reason, you should keep these duplicates but identify each so that you know which is which.



A tale of two Helveticas

If you allow your font manager to always keep fonts in its private store (the Font Vault in Suitcase Fusion), you should never have fonts that are identical fonts in name and construction. If you do keep some fonts outside the Vault, you may see this type of duplicate, but it is a minor problem: once identified, all such duplicates can be eliminated and will never be a problem again.

Finding duplicate fonts is relatively easy; in Suitcase Fusion, you can use the following methods. If you use another font manager, see its documentation.

FINDING DUPLICATE FONTS BY POSTSCRIPT NAME

1. Open Suitcase Fusion
2. In the lower-left corner find the **Smart Searches** panel
3. Click **Duplicate Fonts**

The list now shows fonts that have the same PostScript name. If the list is empty, then you have no fonts with the same name.

Click the **View** menu. If **Group Fonts by Family** is checked, then select it, so that fonts are now listed individually and not in folders.

Choose **View > Columns > PostScript Name** to show the PostScript name for each font listed, then click the header of that column to sort the fonts by their PostScript name.

Keeping duplicate fonts at bay

The easiest way to deal with duplicate fonts is to not let them in. If you use Suitcase Fusion and keep your fonts exclusively in the Font Vault, it will never add a font that is identical to one that is already in the Vault.

What's in a (PostScript) name?

A font's PostScript name is an internal value that the system and applications use to identify and activate fonts.

Since it is possible that you have used these fonts in projects, you may want to keep them all, but you can find a way to identify each one. For example, you might create keywords of your client names, then assign those keywords to the fonts that each client uses.

The most important thing to keep in mind with duplicate PostScript names is that only one of these fonts can be active at a time. The result is that font substitutions will occur if the wrong font is active.

Font managers include activation plug-ins for professional design applications to ensure 100% accuracy. Global activation techniques are used to ensure correct font usage in other applications, such as word processors and spreadsheets.

FINDING IDENTICAL DUPLICATES

You may have two identical fonts if you have added fonts both to the Font Vault, and in-place on disk. To tell if you have added two of the exact same font, check the font's Font Sense ID in Suitcase Fusion. You can then check the font's location on disk and remove the duplicate.

CONFLICTING SYSTEM FONTS

There is another issue involving some fonts that have identical PostScript names. Some of Mac OS's System fonts—including some required fonts—have the same PostScript name as their Adobe Type 1 PostScript counterparts.

Suitcase Fusion allows you to override System fonts that conflict with fonts in your collection. Suitcase works in the background to make sure that the System fonts are not displayed in applications' Font menus.

Some of these fonts are easily dealt with: **Courier.dfont**, **Symbol.dfont**, and **Times.dfont** are not protected by the OS and so can be easily disabled if necessary.

Helvetica.dfont and **HelveticaNeue.dfont**, however, are protected fonts: If you remove them, the OS replaces them from a hidden repository.

Since the OS must have some version of these fonts active in order to run properly, it can be difficult to disable them in favor of other versions. It can be done manually, but this requires some modifications to your OS that, if done incorrectly, could leave your system unusable.

Finding Corrupt Fonts

A corrupt font is any font where the font resources can't be opened, the font resources contain inconsistent information, or there is incorrect values in important fields.

Fonts can be created with inconsistent font information, or can be corrupted accidentally, such as by moving a Mac PostScript font to a Windows system (see the sidebar “The fork in the road” on page 25).

A good font manager will scan fonts as you add them and identify and reject or quarantine any corrupt fonts that it finds.

However, if you are experiencing problems that lead you to believe that one of your fonts has been corrupted, use your font manager or a font utility like FontDoctor to scan your fonts.

SCANNING FONTS WITH SUITCASE FUSION

1. Select a font, set or library to scan.
2. Choose **File > Check for Corruption**.

Any corrupt fonts are placed into a new set within the selected library.

SCANNING FONTS WITH FONTDCTOR

If your font manager doesn't scan fonts for corruption, you can use a font utility like FontDoctor or Font Book (included with Mac OS).

FontDoctor offers many options over other font utilities, including the ability to move corrupt or conflicting fonts and clean font caches.

See the FontDoctor help system for details on how to use it to diagnose font problems.

SCANNING FONTS WITH FONT BOOK

Font Book, the font manager included with Mac OS, can scan fonts for corruption without the need to install them first.

1. Open Font Book.
2. Choose **File > Validate File**.
3. Select one or more font files to scan and click Open.

Font Book performs an exhaustive scan on each font and reports any errors.

Be forewarned: Font Book will not scan PostScript outline font files, and it will also report fonts that are duplicates of installed fonts.

The Doctor is In

FontDoctor is included with Suitcase Fusion and is available separately from Extensis at <http://www.extensis.com/fontdoctor>.

Planning For More Fonts

Let's not kid ourselves: there is no such thing as enough fonts. You are going to get more, and it is a good idea to be ready for them.

Where Fonts Come From

You usually get fonts in one of two ways: by purposefully acquiring them singly or in bunches, or by finding them installed along with a new piece of software.

Purchased Fonts

When you purchase or download fonts, you should keep certain things in mind:

- Purchase or download from reputable foundries or websites.
- Try to get fonts in OpenType format.
- Be wary of collections of thousands of fonts for a low price. They are often mostly display or “fun” fonts that you will rarely use, and are typically not of high typographic quality.
- Make sure the fonts you acquire include the styles, languages, and symbols that you need.

Before you add new fonts to your font manager, make a backup copy, then scan them for corruption. (Suitcase Fusion scans fonts as you add them, or you can choose to scan them separately with a utility such as FontDoctor.)

After you add the fonts to your font manager, double-check to make sure there aren't duplicate fonts by PostScript name. If your font manager supports sets, you may want to add new fonts as a set so that they are already identified if you need to remove any of them.

Add keywords or other unique identifying information to new fonts. If they were purchased specifically for a client or job, add that information as a keyword.

Fonts Included With Applications

Some applications include high quality fonts for your use. However, you may not have any options regarding font installation. The software may install fonts in your System font folders or in other locations where your font manager has less control over them.

Before installing new software, you may want to make it easier to identify which fonts you purposely left in your system font folders.

Note: The following process is optional. It can help you identify fonts that get installed along with other software you install, but is not absolutely necessary. If you don't follow these steps, future installed fonts will typically show up in your System fonts.

LIST YOUR CURRENT FONTS

A simple and safe method of identifying system fonts is to make a list of them.

1. Open the **/Library/Fonts/** folder.
2. Choose **View > As List**.
3. Choose **View > Arrange By > None**.
4. Click the heading of the Name column to sort the files by name.
5. Choose **Edit > Select All**.
6. Hold down the **Option** key and choose **File > Show Inspector**.
7. In the Multiple Item Info window, make a note of how many files are present (shown next to Kind at the top of the window).
8. Close the Multiple Item Info window and choose **Edit > Copy**.

9. Open TextEdit and create a new document.
10. Type **Library Fonts: ###** files and press *Return*. Instead of ###, type the number of fonts as shown in the Multiple Item Info window.
11. Choose **Edit > Paste and Match Style**.
If you choose **Paste**, TextEdit will paste all the copied fonts into your document; choose Undo and try again.
12. Save the file in your **Documents** folder. Name it "Library Fonts as of" and append the date to the filename (such as, **Library Fonts as of 27 July 2012.rtf**).

Repeat the above process for the **/System/Library/Fonts/** folder; name the resulting file "System Library Fonts as of" with the date appended to the filename.

COLLECTING FONTS INSTALLED BY AN APPLICATION

If an application doesn't give you options regarding installing fonts, it may install them in one of several places: one of the system font folders, the **Application Support** folder, or someplace else.

For details about finding and relocating fonts installed in the **Application Support** folder, see *Gathering Optional Fonts* on page 14.

If you suspect your application has installed fonts but you cannot find them, see the documentation that came with the software; sometimes fonts will be placed in a separate folder inside the application's folder.

Some applications that install fonts into a system font folder add them into a folder of their own; Microsoft Office 2008 and 2011 install their fonts into a folder named **Microsoft**. Removing these fonts is as simple as dragging this folder out of the **Fonts** folder.

To collect fonts that are installed in the system font folders:

1. Make a new folder on your desktop, named for the application you just installed (such as **SurfWriter fonts**). This is where you will move the fonts that the new application installed.
2. Open the Library Fonts list document that you saved in your **Documents** folder.
3. Open the **/Library/Fonts/** folder and compare the number of files present with the number that you recorded at the top of your Library Fonts list.
(To quickly count the fonts in the folder, choose **View > Show Status Bar**; the status bar at the bottom of the window shows how many files are in the folder.)
If the number is the same, then there are probably no new fonts and you can move on to checking the next folder. (It is unlikely but possible that the application removed some fonts and added others.)
4. If the number of fonts present is different from the number you recorded, then you should review the list against the folder contents. When you find a font in the folder that is not on your list, remove it to the folder that you created on the desktop (**SurfWriter fonts** in our example).
5. Open the System Library Fonts list that you saved earlier.
6. Open the **/System/Library/Fonts/** folder. (Applications shouldn't be installing fonts here, but it is a good idea to check just to make sure.) Check the folder against the list; if there are fonts here that are not on your list, select them and then choose **File > Move to Trash**. Enter your password at the prompt. Move the fonts from the Trash into the new application's fonts folder on the desktop.
7. You should also check whether the application installed fonts in your User fonts folder. Choose **Go > Library** in the Finder, then open the Fonts folder. (Hold down the *Option* key while clicking **Go** to see the **Library** option on the menu.) Select all the fonts in this folder and move them to the application's fonts folder on the desktop.
8. Move the new application fonts folder (**SurfWriter fonts** in our example) into the **/Users/shared/Optional fonts/** folder.

Font Caches

The Mac OS and many font-intensive applications use a cache to store activated font data.

Any cache data can get out of sync, or stale. If you start experiencing problems with fonts, either seeing garbled text on screen or experiencing slowdowns related to font changes, it's likely due to font cache issues and you may want to clean your font caches.

The easiest way to do this is to use a cache cleaning utility. This is a feature of Suitcase Fusion and is accessed by selecting **File > Clean Font Caches**. This cleans all necessary caches and restarts your machine.

It Never Ends

Effective font management is an ongoing task. However, by choosing the right tools and implementing some basic processes, it can become a seamless part of your creative workflow, and can even add benefits that you hadn't imagined possible.

Appendix A: Font Terminology

Some of the terminology used when talking about computer fonts can be confusing, often because some terms are used interchangeably, or are used differently by different companies. For a more complete glossary of type-related terms, see Adobe's website at:

<http://www.adobe.com/products/type/adobe-type-references-tips/glossary.html>.

Here are some common terms and what we mean when we use them.

Traditional Typographic Terms

CHARACTER

A single letter, punctuation mark, number, space, or any other object or symbol in a font. Compare with *glyph*.

FAMILY

A collection of related typefaces that were designed and intended to be used together. Typefaces in a family will vary in weight, style, or width, but not in overall design.

Myriad Pro Condensed	<i>Myriad Pro Italic</i>
<i>Myriad Pro Condensed Italic</i>	Myriad Pro Semibold
Myriad Pro Regular	<i>Myriad Pro Semibold Italic</i>
Myriad Pro Bold Condensed	Myriad Pro Bold
<i>Myriad Pro Bold Condensed Italic</i>	<i>Myriad Pro Bold Italic</i>

The Myriad Pro type family

FONT

A complete set of characters of a single typeface in one weight, width, and style. Times New Roman Italic is a font, as is Garamond Semibold.

GLYPH

The visual presentation of a character. A single character, such as the capital letter A, can have different glyphs in different fonts. Glyphs do not need to represent characters used for text (as seen in the multitude of dingbats fonts available), and in some non-Roman writing systems, a single character can be represented by multiple glyphs within a single font.



*Same character, different glyphs
(Rockwell Extra Bold, Lithos Pro, Edwardian Script ITC)*

STYLE

A variation in appearance (such as bold or italic) that constitutes a typeface in a family of typefaces.

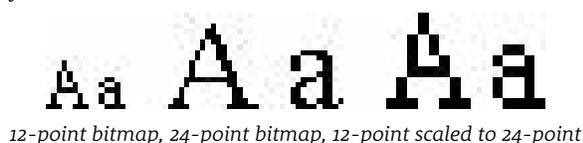
TYPEFACE

The collection of glyphs that constitute a design of type. A typeface is usually part of a family of related designs. A typeface's name includes the family name and a style designation, such as *italic* or *condensed*.

Computer Typographic Terms

BITMAP FONT

A *bitmap font* is made up of images of each glyph. Each glyph image is a matrix or bitmap of pixels representing the glyph for a single face, style, weight, and size. Bitmap fonts are designed for a specific output resolution, typically a screen resolution. Bitmap fonts do not scale well, since their size is fixed. Compare with *outline font*.



FONT FILE

Any file containing one or more fonts that the computer can display directly.

OUTLINE FONT

An outline font (also called a *scalable font* or *vector font*) is a set of instructions that describe how to draw each glyph in the font. Outline fonts can be scaled to virtually any size for any type of device without loss of quality.



An outline font rasterized at 72 dpi, 96 dpi, 300 dpi, and 600 dpi

When is an outline not an outline? When it's a bitmap.

Since most output devices are pixel-oriented (such as displays, laser printers, and inkjet printers), a bitmap representation of a glyph must be generated at the correct size in order to be displayed or printed. This is done by the operating system or by a printer's page layout engine in a process called "rasterizing."

VARIABLE FONT

Variable fonts have several characteristics that can be changed by you, the designer: the weight, the width, the optical size, or the slant or italic. What this means is you can implement a font, say on a website, and only need to implement one font, rather than multiple faces, to get the job done.

Appendix B: The Hidden User Library

In Mac OS the **Library** folder inside your home folder (`~/Library/`) is hidden from casual snooper, but easily unveiled.

To open the folder, in the Finder, hold down the *Option* key, click the **Go** menu, then choose **Library**.

If you hold the **Go** menu open and release the *Option* key, you'll see the **Library** menu item disappear. Press *Option*, and it reappears.

This is important because you will sometimes need to check the User fonts folder (`~/Library/Fonts/`) to see if there are fonts installed there.

You can also open the User fonts folder directly; choose **Go > Go to Folder**, type the folder path (`~/Library/Fonts/`) and press *Return*.

If you share your computer with other users, you may sometime need to examine the fonts in their User fonts folder. For example, if there is a user named Joe, you may want to look in `/Users/Joe/Library/Fonts/`. There are two problems: by default you won't have access to Joe's user folder, and Joe's **Library** folder is hidden also.

The easiest way around this is to have Joe log in, do what you need, then log out.

Appendix C: Font Formats

As computers and their typographical output has become more sophisticated, so have the fonts they use. The original Mac wowed us with black-and-white bitmap fonts at 72 dots per inch; today's Retina displays, interactive animated websites, and million-color printers require much more.

OPENTYPE (.OTF OR .TTF)

OpenType is the format that OS vendors are standardizing on. The file format is based on the Windows version of TrueType, but an OpenType font can contain outline data in PostScript format (such files use the extension **.otf**) or TrueType format (using either the extension **.ttf** or **.otf**). This means that professional publishing environments can continue to use PostScript outlines if they are so inclined.

There are several advantages to OpenType. As with TrueType fonts, one font is one file. OpenType font files are cross-platform: the same file can be used on a Mac or Windows system with consistent results. An OpenType font can contain thousands of glyphs. Not only can this enable extensive language support in a single font, but ligatures, swashes, true small caps, and other advanced typographical alternate glyphs can be built into a font, and are accessible in compatible applications. Finally, OpenType fonts are based on Unicode, the universal cross-platform character encoding standard. These are significant benefits over PostScript Type 1, which is limited to 256 encoded characters, and does not directly support Unicode. Font vendors often offer information on compatibility or upgrade availability, such as this FAQ from Adobe:

http://www.adobe.com/type/opentype/T1_to_OTF_FAQ.htm.

Mac OS natively supports OpenType fonts and Unicode information, making OpenType an excellent choice for new font purchases. However, unless your budget allows for re-licensing all your existing fonts, you may want to migrate only gradually, as you cannot simply convert your existing PostScript Type 1 or TrueType fonts to OpenType and get the same results as with freshly licensed OpenType fonts. Most font vendors now sell OpenType versions of their font collections, and some are developing only OpenType fonts at this point.

TRUETYPE (.TTF)

Mac OS also supports TrueType fonts with the **.ttf** extension, which are a cross-platform format originally developed for Windows. Beginning with Mac OS X v10.6, many system fonts are in this format. These fonts are similar to Mac TrueType fonts, but with a different file structure: they lack the resource fork and its associated data, or that data is placed inside a special table within the data fork. Each **.ttf** file is a single, complete TrueType font.

Originally, TrueType fonts were not as widely accepted in professional creative, print, and publishing environments. However, most TrueType fonts will function properly in a professional workflow.

TRUETYPE COLLECTION (.TTC)

TrueType Collection files contain multiple TrueType fonts in a single file. TrueType Collections allow multiple fonts to share glyphs or other tables, and can create a significant saving of file space.

Windows typically uses TrueType Collections for East Asian languages, while Mac OS uses them for many purposes. Although this format was originally developed for Windows, many Mac system fonts are in this format, starting with Mac OS X v10.6. Older versions of Mac OS have less well-developed support for **.ttc** fonts.

The fork in the road

Legacy Macintosh fonts, specifically PostScript Type 1 fonts and TrueType fonts, are in files that include important data in a separate resource fork. With Mac OS X, OS X, and macOS, Apple has been moving away from resource forks.

The most important thing to remember about these types of fonts is that the resource forks will not be recognized by Windows or any other operating system. If you copy or move these fonts to a Windows system or onto a Windows server, the copied files will not include the resource fork and will no longer be usable on your Mac.

Note: *If you do need to store your fonts on a Windows server or backup system, they will be perfectly safe if you archive them in a .ZIP file first. To create an archive in macOS, choose a file or folder, then choose File > Compress "item name".*

OpenType wraps it up

The OpenType format was designed by Adobe and Microsoft so that it could be a wrapper around fonts in either the TrueType or PostScript Type 1 format. Your font manager may differentiate these as

OpenType-TT or **OpenType-PS**, indicating which type of font is at the core of the OpenType file.

MAC POSTSCRIPT TYPE 1

These were long the de facto standard for professionals in creative, print, and publishing environments.

Each PostScript Type 1 font is made up of two parts, a suitcase font file containing bitmaps and metrics (also called the *screen font*) and the corresponding outline font file (also called the *printer font*). Both the suitcase and corresponding outline files must be in the same folder in order to work properly in Mac OS. Note that one suitcase file may contain the bitmaps and metrics for multiple outline fonts. (Older PostScript fonts sometimes also included a separate font metrics file with the **.afm** extension. This was generally extraneous.)

Mac PostScript Type 1 fonts have resource forks, which can be an issue for file transfer and backup/restore. These fonts can't be used on Windows systems.

PostScript Type 1 fonts for Windows systems are not compatible with Mac OS.

APPLE ADVANCED TYPOGRAPHY (AAT)

Apple Advanced Typography (AAT) is an alternative to OpenType for encoding advanced typographic information in a font. AAT features may be coded in a Mac or Windows TrueType font, a **.dfont**, or an OpenType font. Many Apple system fonts have AAT features for advanced typography. Such features are accessible only in AAT-savvy applications. Few vendors other than Apple have created AAT fonts, and other than Apple's own iWork applications (such as Pages and Keynote), few major applications support AAT typographic capabilities.

MAC TRUETYPE

Mac TrueType fonts consist of a suitcase file that contains outlines and (optionally) bitmaps, as well as all the required font metrics. This makes them easier to use than PostScript Type 1 fonts. A single TrueType font suitcase can contain many TrueType fonts. TrueType fonts can contain thousands of glyphs, enabling extended language support in a single font.

A TrueType font suitcase has a resource fork, which can be an issue for file transfer and backup/restore. Because of this, and because most fonts use Mac-specific character encoding, these fonts can't be used on Windows systems.

DATAFORK TRUETYPE FONT (.DFONT)

With Mac OS, Apple introduced a new way of packaging system fonts. The **.dfont** is a font suitcase with TrueType font data stored in the file's data fork rather than the resource fork. Apple's **.dfont** fonts are generally high-quality fonts, but this format is only used by Apple. Unlike other new font formats, the **.dfont** format only works on Mac OS, and equivalent Windows fonts are not often available; therefore these fonts should be avoided in any potentially cross-platform workflows (for example, if your printer or service bureau is doing output from Windows).

MULTIPLE MASTER

This special kind of PostScript Type 1 font allows modifications of one or more font parameters to create variations of the original font, such as varying weight or width. While Multiple Master (MM) fonts are supported by Mac OS v10.2 and later, they are no longer sold or supported by Adobe, the original creator of the format. Uneven support for MM fonts has been known to cause various issues and problems in professional workflows, so we recommend not using them if possible.

Since Mac Type 1 Multiple Master fonts have resource forks, they are subject to the same problems that may arise during transfer or backup/restore.

Using Windows Type 1 fonts on a Mac

Windows PostScript Type 1 fonts are not natively supported by macOS, and so are not managed by Mac font managers.

Adobe design applications on the Mac will let you use Windows PostScript fonts just as if they were Mac fonts. You only need to copy the font files to the folder /Library/Application Support/Adobe/Fonts/. If this folder doesn't exist, go ahead and create it.

Windows PostScript fonts are comprised of two files with the same base name, one with the extension .pfb and the other with the extension .pfm. Copy both files to the above folder in order for your applications to recognize the font.

InDesign and .dfonts

Several Apple system fonts share names with fonts commonly used in publishing. These fonts would often override their PostScript counterparts that are usually more desirable in published output. Adobe realized this and made InDesign automatically ignore a system .dfont if its PostScript version was installed and active. This worked well until macOS v10.6 replaced the HelveticaNeue.dfont with HelveticaNeue.ttc, a TrueType collection. Suddenly InDesign users were back in the same situation, where their PostScript font was being overridden by a system font. Apple graciously returned to the .dfont version in a subsequent update to Snow Leopard.

As with regular PostScript Type 1 fonts, there is a separate Windows flavor of MM fonts. Windows MM fonts are not supported on Mac OS.

For more details on font formats, see the following:

- **Mac OS X: Font file formats** (<http://support.apple.com/kb/TA22195>)
- **Adobe - Fonts: Type topics: Font formats**
(<http://www.adobe.com/products/type/adobe-type-references-tips/font-formats.html>)
- **OpenType fonts | the font format and its usage**
(<http://www.prepressure.com/fonts/basics/opentype>)

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