



Manage your fonts with Fontmatrix

MASTER OF LETTERS

Fontmatrix can simplify font management for web designers, desktop publishers, and others. We'll show you how it works. **BY NATHAN WILLIS**

If you say the words “font manager” to some Linux users, you could be met with a raised eyebrow and the question: “Doesn’t X manage the fonts automatically?” But when graphic designers and publishers talk about a font manager, they mean an application that allows the user to load and unload fonts selectively from the operating system – as well as keep track of the font library and inspect each option and character of the available fonts. Until recently, there was no such application for Linux users, but thankfully, Pierre Marchand’s Fontmatrix [1] is here to fill that gap.

Two basic categories of users will find Fontmatrix a useful addition to their desktop. The first is the casual, non-type-o-phile desktop user who simply wants a way to shrink down the unwieldy Fonts menu in the word processor and occasionally look for an interesting typeface for use on a special project – after all, Ubuntu 10.4 ships with more than 220 font packages, representing hundreds of individual fonts. Tracking them without assistance is nearly impossible, and uninstalling and reinstalling through Synaptic is a waste of time.

The second category is the artist: the web designer, the desktop publisher, the illustrator. This type of user might care a lot more about individual fonts, perhaps purchasing commercial fonts or downloading open fonts via Open Font Library

[2], or another resource, in search of a particular letterform for a new site logo or the text for a booklet. Fontmatrix can handle both use cases, if you know your way around.

Fontmatrix is automatically available to Ubuntu users through the Universe repository. Ubuntu 10.4 Lucid Lynx ships with version 0.6.99, which is the most recent release series. It is a Qt-based app, but runs flawlessly on KDE, Gnome, and all other desktop environments. Once you install Fontmatrix, it will appear in *Applications* | *Graphics*.

Finding your Fonts

The main Fontmatrix interface is split into two halves. The left half offers three ways to select a font to inspect, and the right half offers an array of tools to explore and work with a selected font. The first time you launch Fontmatrix, it loads all of the currently installed fonts into its font browser (a tab at bottom left) and sort them into an alphabetical list.

By default, Fontmatrix looks for fonts in the predefined system locations; on Ubuntu these are listed in the file */etc/fonts/fonts.conf* and include basic fonts found in */usr/share/fonts/* and */usr/local/share/fonts/*, along with fonts that come from the X.org project located in */usr/X11R6/lib/X11/fonts/*. You can always add fonts to your personal collection by dropping them into your own

~/fonts/ directory, a standard location that Ubuntu and other Linux distros use, and where Fontmatrix knows to look.

Additionally, Fontmatrix can load and inspect font files stored anywhere else on your computer. If you are downloading items that you don’t want to keep around, you can store them in some peculiar location like */home/username/projects/newblog/design/*. If you open the *File* | *Import* menu option in Fontmatrix, you can select this directory, and Fontmatrix will index it along with the standard font folders.

In the font browser (Figure 1), you activate and deactivate each font individually – or, where applicable, entire “font families” – by clicking on the checkbox next to its name. If you can’t recognize all of the fonts by name, the *Previews* tab displays them all rendered in the individual fonts themselves. Deactivated fonts disappear from the font menus in all of the desktop applications, so you can save screen real estate and load times by turning off fonts for unneeded languages, novelty fonts, or wingdings.

This ability to “trim the fat” from your loaded fonts is the first convenience Fontmatrix offers; without it, the only way to load and unload fonts from the running operating system is through the command-line tools for Linux’s underlying font loader Fontconfig; even then, you might have to move files around to

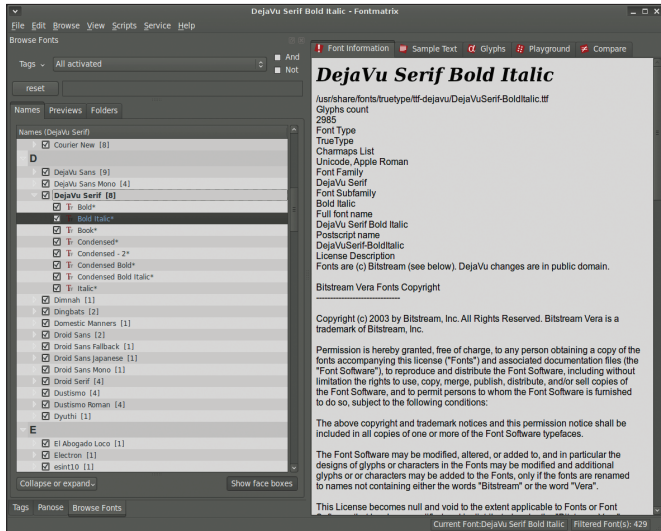


Figure 1: The Fontmatrix font browser, showing the full font list and the information tab.

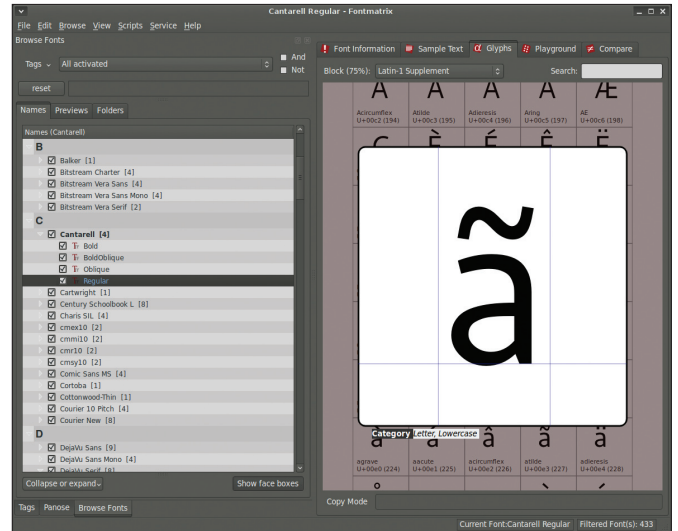


Figure 2: Exploring a font's glyph coverage in Fontmatrix from the Glyphs tab in the font browser.

prevent accidental reloading. The point-and-click feature is orders of magnitude quicker.

The other two tabs on the left-hand side offer alternative methods of navigating through your font library. To assign tags to your fonts use the *Tags* tab, after which you can selectively sort the collection by tag. The *Panose* tab offers a more structured approach: categorizing each font by its graphical characteristics. The PANOSE system [3] was devised by Benjamin Bauermeister in the late 1980s and classifies typefaces by weight, proportion, contrast, stroke variation, and numerous other characteristics. PANOSE is not limited to computer fonts because it is based on the shape of the letters them-

selves, and it can even be used to locate the typeface used in an unknown sample or to find the nearest match to an unavailable font.

Both tags and PANOSE classification depend on you putting in some work assigning and checking the right labels. If you do so, you can leverage Fontmatrix's search tool at the top left of the font browser to find fonts that fit a complex series of requirements. And if you were crazy enough to install all of those 220-plus packages mentioned before, you'll be glad it is there.

Exploring your Fonts

Locating and activating the fonts you want is only the beginning. On the right-

hand side are five tools to help you dig into the properties and characteristics of your fonts. The Font Information window (Figure 2) shows you basic information: font type (TrueType, OpenType, PostScript Type 1), glyph count, Unicode block coverage, and even copyright and version information. This information can help you determine whether you have the license to use a font only on screen or in print (as is frequently the case with commercially purchased fonts), whether you can embed it in a PDF document and redistribute it, and, if it is an open font, whether you can modify the characters or add missing letters.

Often, the most important facet of a font is its language coverage. Ubuntu supports a vast array of alphabets and writing systems, but sadly, many fonts encountered "in the wild" supply a limited set of characters – often Unicode's Basic Latin, perhaps with diacritics and accent marks that make it useful for a few additional languages. Fontmatrix's *Glyphs* tab allows you to scroll through the entire glyph table of a selected font.

A drop-down list selector at the top lets you choose which Unicode block to examine. You can choose the block that interests you (e.g., Hiragana, Miscellaneous Mathematical Symbols-A, or Linear B) then scroll quickly through the font browser list on the left, watching the glyph coverage change to reflect each font as you go. Also, you can select a particular glyph and inspect its outline definition up close or copy selected characters to the clipboard.

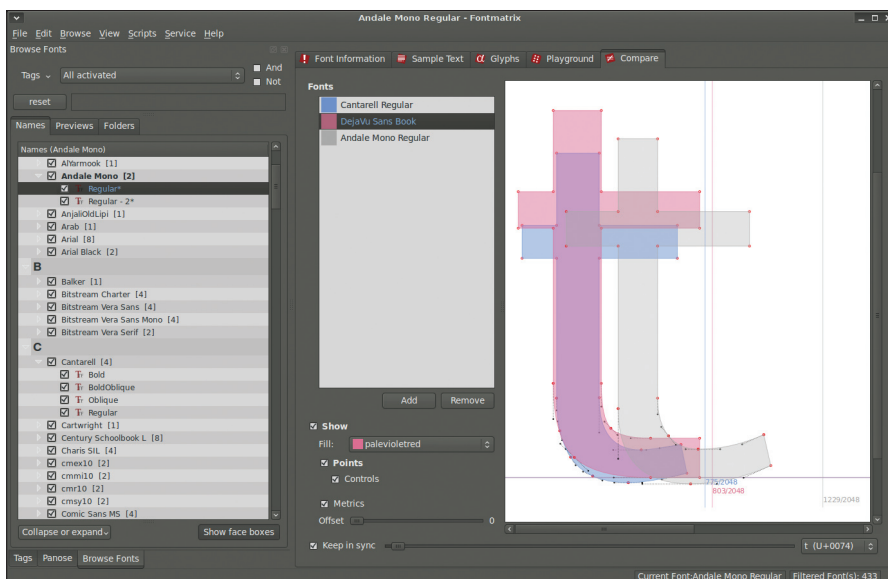


Figure 3: Comparing three fonts in the Compare tab. Note that although the shapes are similar, the three fonts vary considerably in height, width, spacing, and alignment.

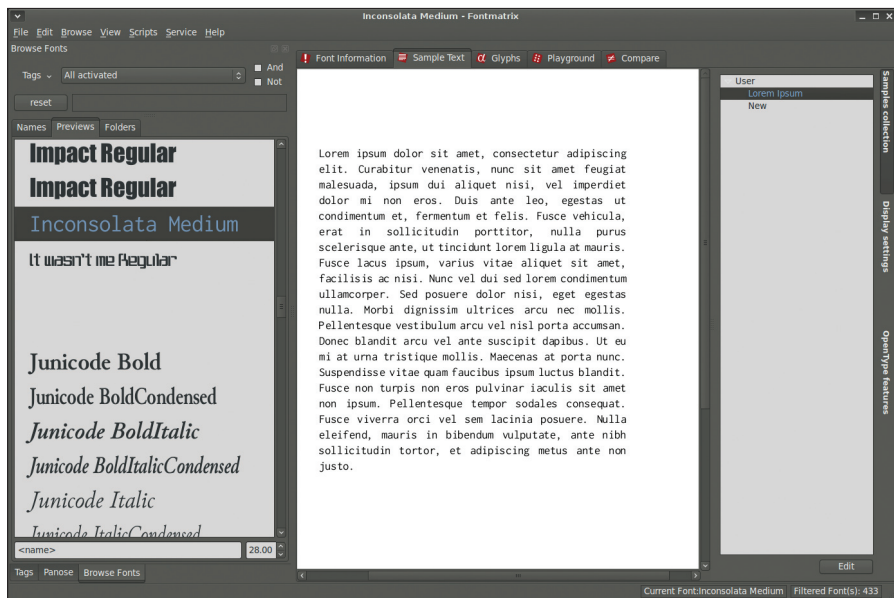


Figure 4: Rendering a block of Lorem ipsum text in the Sample Text window allows you to see spacing and kerning in actual copy text.

The *Compare* tab (Figure 3) lets you inspect the outlines for a particular glyph in more than one font. Choose any glyph in the Glyphs tab, then switch to *Compare* and click *Add* – the glyph will appear in the inspector window. Subsequently, you can add other fonts by choosing them in the browser and adding them. You can set fill colors for each font separately to clarify which is which and show the control points and metrics to further reveal, for example, how far above and below the baselines different glyphs reach.

Testing your Fonts

This latter service is particularly helpful if you are trying to select a font for a particular glyph – for instance, when choosing a font in which to render your initials in a monogram. Although this is certainly helpful, a more common design problem is choosing a font to use for full words or large blocks of text. For these tasks, Fontmatrix provides the *Sample Text* and *Playground* tools.

The *Sample Text* tab (Figure 4) allows you to see arbitrary blocks of words rendered in the font of your choosing. You can enter multiple samples from within Fontmatrix’s Preferences panel, then switch between them in the main window. Fontmatrix does not yet have a “greeking” or “Lorem ipsum” dummy-text generator, but you can import dummy samples from online generators. The Sample Text pane uses a vertical tab

bar to provide additional rendering options, including font sizing, hinting behavior, left-to-right/top-to-bottom progression, and controlling special features of OpenType fonts – such as ligatures, contextual alternates, and superscripts.

In contrast to the structured options of Sample Text, the *Playground* tab is a free-form canvas. You can select any font from the browser, choose a size, and type directly in the canvas to see how it looks. In a sense, there is some duplication in functionality here, and the Playground offers fewer utilities for text manipulation. However, it does offer one key difference: the ability to place samples from different fonts side by side.

This feature has a very practical use in design applications. Often, when working on corporate or project branding, the final logotype, letterhead, or other design will incorporate more than one typeface or more than one style. Consider the Red Hat logotype [4]: the “red” is rendered in bold, and the “hat” is rendered in regular width. Or look

at the Mozilla Labs site [5]: Mozilla branding uses a particular font, but the designer needed to find a different font for “Labs” – ensuring that it was one that would still look good on the page. Tasks like these are made considerably easier, thanks to a tool like Fontmatrix.

The Practical Benefits

If you already do work as a designer, you stand to gain a lot from employing Fontmatrix in your Linux workflow. As mentioned before, you can tag and categorize large font collections then use Fontmatrix to keep active only those that are relevant to your current project. Fontmatrix can minimize itself to run in the system tray for easy access to activation and deactivation of the current font set. The fewer fonts you have loaded at once, the less memory they will occupy, and the shorter your Font menu will be in your other applications.

But if you are a casual user, don’t stop at merely simplifying your fonts menu. Consider bringing up Fontmatrix the next time you refresh your blog or personal website. Simply choosing a font outside of the generic Microsoft Core Fonts can give your pages a subtle but more appealing edge. That’s true for the body copy but goes double for the title, menus, and sidebars.

The same is also true of presentations: Don’t head to the next conference armed only with Arial and Times New Roman and expect to make much of an impression. Be forewarned, however, that not all exotic fonts allow embedding into

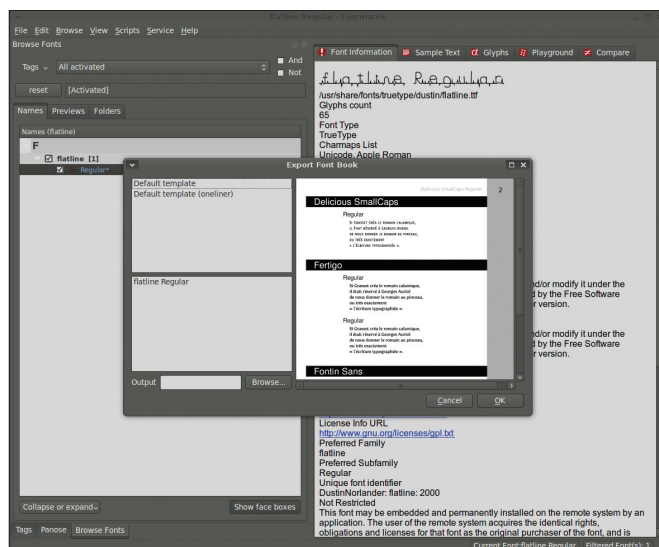


Figure 5: Exporting a font book, so you can print type specimens and examine them at your convenience.

PDF documents, particularly those that you might post later for public consumption.

The Far Out

Fontmatrix is still under active development and is certainly not complete. Some advanced features are already available in the current builds under the Service menu, even though the user interface is not entirely complete or there are kinks still to be worked out.

For example, Fontmatrix can display the full TrueType tables for a TrueType font that show kerning and hinting details, as well as character-to-glyph mappings and other internal structures. However, it is not yet possible to edit these tables to tweak your fonts. Also, you can extract the embedded fonts from a PDF document, but not all versions of the PDF standard are supported, and some options give Fontmatrix trouble.

The program includes an interesting, fully functional *Find a font using raster sample* tool that attempts to match letters from an imported image or screen

grab to fonts in the database. Fontmatrix only searches through the installed fonts on your local system, which reduces the odds of finding the original typeface considerably. Still, it is helpful for finding the next-best match to a mystery font.

Fontmatrix is also extensible through the use of Python scripts, and a handful of scripts are included with the default Fontmatrix package. One extremely useful script creates a font book (Figure 5) with samples of each active font on your system, so you can examine samples at print quality. This feature is so valuable that you will find it integrated into the menu system; just select *File | Export Font Book*. With the built-in template or one of your own creation, you can define your preferred formatting.

Historically, fonts have not received as much attention on Linux desktops as other graphical and design elements – image collections, widget sets, icons, and so on. Fontmatrix not only gives you tools to manage your collection, it also makes your fonts a more powerful element of the operating system. Design

pros know there is more to the world than Courier and Helvetica, and the more people use Fontmatrix, the more they will see how much the open source font community has to contribute to the Linux community. ■

AUTHOR

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INFO

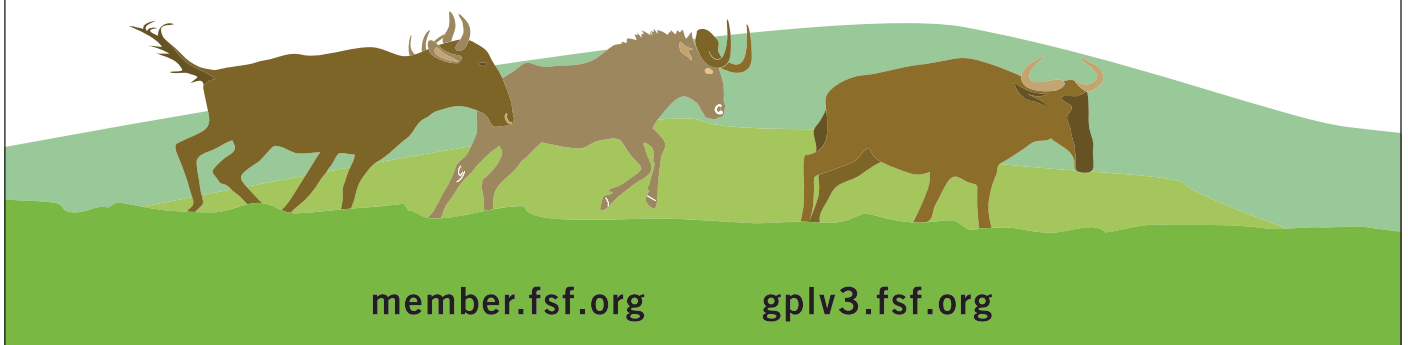
- [1] Fontmatrix homepage:
<http://fontmatrix.net>
- [2] The Open Font Library:
<http://openfontlibrary.org/>
- [3] PANOSE:
<http://www.monotypeimaging.com/printer/pan1.asp>
- [4] Red Hat:
<http://www.redhat.com/>
- [5] Mozilla Labs:
<https://mozillalabs.com/>

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