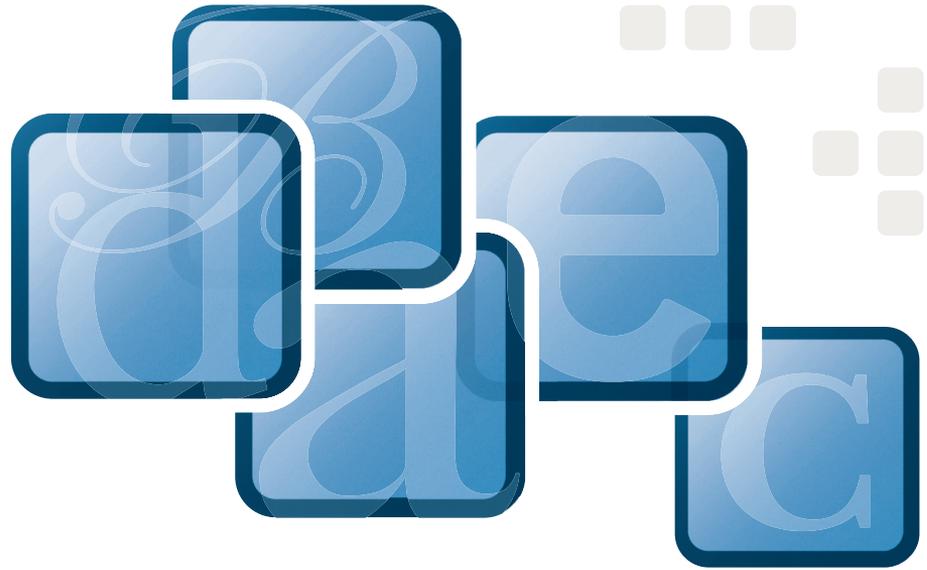FOURTH EDITION

Extensis™

Font
Management
in Mac OS® X

Best Practices
Guide

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Best Practices for Managing Fonts in Mac OS X

So what's all the hubbub?

In Mac OS X, professional workflows involving fonts have become seemingly more difficult and confusing, resulting in delays and problems for users.

Fonts in OS X are located in a myriad of locations on the system, and fonts are activated by a very specific font hierarchy that can make it very challenging for users to accurately verify when and if the correct font is in use.

Several fonts are also required for Mac OS X to properly function. Removing these fonts can affect the stability of your system.

What can I do about it?

This document contains detailed recommendations and instructions that can help you work efficiently with fonts in OS X, configure your system to minimize font problems and improve your workflow.
It covers:

- *How to organize your fonts*

- *Which fonts are required by Mac OS X*

- *Where Mac OS X system fonts are stored*

- *How to cleanup your fonts*

- *The font activation hierarchy*

- *Techniques to workaround font issues*

We presume that you have made the decision to use a professional font manager to manage your fonts. A font management tool is an integral part of making sense of your font mess.

If you are unclear on the need for a professional font manager, please take a moment to review the document "Font Management – Why Go Pro?" Please visit the following location to download the PDF: *http://dl.extensis.com/downloads/SC/EN/P/ Suitcase_why_go_pro.pdf*

This document is useful for all professionals in the creative, print and publishing environments. If you manage a workgroup of multiple users, you may significantly benefit from the use of a server-based font management system. To download white papers, documentation and related information about the benefits of server based font management solutions, please visit the Extensis website: *http://www.extensis.com.*

Please note: this guide covers the best practices for font management of Roman-based languages. Font management best practices for Asian and other languages can vary from what is in this document.

Step 1:
Organize Your Font Files

One of the first things you should do is to organize your font files into a neat, systematic and central location.

To do this, you need to create a folder – for example a folder called **My Fonts** – and keep it somewhere locally on your hard drive. A good location to place this folder is in the **/Users/Shared** folder, because that way your font library will be accessible to all the users on the machine.

You should also decide whether you want to manually organize your font files, or use a font manager to do this for you. Suitcase Fusion comes with a product called FontDoctor which, among other things, can organize all your font files. Suitcase Fusion can also organize all your font files for you automatically if you choose to have it do this. Even if you do this, it's still a good idea to organize your fonts before adding them to Suitcase Fusion.

To organize fonts with FontDoctor:

1. Launch **FontDoctor**.

   Font Doctor comes with Suitcase Fusion, or can be purchased separately from the Extensis website: *http://www.extensis.com/fontdoctor*.

2. In the FontDoctor dialog box, select the **Organize Fonts** tab.

3. In the **Search Disks/Folders for Fonts** box, add specific folders to the list by using the folder button to choose specific locations, or by checking a specific disk to scan.

Warning: If you choose to scan an entire disk, you may wish to manually clean up your application font folders before scanning the entire disk. See **page 6** of this guide for location information about Adobe, Microsoft and Quark applications.

4. If you want to keep an entirely clean font library, it is good to remove the original font files, so that the fonts in your library are the only ones available for use. To do so, check the **Delete Original Files After Copy** option.

5. Click the Organize Options button to open the Organize Options dialog box. Typically the default settings are appropriate here. To reset the default settings, click the **Reset Settings** button. Note that the **Skip System Folder** option is checked. You will also need to clean these files up, but it is better to do this manually, or with a professional font manager like Suitcase Fusion.

6. Click **Save** to save the new settings.

7. Click **Create Library**.

8. FontDoctor prompts you to choose a location for your new font library. Click **New** and choose the folder you created at the beginning of step 1..

9. Click **OK** to confirm the settings. FontDoctor searches the selected locations and groups all of the fonts in the new library.

To manage fonts with Suitcase Fusion:

When fonts are added to Suitcase Fusion, you can specify that the fonts be moved or copied to a central location, called the **vault**. To tell Suitcase Fusion to organize your fonts, do the following:

1. Launch Suitcase Fusion.

2. Choose **Suitcase Fusion** > **Preferences**.

3. In the General tab of the Preferences dialog box, choose the **Copy added fonts into the vault** option. This copies the font files into the vault, leaving the original files untouched.

4. If you would like to move all of the files into the vault, and delete the original files, enable the **Delete originals after copying into the vault** option.

   Warning: Enabling this option will delete your original font files, keeping copies only in the vault. To obtain another copy of your font files, use the **Collect Fonts for Output** command to extract a copy of your fonts from the vault.

5. Click **OK** to accept the new preferences.

6. Add your fonts to Suitcase Fusion.

Manually organizing your fonts

If you decide to manually organize your fonts, it is best to have a strategy for the organization of your font library. The following are typical strategies that users implement to organize physical font files. Keep in mind that some levels of organization are better suited to be implemented within a font manager.

Alphabetically by family name: Often used by designers or creative professionals, this is often the easiest way to find a particular font. With this method, the library is often further divided into a number of subfolders within the My Fonts folder, for example A-D, E-H, etc. If you like this method, Font Doctor can organize fonts like this for you.

By classification: Often used by typographers, or designers who are well versed in typography. Depending on the level sophistication a set of subfolders with names such as Serif, Script, or Ornamental can be used.

By job name or number: Often used in production environments like service bureaus or print shops, you would create a set of subfolders for each job name or number in your workflow.

By client: Often used in design shops with many clients, where each client uses a specific set of fonts for all their jobs. It is sometimes required in these environments, to physically separate the different font files for each client. Suitcase Fusion includes the optional to add these fonts temporarily and activate them "on-demand".

Whichever way you decide to organize your font library, you must ensure that you keep all PostScript font components (suitcase fonts and outline fonts) together in the same folder. Mac OS X requires that the suitcase font files and corresponding outline font files to be in the same physical folder in order to work correctly. This level or organization is typically managed by your font manager, for example Suitcase Fusion won't even allow orphan fonts (PostScript fonts missing a component) into the font vault.

Step 2:
Manage Your System Font and Application Font Folders

Fonts that are stored in any of the Mac OS X System Font folders or in any of the Application Font folders are typically managed by the operating system and not by your font management tool.

For detailed information about the many locations where Mac OS X can place and store fonts, see the **Mac OS X and Font Locations** chapter of this guide.

The number of locations for fonts in Mac OS X can lead to confusion and cause problems. Within the professional creative, print and publishing environments, it is strongly recommended that you use a font management tool to manage **all** of your available fonts.

Suitcase Fusion includes features that allows you to manage Mac OS X System Fonts. For details about how to do so, see the **Suitcase Fusion Users Guide**.

Mac OS X 10.5 Font Book preferences

Font Book is the built-in font utility for Mac OS X. Font Book version 2.1 that is included with Mac OS X 10.5 (Leopard) includes some new features that can interfere with professional font management..

Two Font Book auto activation preferences act like system-wide system preferences in Mac OS X 10.5. To avoid activation conflicts, these options should be adjusted.

To update Font Book preferences:

1. From the Applications folder, launch Font Book.

2. Choose **Font Book** > **Preferences**.

3. From the Preferences dialog box, disable the following options:

   • **Automatic font activation** - *this option interferes with professional font mangers and does not allow for automatic font activation across all applications. Your font manager should still allow you to use plug-in based automatic activation for each supported application.*

   • **Alert me if system fonts change** - *when enabled, this option will automatically place "protected" fonts back into your system font folders even if you remove them. It also can prevent a professional font manager from effectively managing or overriding your system fonts.*

Manually cleaning up your System Font and Application Font folders

In order to manually clean up your System Font and Application Font folders, it is necessary to remove all fonts that are not absolutely essential for Mac OS X to operate.

If you manually clean out these folders, we recommend that you create a folder named **Moved from System Font Folders** within your **My Fonts** folder (the folder you created in Step 1). Whether you will be using these fonts in the future or not, it is good practice to save these fonts and not discard them just in case you do need them at a later date.

To manually clean up your system fonts:

1. For **Local Domain Fonts**, create a folder called **Library Fonts** within the **Moved from System Font Folders** folder.

2. Move all fonts that you find in /**Library**/**Fonts** to your new **Library Fonts** folder.

3. For **User Domain Fonts**, create a folder called **User Fonts** within the **Moved from System Font Folders** folder.

4. Move all fonts that you find in /**Users**/[**name**]/**Library**/**Fonts** to your new **User Fonts** folder.

5. If you have a **Classic System Folder**, a "system folder" that has an OS 9 icon at the root of your startup disk, these fonts should be moved if you want them to be managed with your font manager in Mac OS X. Please remember, that fonts moved out of the Classic System Folder will no longer be available for Mac OS 9 applications unless activated by a font manager.

   Create a folder called **Classic Fonts** within the **Moved from System Font Folders** folder.

   Move all fonts that you find in /**System Folder**/**Fonts** to your new folder, *except* the following fonts:

Charcoal	*Chicago*
Geneva	*Monaco*

   These fonts are essential to normal system operation of Mac OS Classic, and removing these fonts may cause Classic and Classic applications to behave erratically. In no event should these fonts be moved from **System Folder**/**Fonts**.

You may also wish to leave any OpenType fonts that you want to use in the Classic environment in the **System Folder**/**Fonts** location. All Mac OS X font managers will be unable to activate OpenType fonts for Classic applications.

6. To move **System Domain Fonts**, you must authenticate to Mac OS X as a user with Administrator rights. If you aren't sure your login level, check the Accounts page of the System Preferences. For more information, see the Mac OS X documentation.

7. Create a folder named **System Domain Fonts** folder in your **Moved from System Font Folders** folder.

8. **WARNING:** Removing required fonts from your System Domain Fonts folder can have adverse effects. This includes not being able to launch the operating system and require you to reinstall the operating system.

   Review the required operating system fonts listed on the next page. These fonts are required by the operating system. Other fonts may be required by other applications that you have installed, so remove fonts from the System Domain Fonts folder *with caution*.

   Select only fonts in the /**Library**/**Fonts** folder that are not listed on the chart, and that you know are not required by other applications.

Required System Fonts by OS			
Font file name	10.3	10.4	10.5
AppleGothic.dfont	•	•	•
AquaKanaBold.ott	•	•	•
AquaKanaRegular.ott	•	•	•
Courier.dfont*	•	•	•
Geneva.dfont	•	•	•
Helvetica LT MM and HelveLTMM		•	•
Helvetica.dfont*	•	•	•
HelveticaNeue.dfont*			•
Keyboard.dfont	•	•	•
LastResort.dfont	•	•	•
LucidaGrande.dfont	•	•	•
Monaco.dfont	•	•	•
Osaka.dfont	•	•	•
OsakaMono.dfont	•	•	•
Symbol.dfont*	•	•	•
Times LT MM and TimesLTMM		•	•
Times.dfont*	•	•	•
ZapfDingbats.dfont*	•	•	•
ヒラギノ丸ゴ *Pro W4.otf* *(Hiragino Maru Gothic Pro W4)*	•	•	
ヒラギノ明朝 *Pro W3.otf* *(Hiragino Mincho Pro W3)*	•	•	
ヒラギノ明朝 *Pro W6.otf* *(Hiragino Mincho Pro W6)*	•	•	
ヒラギノ明朝 *ProN W3.otf* *(HiraMinProN-W3)*			•
ヒラギノ明朝 *ProN W6.otf* *(HiraMinProN-W6)*			•
ヒラギノ角ゴ *Pro W3.otf* *(Hiragino Kaku Gothic Pro W3)*	•	•	
ヒラギノ角ゴ *ProN W6.otf* *(Hiragino Kaku Gothic Pro W6)*	•	•	
ヒラギノ角ゴ *ProN W3.otf* *(HiraKakuProN-W3)*			•
ヒラギノ角ゴ *ProN W6.otf* *(HiraKakuProN-W6)*			•

* These fonts are OK to replace with another version of the font. For example, you can substitute the .dfont with a PostScript version of the font. However, at least one version of the font is required at all times.

Note: If you run a non-Roman based applications, then other fonts may be required.

9. **Copy** the selected fonts from the /**Library**/**Fonts** folder to your new **System Domain Fonts** folder.

10. Move the selected files from the System Folder to the trash. At the prompt, enter your Mac OS X Administrator password and click **OK**.

International Fonts

Mac OS X also comes with a number of international fonts for use when using a non-Roman language as the preferred language. The required fonts for each language are listed in the chart on the previous page.

If you have difficulty reading the font name, select the font and choose **File > Get Info** (Command-I). The full name is listed in the Get Info dialog box.

About Helvetica and Helvetica Neue

While Helvetica and Helvetica Neue are not essential system fonts, some applications still require an active version of these fonts in order to operate correctly. If you regularly use any or documents that require these fonts, once you remove them from your system font folders, be sure to activate your preferred versions using your font manager. It doesn't matter which font format you use (PostScript, TrueType, etc), but for professional creative, print and publishing environments, we recommend using a PostScript version of these two common fonts.

Working with Helvetica and Helvetica Neue is different in Mac OS X 10.5 (Leopard). In Mac OS X 10.5, Apple introduced a new feature called System Font Protection. This feature is always enabled and prevents a user from removing critical fonts from the **/System/Library/Fonts** folder by automatically replacing them with backup copies.

This is the list of "Protected" fonts in Mac OS X 10.5:

Geneva.dfont	*Keyboard.dfont*
Helvetica.dfont	*LastResort.dfont*
HelveticaNeue.dfont	*LucidaGrande.dfont*
Monaco.dfont	

Extensis does not recommend removing all of these fonts; In fact, doing so will prevent your system from functioning properly.

However, the versions of Helvetica and Helvetica Neue supplied with Mac OS X 10.5 can cause problems with versions of these fonts you already be using in documents. If you are working in a professional print or publishing environment, you will most likely want to replace these with another version. You have two options for activating your chosen replacements:

1. Override these system fonts with your font manager. (Suitcase Fusion has the ability to do this.)

   The only risk associated with this option is, if you disable the version you activate with your font manager, the dfont version will silently reappear. You may also see more than one choice for these fonts, which can be confusing. This may be your only option, if you do not have permission to remove the dfont versions of Helvetica and Helvetica Neue.

2. Remove the font from both **/System/Library/Fonts** and the system's ProtectedFonts folder. Once you do this, you'll want to keep your preferred version of the fonts that were removed permanently active in your font manager (always on). In fact, some version of Helvetica and Helvetica Neue must always be active for Mac OS X 10.5 to function properly.

If you want to remove Mac OS X 10.5 protected fonts, the versions of Helvetica and Helvetica Neue you choose as a replacement must contain Regular, Bold, Italic and Bold Italic weights. It should also be a modern, high-quality font. For most purposes, Extensis recommends a PostScript Type 1 font. However, an OpenType version of these fonts will offer greater flexibility for newer documents and applications.

To remove Helvetica.dfont and HelveticaNeue.dfont from /System/Library/Fonts:

1. Log-into your Mac OS X computer with an Administrator account.

2. Open Font Book.

3. Choose **Font Book** > **Preferences**

4. Disable the Alert me if system fonts change preference.

5. Copy the following folder to a safe, backup location on your hard drive:

   /System/Library/Frameworks/ApplicationServices. framework/Versions/A/Frameworks/ATS.Framework/ Versions/A/Resources/ProtectedFonts

   Note: Never delete your backup copy of the ProtectedFont folder, in case it they are required by a document or application you encounter in the future.

6. Open the original ProtectedFonts folder listed above and select only Helvetica.dfont and HelveticaNeue. dfont and move them to the Trash.

7. Authenticate with your Administrator username and password.

8. Open the **/System/Library/Fonts** folder and move Helvetica.dfont and HelveticaNeue.dfont to the Trash.

9. Open your font manager and permanently activate (always on) your preferred versions Helvetica and Helvetica Neue.

10. Restart your computer.

Microsoft Core web fonts

There are a number of common fonts used by browsers to display web pages as intended by the designer. These fonts were part of the Microsoft Core Web fonts initiative, and are included with Mac OS X and Microsoft applications. It is a good idea to have a version of the following fonts active on your system not only for web pages, but also for many Microsoft applications.

Andale Mono	*Arial*
Arial Black	*Comic Sans MS*
Courier New	*Georgia*
Impact	*Times New Roman*
Trebuchet MS	*Verdana*
Webdings	

These fonts are commonly installed by Microsoft Office in **Users/[Name]/Library/Fonts** and by Mac OS X in **Library/Fonts**. These can be removed from either location and managed with a font manager.

Microsoft Office fonts

In addition to the Microsoft Core web fonts, Microsoft Office 2004 applications require a number of additional fonts to operate properly.

Batang.ttf	*Gulim.ttf*
MS Gothic.ttf	*MS Mincho.ttf*
MS PGothic.ttf	*MS PMincho.ttf*
MT Extra	*PMingLiU.ttf*
SimSun.ttf	*Wingdings*

The first time that a user launches an Office application, these required fonts, as well as others are automatically copied into the **Users/[Name]/ Library/Fonts** folder. This only happens the first time every Mac OS X user launches any Office application on the machine, yet not thereafter. To prevent this from happening, you can rename the source folder of these files. Office will continue to function properly after doing so. For data integrity, do not delete these files, just keep them in a renamed folder.

To prevent Office from automatically reinstalling these fonts:

1. Close all Microsoft Office applications.

2. Rename the following Fonts folder:

   /Applications/Microsoft Office 2004/Office/Fonts

3. Add the Microsoft Office fonts to your font manager and ensure that the required fonts are active before launching any Office applications.

   Note: Additional fonts may be required when using templates installed with Office or from the web.

Adobe Application Fonts

It is likely that you have a number of applications from Adobe installed on your system. Adobe places fonts on your system that are required for Adobe applications to function properly.

Adobe Creative Suite 2 required fonts:

Adobe CS2 installs font files in a location that is only available to Adobe applications. You may remove most font files from **/Library/Application Support/Adobe/Fonts**. However, do not remove any folders, non-font files or the following fonts from the **Reqrd** folder.

MyriaBol	*MyriaBolta*
Myriad	*Myrialta*
MyriaRom	

Other fonts in this folder can be removed and managed with a font manager.

Adobe Creative Suite 3 required fonts:

Adobe CS3 installs font files in **/Library/Fonts**, so they are available to all users and applications. These fonts can be removed and managed with a font manager, but the following required fonts must be active when you launch Adobe applications:

MyriadPro-Black.otf	*MyriadPro-BlackIt.otf*
MyriadPro-Bold.otf	*MyriadPro-BoldCond.otf*
MyriadPro-BoldIt.otf	*MyriadPro-BoldCondIt.otf*
MyriadPro-Cond.otf	*MyriadPro-CondIt.otf*
MyriadPro-It.otf	*MyriadPro-Light.otf*
MyriadPro-LightIt.otf	*MyriadPro-Regular.otf*
MyriadPro-Semibold.otf	*MyriadPro-SemiboldIt.otf*

These required fonts can be removed and managed with a font manager, but must be active when you launch Adobe applications.

Step 3: Add your fonts to your font manager

Once you have all your font files organized, and have removed all unnecessary fonts from the various System Font and Application Font folders, the next step is to add all these fonts to your font manager, so you can activate them as you need them.

Before you add your fonts to a font manager, you will likely need to decide how you will add the fonts. Suitcase Fusion contains a secure font vault that can be used to keep fonts. The vault ensures that fonts are complete and safe from corruption. To add fonts to the Suitcase Fusion vault, see page 2 of this guide

If you have organized all your font files into a single folder hierarchy, and don't want to use the vault, you may want to add these fonts in place to your font manager. You can simply drag the entire My Fonts folder into the Fonts pane in Suitcase Fusion to have all the fonts added to the font manager.

Another decision you need to make is whether you want to follow your physical organization of files by creating corresponding Sets in Suitcase Fusion, or simply add the fonts and organize them into Sets at a later time. For example, if you have organized your font files by client or by job name, you may want to create a separate Set for each client or job. To do this, simply drag each client or job folder into the **Sets** pane in Suitcase. Suitcase only adds fonts once, and makes references to the original font file thereafter. So, there's no danger of adding duplicate fonts.

For detailed instructions about adding fonts, see the **Suitcase Fusion User Guide**.

Before you add your font library to your font manager, you may want to consider first validating your font library using a tool like Font Doctor. For more information about this, refer to the "Corrupt Fonts" section in Step 4.

Step 4: Cleanup your Font Library

Cleaning up your font library is probably the most diverse and certainly the most difficult task of font management. Many font problems encountered in Mac OS X occur because of problem fonts. Any number of errors can occur because a font is actually corrupt, missing a outline font file, or is a duplicate of another font you already have in your library. Having a clean, healthy font library is your best bet to a seamless, problem free workflow.

Corrupt Fonts

Suitcase Fusion comes with a full copy of Font Doctor. Font Doctor's main function is to validate fonts, to fix any corrupt fonts that it is able to fix, and warn you about problems that it is unable to fix.

Suitcase Fusion also performs font corruption checking and repair as you add fonts. Even so, for that extra level of security, Font Doctor is recommended to ensure that your fonts are healthy and that missing components are identified and regrouped, if possible..

Any fonts that are found to be corrupt should be discarded. Find and reload a healthy version of the font from the original media whenever possible.

Orphan Fonts

PostScript fonts are comprised of a suitcase font file (sometimes referred to as the bitmap or screen font file) and a corresponding outline font file (sometimes referred to as the printer font). If either of these components is missing, it is referred to as an orphan font. Different applications deal with these orphan fonts in different ways, but to ensure a trouble free workflow, both components are required. So one of the steps you should take in cleaning up your font library, is to either discard any orphan fonts you have in your library, or replace the orphans with a copy of the font from the original media.

Once again, Font Doctor can help in this regard by locating and matching suitcase and outline fonts together. The final check should be done once you have added your font library to Suitcase Fusion. If you are adding fonts to the Font Vault, orphan fonts are not allowed. Orphans will not even be added to the Suitcase Fusion vault.

Duplicate Fonts

Two fonts that have the same name are considered duplicate fonts because it is often difficult to determine what – if anything – is different between the fonts. Many font libraries often contain many duplicate fonts, sometimes out of necessity (different versions of these fonts may be needed), sometimes simply because they have accumulated over time. To avoid confusion and errors, it is best to keep only the fonts – and the versions of fonts – that you need.

Once all your fonts have been added to your font manager, you should decide which of these fonts – especially duplicates – you want or need to keep, and which you should discard. For example, most people have multiple versions of Helvetica — likely PostScript, TrueType and Dfont versions, and even possibly multiple PostScript versions of Helvetica from a single foundry, such as Adobe. This is not uncommon. There are, in fact, many, many versions of Helvetica available. If you work on client jobs using client provided fonts, then you will need to make sure you have the versions of these fonts provided by the client. So if Client A requires Helvetica "A", and Client B requires Helvetica "B", it is necessary to keep copies of both Helvetica "A" and Helvetica "B" in your library.

Suitcase Fusion can help you determine if fonts are identical and thus true duplicates. Font Sense technology examines fonts and gives you helpful information such as kerning checksum values which can be used as a unique identifiers for specific fonts, even if they appear to be similar.

While determining duplicates can be a time consuming process, it is definitely worth your while to examine your duplicates and decide which you need and which you do not need.

For detailed instructions about examining duplicate fonts and Font Sense attributes, see the **Suitcase Fusion User Guide**.

If you do need to keep multiple versions of fonts in your library, you should probably use the keyword features of your font manager to tag your duplicate fonts with information to help identify the fonts required for each client and job.

For detailed instructions about using keywords and other attributes with your fonts in Suitcase Fusion, see the **Suitcase Fusion User Guide**.

If you are completely in charge of the fonts you use, you should only keep one version of each font and remove the duplicate font from your font manager as well as removing the duplicate font files from your system. Within a professional creative, print and publishing environment, PostScript versions (either Type 1 PostScript format, or OpenType PostScript format) are the most commonly preferred.

Mac OS X Font Details

Font Locations

With Mac OS X, Apple introduced a number of new locations where fonts may be stored and used by the system.

System Domain
/System/Library/Fonts

Fonts in this folder are used by the OS, available to all users of the system, and in general should be left alone. Some of the fonts in this folder are absolutely required by the OS and removing them will cause the OS or certain applications to crash or behave erratically. Other fonts may be safely removed from this folder. See **page 6** of this guide for a list of required fonts that cannot be removed. Fonts stored in this location are always active and available to the OS and all applications.

Local Domain
/Library/Fonts

This folder houses any fonts available to any user who logs-on to the system. Fonts stored in this location are always active and available to the OS and all applications.

User Domain
/Users/[name]/Library/Fonts

Fonts in this folder are non-essential available only to the specific user who logs-on to the system. Each individual user who has an account on the system has his/her own User Fonts folder. Fonts stored in this location are always active and available to the OS and all applications.

Classic Domain
/System Folder/Fonts

This folder exists only on PowerPC machines with the Classic environment installed, and houses fonts available to all users of the system. These fonts are specifically for use with the Classic environment. See **page 5** of this guide for a list of required Classic fonts that cannot be removed.

Note: Fonts in this folder are active even if the Classic environment is not running.

Application Fonts
/Library/Application Support

In addition to these system font folders, individual applications sometimes also store fonts in certain locations for their own use. With Mac OS X, applications can keep a private store of fonts for their own use. Of particular importance to the professional creative, print and publishing community, are the Adobe CS2 applications, which store fonts in:

/Library/Application Support/Adobe/Fonts

These fonts are active and available to any Adobe CS2 application running in Mac OS X – but not available to non-Adobe applications.

Font Hierarchy

Can duplicate fonts be retained in the various system and application font folders? Yes, but it's not a good idea.

If duplicate fonts are stored in multiple font locations, Mac OS X will use the first instance of the font based on the following hierarchy:

1. A specific Application's font folder:
   /Library/Application Support

2. The User font folder:
   /Users/[name]/Library/Fonts

3. The Local font folder:
   /Library/Fonts

4. The Network font folder
   (if configured by a network administrator)
   /Network/Library/Fonts

5. The System font folder:
   /System/Library/Fonts

6. The Classic font folder:
   /System Folder/Fonts

The Application Support font folder is the "highest" font location, and the classic font folder is the "lowest" font location. This means, for example, that if you have a font of the same name (a duplicate font) in both the **/Users/[name]/Library/Fonts** folder, and the **/System/Library/Fonts** folder, Mac OS X (and all running applications) uses the version of the font in the **/Users/[name]/Library/ Fonts** folder, since that is the "higher" font location.

Font Formats

Following is a brief synopsis of all font formats supported by Mac OS X:

PostScript Type 1

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

Each PostScript Type 1 font is made out of two parts, a suitcase font file (sometimes called the screen font) and the corresponding outline font file (also called the printer font) in order to work correctly. Both the suitcase and corresponding outline files must be in the same physical folder in order to work properly in Mac OS X.

TrueType

TrueType fonts contain the bitmap and outline information, as well all the required font metrics, in a single font suitcase, making it somewhat easier to utilize than traditional PostScript Type 1 fonts. Some older TrueType fonts are not as widely accepted in professional creative, print and publishing environments, yet most new TrueType fonts will function properly in a professional workflow.

OpenType

OpenType is the newest font format. There are several significant advantages to the OpenType format. First, as with TrueType, the entire font is housed in a single file. Second, this file is cross platform – the same file can be used on a Mac or

Windows platform with consistent results. Third, an OpenType font can contain either PostScript or TrueType outline data, so professional publishing environments can continue to use PostScript fonts. Fourth, OpenType supports Unicode which can contain thousands of characters and language information including high quality ligatures, swash glyphs, and other advanced typographical features. This is a significant benefit over PostScript Type 1, which is limited to 256 characters.

Mac OS X natively supports OpenType fonts and Unicode information, making OpenType an excellent choice. However, moving to OpenType fonts does require a financial investment since you cannot simply convert your existing PostScript Type 1 or TrueType fonts to OpenType. Many font vendors now sell OpenType versions of their font collections, and many are only developing OpenType fonts at this point.

Dfont

With Mac OS X, Apple introduced yet another font format. The Dfont (Data Fork TrueType Font) is essentially a repackaged TrueType font. While these Dfont format fonts are often high-quality fonts, this format is essentially only used by Apple and, in effect, these fonts are just used as system fonts. We do not recommend using Dfont format fonts within professional creative, print and publishing environments.

PostScript Multiple Master

This special PostScript font allows modifications of one or more font parameters to create variations of the original font. While Multiple Master fonts are supported by Mac OS X, they have been falling "out of favor" and are no longer

being actively developed by Adobe (the original creators of Multiple Master fonts). They have been known to cause various issues and problems in professional workflows, and we recommend not using Multiple Master fonts if possible.

Windows TrueType

Mac OS X also supports Windows TrueType fonts. These fonts are similar to Mac TrueType fonts, but with a different internal organization.

Unicode

You've probably heard the term "Unicode" used in one way or the other, but may not know exactly to what it refers. For Fonts, Unicode defines unique character mappings for up to 65,000 characters (current font formats) per font. For example, the character "A" is in the same character mapping across all Unicode fonts.

The Unicode format specifies exact character mappings for all letters, including Dingbats, that provides predictability across multiple fonts. In previous versions of the Mac OS, the predominant character encoding for fonts was MacRoman, not Unicode. MacRoman did not specify exact character mappings, so unique characters could be mapped to other character locations. For example, in MacRoman, Dingbat characters could be mapped to keyboard keys.

For an application to be able to use Unicode fonts, it must be "Unicode Compliant." If an application is not compliant, then it will likely display an entirely wrong character from a different location in the font.

Modern Mac OS X applications are Unicode compliant, while older applications written with for earlier standards are not as likely to be compliant.

Many font vendors are providing Unicode compliant OpenType fonts as well as older, non-Unicode fonts that have simply been upgraded to OpenType. For example, Adobe sells STD and PRO OpenType fonts. PRO fonts are Unicode compliant and typically contain additional glyphs and have additional language support. The STD line, while still quality fonts, are typically not Unicode compliant, yet gain the other benefits of the OpenType format.

Font Cache Issues

System font cache issues

If your fonts occasionally appear garbled or you are seeing other strange behavior with your fonts, you may be seeing a problems with the Mac OS X font cache.

Font Doctor 7 has the ability to purge the font cache, please visit the Extensis website for more information: *http://www.extensis.com/fontdoctor/*

Otherwise, you can manually clear your system font cache using the following procedure.

To clear the system font cache:

1. Remove the font cache files **com.apple.ATS.System. fcache**, **com.apple.ATSServer.FODB_System** and **fontTablesAnnex** that are found in **/System/Library/Caches**. You will need to enter an Administrator password in order to do this.

2. Remove the folder **com.apple.ATS** from **/Library/Caches**.

3. Remove the file **com.apple.ATS.plist** from **/Users/[name]/Library/Preferences**.

4. Restart your Mac.

This should alleviate the problem. If the problem recurs, it is necessary to remove the font cache files again.

Adobe font cache

If your font display problems are limited to Adobe applications, there are a few Adobe-specific font caches that can be manually cleared.

To clear the Adobe font caches:

1. Close all open Adobe applications.

2. Remove the **AdobeFnt*.lst** files from the following locations. Depending upon which applications you have installed, every location may or may not exist.

   Note: The "*" in the filename represents any numerical value, for example, AdobeFnt10.lst, AdobeFnt11.lst, etc.

   Warning: *Do not delete **AdobeFnt.db**, **FntNames.db** or any other files from these folders.*

   Users/[Name]/Library/Application Support/Adobe/Fonts/
   Users/[Name]/Library/Application Support/Adobe/TypeSpt/
   Users/[Name]/Library/Caches/Adobe/Fonts/
   Users/[Name]/Library/Caches/Adobe/TypeSpt/

   /Library/Application Support/Adobe/Fonts/Reqrd/CMaps/

3. Depending on your version of InDesign clear AdobeFnt*.lst files from either:

   /Applications/Adobe InDesign CS2/Fonts/
   /Applications/Adobe InDesign CS3/Fonts/

4. Relaunch the affected Adobe application. The Adobe applications automatically create new clean copies of the removed font cache files.

QuarkXPress JAWS font cache

QuarkXPress uses the JAWS PDF generation engine to create PDF files from documents. This PDF creation engine places cache files on your system that can become quite large and cause stability issues. To prevent and solve these issues, the JAWS folder can be cleaned. QuarkXPress will automatically regenerate any necessary files.

To clear the JAWS folder:

1. Close all Quark applications.

2. Remove the contents of the following folder based on the version of QuarkXPress installed.

   QuarkXPress 7.1 and newer stores the cache in each user's home folder:

   /Users/<Name>/Library/Preferences/Quark/ QuarkXPress 7.0/jaws/

   Versions earlier that QuarkXPress 7.1 store the cache in the the Application folder:

   /Applications/<QuarkXPress folder>/jaws/ttfont/

3. Re-launch QuarkXPress.

If clearing QuarkXPress' caches don't address your problem, updating Mac OS X may help. Mac OS X 10.4.11 (and later), includes an important update that improves compatibility when using OpenType fonts in QuarkXPress.

Quark also offers a free FontFace XTension for QuarkXPress 6.x that prevents incorrect substitution of a font face when a font face within a font suitcase is deactivated.

To download the FontFace XTension:

For **QuarkXPress 6.5.2**, please visit: *http://www.quark.com/service/desktop/downloads/ details.jsp?idx=581*

For **QuarkXPress 6.1** and **6.1.1** please visit: *http://www.quark.com/service/desktop/downloads/ details.jsp?idx=590*

Microsoft Office font cache

If Microsoft Office 2004 documents are not displaying or printing fonts correctly, you may need to manually clear the Microsoft Office font cache.

To clear the Microsoft Office font cache:

1. Close all Microsoft Office 2004 applications.

2. Remove the following file:

   Users/[Name]/Library/Preferences/Microsoft/ Office Font Cache (11)

3. Re-launch the affected Office application.