

Compliance and Control in Font-Intensive Workflows

The Case for Enterprise Font Management

Executive Summary

Millions of design and printing professionals use desktop font management; it's an essential part of their workflow. These users are responsible for the public face of the corporation. Wherever they are situated in the enterprise, these users are voracious consumers of fonts, and it is not uncommon to find thousands of fonts in active use on any given workstation. Any IT Manager who supports a font-intensive workflow—such as design, printing, and publishing teams—knows how time-consuming font problems can be. Helpdesk tickets related to font issues abound.

But enterprise font management is about more than helpdesk tickets and frustrated 'creative types'; it is even more importantly about compliance. Although some IT managers don't realize it, fonts are *licensed* software assets. And because of this, it is vital for organizations to understand, centralize, and control their font usage.

The benefits of a centralized (as opposed to workstation-specific) font management include legal license compliance, simplified license management, improved IT efficiencies, document design consistency, and reduced production downtime and overall cost savings.

This paper will examine the issues that necessitate font management, and why IT departments within these enterprises should look deeper at centralized font management solutions.

Introduction

With all the headaches on an IT executive's plate in these days of Internet Time, the problems of computer fonts might appear to be a pretty low priority. But fonts and font management are latent issues that can escalate into major problems for an organization. This paper examines the reasoning behind that statement, and explores some solutions.

What do we mean by "font management," and why is it important? Font management is asset management of fonts from several standpoints: inventory (what fonts do we own?), licensing (is our font software legal?), and control (what fonts are available to each individual workstation and/or application?).

Font management deals with enabling/disabling, controlling access to, and tracking fonts on Windows and Macintosh workstations. There are many reasons for needing to do this, including maintaining consistency

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(standardizing the look and feel of documents and publications), preventing layout errors (often due to text that re-flows due to character width variations in different fonts), and avoiding costly print re-runs engendered by missing or incorrect fonts. Organizational imperatives, including abiding by font licensing contracts, maintaining workstation OS and application stability, are also important. Font management software is necessary in creative workflows because current Windows and Macintosh operating systems cannot efficiently accommodate the thousands of simultaneous fonts that typical graphic design and production users require. Millions of design and printing professionals use desktop font management applications without a server component; it's an essential part of their workflow. When those design and printing professionals work in large organizations, their font management needs are unchanged, but additional requirements arise due to organizational policies and font licensing obligations.

The fundamental requirement that leads to font management is the need to get the right fonts into the hands of the appropriate users in a timely and uncomplicated fashion. This simple requirement is often exacerbated in larger organizations, where fonts pass through many touch points before reaching end users' workstations. Worse, users are left to their own devices, being given permission to the all-important "Windows\Fonts" directory or having Admin access on Mac OS X systems.

Let's be clear here. We're not talking about font management for average office users, whose wild-and-crazy font choices might range as far as Arial and perhaps Times New Roman. Those users are, or by decree must be, content with the fonts that ship with their OS, or are pre-loaded on their machines as part of a standard image. We're talking about design, printing, and publishing professional font users. These users are responsible for the public face of the corporation, in press releases, advertising, signage, packaging, and so on. Sometimes they work in the marketing department; in some organizations, there is a separate in-house graphics department. Wherever they are situated in the enterprise, these users are voracious consumers of fonts, and it is not uncommon to find thousands of fonts in active use on any given workstation.

If you search the Microsoft website for "font management," the first results page returned by the Microsoft search engine is for Windows 95, not exactly the most germane result for today's operating systems. Apple's website is only marginally better. So font management issues are not exactly high on the OS vendors' list. That leaves researching and implementing font management solutions up to individual IT departments (*see addendum for resources*).

The remainder of this document discusses the issues surrounding enterprise font management: what it is, why it's needed, and what benefits it delivers.

Licensing Issues

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Although some IT managers don't realize it, fonts are *licensed* software assets. They're not free, and professional fonts *do* come with license agreements. The popular Adobe Font Folio, for example, currently retails for \$2,599 for a five-seat license, or almost \$520 per computer. It can be had more cheaply in bulk; a 20-seat license works out to about \$450 per seat, for example, and more favorable corporate licenses are available through Adobe's sales force. Other major font suppliers, such as Bitstream, Linotype, ITC, and Monotype, have similar pricing and licensing arrangements. The point here is that fonts can be a significant per-workstation cost.

An important aspect of font licenses is that they are generally CPU-based, *not* based on concurrent usage like some other software licenses. With a CPU-based license, an organization cannot legally install the font software on 20 computers, with the assumption that it will only be used on five computers at any one time.

The Business Software Alliance (BSA) is the organization that software vendors such as Microsoft and Adobe use to track and pursue software piracy. Here's what the BSA says about fonts:

Did you know that the typefaces [*e.g., fonts*] you use every day are software? All fonts are software, and, like any software, fonts are intellectual property and are subject to copyright and trademark laws.

Operating systems include fonts. Desktop and network applications include fonts. These 'system fonts' are licensed under the terms of their respective applications' End User License Agreements (EULAs).

But what about the other fonts we use – for design, for publishing, for legal documents – for any work outside the basic tasks of creating and printing documents and email?

These fonts are also licensed by font software publishers (foundries) or from type designers, and using them means paying attention to the terms of the license agreements and being compliant with the standards they set. Just like licenses for software programs are a necessity, your organization also needs to be sure its fonts are licensed too. Find out if your organization has the licenses it needs to avoid risks.¹

The BSA also publishes “8 Golden Rules of Font Software Licensing,” which includes this warning:

1. www.bsa.org/country/Anti-Piracy/What-is-Software-Piracy/Fonts%20are%20Software%20too.aspx (text in brackets added)

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A company will be liable if it lends or gives font software to anyone unless that person also has a license to use it.²

The word “liable” means that the BSA can and does pursue violators, extracting damage settlements of hundreds of thousands of dollars.

Here’s what ITC (International Typeface Corporation, a large, old-line supplier of fonts) has to say about font licensing:

When you purchase a typeface, you are really purchasing a license to install and use font software for that typeface on up to five (5) computers – also known as CPUs – at a single location. What many companies and individuals don’t realize is that when they purchase typefaces, **they cannot freely copy and distribute the typefaces among employees or outside resources such as a service bureau. Even if a company purchased a typeface for use by an entire department, the typeface is licensed for only five computers.** If you plan on using a typeface on more than five computers, you need to purchase an additional license – either a site license for a specific number of CPUs and locations or a corporate license for an unlimited number of CPUs worldwide, where you don’t have to count CPUs or printers. By purchasing site licenses and corporate licenses, a company can cover all of its typeface requirements for a fraction of what it would cost to purchase multiple individual licenses.³

This is just one example. Other major font vendors (such as Adobe and Linotype) may have different licensing terms. The point is, font licenses must be managed, just as any other software license.⁴ An enterprise font manager typically offers central database capabilities for keeping track of what fonts are allocated to what workstations, and can be a great aid in determining license compliance for font software.

Another aspect that good font management solutions offer is control over “rogue” fonts. A rogue font is one that, properly licensed or not, is not authorized for use within an organization, either due to IT policies or design standards. Such fonts also raise obvious licensing issues and could lead to the same kind of

2. www.bsa.org/country/Anti-Piracy/What-is-Software-Piracy/The%208%20Golden%20Rules%20of%20Font%20Software%20Licensing.aspx

3. www.itcfonts.com/About/licensing.htm (emphasis added)

4. As of this writing, the font licenses for some major font vendors can be found at these URLs:
www.adobe.com/aboutadobe/antipiracy/ff_fa.html
www.linotype.com/2061-20496/licenseagreementforfontsoftware.html
www.fonts.com/FontServices/LicensingOptions.htm

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liability and audit issues discussed above. Rogue fonts typically are downloaded (or brought from home) and installed by users on their- and possibly others'- workstations. An enterprise font manager might not be able to prevent such an installation, but it often *can* monitor the font state of the OS, and issue administrative reports about fonts that aren't in its database.

Finally, with good enterprise font management in place, an organization is much better prepared to deal with possible software audits. Although these audits are somewhat rare, they do occur, and when they do, they can be very expensive; for example, a UK publishing firm was recently fined £80,000 for font license violations.⁵ Moreover, BSA offers a rewards program for employees who report piracy at their worksite; rewards for reporting an offence can be as high as \$1,000,000, so there can be considerable incentive for disgruntled or ex-employees to report their employers.

Benefits of Font Management

Besides the obvious licensing benefits, enterprise font management offers other significant advantages.

The first is better control over font usage. If there is an approved set of corporate fonts, and those fonts are under control of the font management system, it's more difficult for end users to use non-approved (or rogue) fonts. The net result is better document consistency, and higher quality look and feel for corporate messaging reducing costly delays in both the creation of documents and at the time of printing.

The second is inventory control and asset management. Whether for budgeting purposes, management reporting, or other reasons, it's good to know the status of corporate assets, including fonts. One problem with fonts is that, individually, they are relatively inexpensive to purchase – so much so that it's common for user in Department A to purchase a font that Department B already owns, just because the departments were not sharing information. On a small scale, this might not matter; but if it happens continually, the costs and administrative headaches add up. This is aggravated by the fact that many font vendors offer variations of nearly-identical typefaces, so it is not unheard of to have dozens of variants of common fonts such as Garamond, when in fact only one or a small set is actually needed.

The third is reduced tech support costs. A good enterprise font manager will allow an administrator to load a new font and remotely push it to selected desktops, instead of traveling to each workstation and manually installing the font. This enterprise-class deployment is commonly used in other IT infrastructure areas, and a good font manager will simplify the steps needed to install, remove, and otherwise manage fonts remotely. Plus, when a font is updated (it does happen), the same benefit occurs. A related benefit is reduced telephone/email support; when users' font sets can be diagnosed remotely, the interaction between the user and the help desk is usually reduced.

5. www.theregister.co.uk/2006/06/27/unlicensed_software_shocker

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The fourth is reduced network bandwidth. In a conventional server-based font sharing solution, each user's OS accesses fonts on a network share. This is a very "chatty" protocol, and inefficient use of network resources.

The fifth is access control. A good enterprise font manager will support Access Control Lists (ACLs) or similar permissions methods, so that specific fonts and font sets are accessible on a per-user or per-group basis. Thus the design group could use font sets A, B, and C, while office users could only use font set B, and video production users have access to font set D. Access control is a central requirement for having effective license management. The distilled message here is: "put the right fonts into the right hands at the right time."

The sixth benefit is a reduction in the number of "corrupt" fonts. This is not as much of a problem as it used to be, but there are still older fonts in circulation that have malformed or damaged internal data structure. Such fonts can cause intermittent and difficult-to-trace problems when loaded. In some organizations, font-related issues are a significant contributor to help desk call volume. A good font manager will detect and prevent usage of such fonts, and repair damaged fonts when possible. A server-based solution will ensure that "clean" copies of fonts are always available for download.

In addition to these IT-related benefits, font management offers high value for end users:

- Design consistency is more easily achieved by having named "sets" of fonts that can be activated for specific types of documents. The ability to enable/disable fonts in sets (groups) means reduced complexity for the end user; a designer finishing a report only needs to enable the "Annual Report" set, rather than trying to remember all the different fonts used in the report. It also helps ensure that only the specific fonts used for a given project are actually used in the project.
- Users have creative control over their font menus with activation/deactivation of individual fonts and sets of fonts;
- The desktop component of an enterprise font manager typically allows users to preview and compare typefaces without actually loading them; in a sophisticated design environment with thousands of fonts, this can be a significant time savings.
- Some font management tools support "auto-activation," which allows the system to automatically detect what fonts a pre-existing document requires, and load those fonts (and applications) automatically without user intervention. There are varying degrees of auto-activation, and the issues are too technical for this report, but the best auto-activation techniques can pinpoint the identity of document fonts even if the font files themselves have names similar or identical to other font files.

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This combination of IT-specific benefits and end-user benefits is a powerful argument for the implementation of some level of enterprise font management.

Workflow Issues

In a typical creative group inside the enterprise, everyone working on similar projects requires access to similar sets of fonts. The old-school way to handle this is to load all the fonts onto an ordinary file server, then allow each end user to download the fonts and install them to their own workstation.

This method has obvious asset management and licensing compliance disadvantages. Additionally, it can be a network hog, although a much worse network situation exists if the users are opening the fonts directly from the file server. Worse, if the font configuration changes (a font is updated, or one is added to or removed from the “approved” list), the IT department must rely on each end user to notice this (or read their email) and take the appropriate action to stay in sync. And if the fonts are actually *used* from (as opposed to being copied from) a file server, that server becomes a central point of failure.

In such an environment, it doesn’t take long for font-related problems to crop up. Someone is missing a font because they forgot to download it, someone has an old version, or someone has a “left over” font that they forgot to delete. The resulting tech support calls can be a burden on even well-staffed IT organizations. Plus, the production and printing snafus that can arise due to these kinds of font issues can (and have) hold up expensive resources such as printing presses.

IT managers with experience in creative workflows already know how damaging it can be if a document goes out for printing (or in a PDF on the web) with a missing or incorrect font. In the case of printing, for example, holding up a press run while a font problem is fixed can be very costly. And troubleshooting font problems with a printing vendor over the phone or by email is frustrating and often ineffective.

Office users, as opposed to design users, are not immune from font consistency problems. Although fewer office users know how to manipulate fonts on their desktop machines, it only takes one to install or delete some font, create a document, and then forward that non-standard document to others in the organization.

Hardware and Infrastructure Requirements

Of course, implementation of enterprise font management is not possible without some cost.

In addition to the font management software itself, there is the hardware cost of a font server. This is typically a small server (sometimes a “server” license is not even required, and the font management server can run on an ordinary client OS license). It doesn’t have to have much disk space, because font files are

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small; the 2,300+ fonts of the Adobe font folio, for example, take up only 153 megabytes. Disk speed, however, is still an issue, and a font server benefits from fast local storage (i.e. the font library shouldn't be out on a SAN somewhere). The font server does need a fast CPU, especially if it is serving hundreds or thousands of clients.

It goes without saying that the font server must have a reliable, fast network connection. Computation of network bandwidth required for an enterprise font management solution is beyond the scope of this paper, but it should be noted that a single font family (for example the bold, italic, condensed, heavy, and other files related to a single typeface) often is less than a megabyte's worth of data, which is less than many Flash-based web pages these days. And of course any IT infrastructure component, including font managers, should be based on modern software architectures, proven technology, and open standards.

Local workstation-specific font caches often reduce the network bandwidth requirements. Just as in a web browser cache, a local font cache retains a copy of a font from the server until system policies cause it to be purged. This means that, over time, network traffic for font management will drop to near zero, as most fonts exist in local caches, and the font server is only exchanging administrative messages with its clients.

There is also the cost of training; a font server solution should provide an easy-to-grasp user experience which "feels" like an ordinary desktop font management application, without hurdles associated with server-management and interruptive messages that only an administrator can understand. Plus, in cross-platform organizations, training costs can be reduced if the font manager has the same end-user experience whether the user is in a Mac or Windows environment.

Conclusion

Font management software, already common in individual design and publishing environments, is even more important in enterprise environments. Although most end users see the primary benefit of font management as better control over their design environment, most IT-related benefits are in asset tracking and management, license compliance, user management, and reduced tech support requirements. Putting control of organization-wide font policies in a central location, instead of having them randomly distributed throughout the institution, makes both economic and operational sense.

If you are in the market for an enterprise font management solution, here are some things to look for:

- Most important, the font management solution should work reliably on the workstation platform of choice. Many design groups use Mac OS X exclusively or use a combination of Macintosh and Windows workstations; therefore, look for a font management solution with cross-platform clients for your users.

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- The solution should allow monitoring and managing of font licenses, and make it easy to determine an organization's compliance with font licensing policies.
- The solution should offer granular permissions to limit the accessibility to (and therefore, risk of) your centralized font database.
- The solution should support some type of user/group authentication scheme to enable restricting fonts to those who must have them.
- The solution should withstand errors introduced by corrupt fonts, and allow end users to easily work around any font corruption issues.
- It goes without saying that the solution should be robust and reliable, and respond gracefully to network, server hardware, and client workstation shortcomings.

Enterprise font management, although not a new concept, is increasingly important as organizations become more aware of the importance of software asset control and license compliance. Properly implemented, it can be another tool in the IT manager's stock of management techniques.

For more information about server-based font management technologies and implementations, there is a wealth of knowledge to be had at www.extensis.com. Extensis is the developer of the most widely-used font management solutions for individuals and workgroups. For information on their server font managers, visit www.typeserver.com.

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