

Program `findfont`

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Rolf Niepraschk;

1 Introduction

The Lua program `findfont` is a program for searching installed fonts which are usable for Lua^{LATEX} and X^{LATEX}. The already existing Lua program `luaotfload-tool` can also be used for searching, but the search-interface is somewhat cryptic and too complex for a user, who wants only to know if a font is present or not. For example:

```
H-MacBook:~ vooss$  
H-MacBook:~ vooss$ luaotfload-tool --find=times  
luaotfload | resolve : Font "times" found!  
luaotfload | resolve : Resolved file name "/System/Library/Fonts/Times.ttc", subfont nr. 0  
H-MacBook:~ vooss$  
H-MacBook:~ vooss$ luaotfload-tool --fuzzy --find="times new roman"  
luaotfload | resolve : Font "times new roman" found!  
luaotfload | resolve : Resolved file name "/System/Library/Fonts/Supplemental/Times New Roman.ttf"  
H-MacBook:~ vooss$
```

But this are not *all* Times fonts. Compare it with the output of `findfont`, where the searchname *times* must only be a part of a longer name:

```
bash-3.2$ ./findfont.lua times  
We are using Lua 5.3  
Check for file /usr/local/texlive/texmf-var/luatex-cache/generic/names/luaotfload-names  
Nr.           Fontname      Symbolic Name          Path  
1.  Times New Roman Bold Italic.ttf    timesnewroman   /Users/voss/Library/Fonts/Times/  
2.  Times New Roman Bold Italic.ttf    timesnewroman   /System/Library/Fonts/Supplemental/  
3.    Times New Roman Bold.ttf        timesnewroman   /System/Library/Fonts/Supplemental/  
4.    Times New Roman Bold.ttf        timesnewroman   /Users/voss/Library/Fonts/Times/  
5.    Times New Roman Italic.ttf      timesnewroman   /System/Library/Fonts/Supplemental/  
6.    Times New Roman Italic.ttf      timesnewroman   /Users/voss/Library/Fonts/Times/  
7.    Times New Roman.ttf          timesnewroman   /System/Library/Fonts/Supplemental/  
8.    Times New Roman.ttf          timesnewroman   /Users/voss/Library/Fonts/Times/  
9.    Times.ttc                  times            /System/Library/Fonts/  
10.   Times_Sans_Serif.ttf       timessansserif   /Users/voss/Library/Fonts/Times/  
11.   TimesNewRomanMTStd-Bold.otf  timesnewromanmtstd /Users/voss/Library/Fonts/Times/  
12.   TimesNewRomanMTStd-BoldCond.otf timesnewromanmtstd /Users/voss/Library/Fonts/Times/  
13.   TimesNewRomanMTStd-BoldIt.otf  timesnewromanmtstd /Users/voss/Library/Fonts/Times/  
14.   TimesNewRomanMTStd-Cond.otf   timesnewromanmtstd /Users/voss/Library/Fonts/Times/  
15.   TimesNewRomanMTStd-CondIt.otf  timesnewromanmtstd /Users/voss/Library/Fonts/Times/  
16.   TimesNewRomanMTStd-Italic.otf  timesnewromanmtstd /Users/voss/Library/Fonts/Times/  
17.   TimesNewRomanMTStd.otf       timesnewromanmtstd /Users/voss/Library/Fonts/Times/  
18.   TimesNewRomanPS-BoldItalicMT.otf timesnewromanspmt /Users/voss/Library/Fonts/Times/  
19.   TimesNewRomanPS-BoldMT.otf    timesnewromanspmt /Users/voss/Library/Fonts/Times/  
20.   TimesNewRomanPSMT.otf       timesnewromanspmt /Users/voss/Library/Fonts/Times/  
21.   TimesNewRomanPSStd-Bold.otf   timesnewromanssstd /Users/voss/Library/Fonts/Times/  
22.   TimesNewRomanPSStd-BoldIt.otf  timesnewromanssstd /Users/voss/Library/Fonts/Times/  
23.   TimesNewRomanPSStd-Italic.otf  timesnewromanssstd /Users/voss/Library/Fonts/Times/  
24.   TimesNewRomanPSStd-Regular.otf timesnewromanssstd /Users/voss/Library/Fonts/Times/
```

1.1 Syntax

The syntax is

```
findfont [...] <font>
```

where [...] are optional arguments, either in short or long form which, of course, can be mixed:

```
parameter handling
-q, --quiet
-h, --help
-o, --otfinfo (default 0)
-i, --info (default 0)
-n, --nosymbolicnames
-v...           Verbosity output
-m, --max_string (default 90)
<font> (string)
```

For example:

```
findfont times
findfont palatino -o 3
findfont -i 3 -m 50 arial
```

1. -q: quiet;
2. -m <columns>: How many columns are used for the font with full path. This can be really long, but with e.g. -m 50 the length is limited to 50 characters.
3. -o <number>: For the font with the given number from the font list the program otfinfo is called for some generell font informations.
4. -i <number>: For the font with the given number from the font list the existing font styles are listed.

2 How it works

`findfont` uses the data file `luaotfloadtool-names.lua` which is created by `LuáTEX`. If it is missing it will be created by `findfont` itself. The name of the font should be in lowercase characters and must not be the complete name. A time for finding all fonts with time in its names is sufficient.

3 Examples

```
bash-3.2$ findfont segoe
```

3 Examples

We are using Lua 5.3

Check for file /usr/local/texlive/2021/texmf-var/luatex-cache/generic/names/luaotfload-names

1.	Segoe UI Symbol.ttf	segoeuisymbol	/Users/voss/Library/Fonts/Segoe/Segoe UI Symbol.ttf
2.	Segoe_Print.ttf	segoeprint	/Users/voss/Library/Fonts/Segoe/Segoe_Print.ttf
3.	Segoe_Print_Bold.ttf	segoeprint	/Users/voss/Library/Fonts/Segoe/Segoe_Print_Bold.ttf
4.	Segoe_Script.ttf	segoescript	/Users/voss/Library/Fonts/Segoe/Segoe_Script.ttf
5.	Segoe_Script_Bold.ttf	segoescript	/Users/voss/Library/Fonts/Segoe/Segoe_Script_Bold.ttf
6.	Segoe_UI.ttf	segoeui	/Users/voss/Library/Fonts/Segoe/Segoe_UI.ttf
7.	Segoe_UI_Bold.ttf	segoeui	/Users/voss/Library/Fonts/Segoe/Segoe_UI_Bold.ttf
8.	Segoe_UI_Bold_Italic.ttf	segoeui	/Users/voss/Library/Fonts/Segoe/Segoe_UI_Bold_Italic.ttf
9.	Segoe_UI_Italic.ttf	segoeui	/Users/voss/Library/Fonts/Segoe/Segoe_UI_Italic.ttf

bash-3.2\$ findfont -m 40 libertinus

We are using Lua 5.3

Check for file /usr/local/texlive/2021/texmf-var/luatex-cache/generic/names/luaotfload-names

1.	LibertinusKeyboard-Regular.otf	libertinuskeyboard	/usr/local/texlive/2021/te...Regular.otf
2.	LibertinusMath-Regular.otf	libertinusmath	/usr/local/texlive/2021/te...Regular.otf
3.	LibertinusMono-Regular.otf	libertinusmono	/usr/local/texlive/2021/te...Regular.otf
4.	LibertinusSans-Bold.otf	libertinussans	/usr/local/texlive/2021/te...ns-Bold.otf
5.	LibertinusSans-Italic.otf	libertinussans	/usr/local/texlive/2021/te...-Italic.otf
6.	LibertinusSans-Regular.otf	libertinussans	/usr/local/texlive/2021/te...Regular.otf
7.	LibertinusSerif-Bold.otf	libertinusserif	/usr/local/texlive/2021/te...if-Bold.otf
8.	LibertinusSerif-BoldItalic.otf	libertinusserif	/usr/local/texlive/2021/te...dItalic.otf
9.	LibertinusSerif-Italic.otf	libertinusserif	/usr/local/texlive/2021/te...-Italic.otf
10.	LibertinusSerif-Regular.otf	libertinusserif	/usr/local/texlive/2021/te...Regular.otf
11.	LibertinusSerif-Semibold.otf	libertinusserif	/usr/local/texlive/2021/te...emibold.otf
12.	LibertinusSerif-SemiboldItalic.otf	libertinusserif	/usr/local/texlive/2021/te...dItalic.otf
13.	LibertinusSerifDisplay-Regular.otf	libertinusserifdisplay	/usr/local/texlive/2021/te...Regular.otf
14.	LibertinusSerifInitials-Regular.otf	libertinusserifinitials	/usr/local/texlive/2021/te...Regular.otf

bash-3.2\$ findfont -i 9 sego

We are using Lua 5.3

Check for file /usr/local/texlive/2021/texmf-var/luatex-cache/generic/names/luaotfload-names

1.	Segoe UI Symbol.ttf	segoeuisymbol	/Users/voss/Library/Fonts/Segoe/Segoe UI Symbol.ttf
2.	Segoe_Print.ttf	segoeprint	/Users/voss/Library/Fonts/Segoe/Segoe_Print.ttf
3.	Segoe_Print_Bold.ttf	segoeprint	/Users/voss/Library/Fonts/Segoe/Segoe_Print_Bold.ttf
4.	Segoe_Script.ttf	segoescript	/Users/voss/Library/Fonts/Segoe/Segoe_Script.ttf
5.	Segoe_Script_Bold.ttf	segoescript	/Users/voss/Library/Fonts/Segoe/Segoe_Script_Bold.ttf
6.	Segoe_UI.ttf	segoeui	/Users/voss/Library/Fonts/Segoe/Segoe_UI.ttf
7.	Segoe_UI_Bold.ttf	segoeui	/Users/voss/Library/Fonts/Segoe/Segoe_UI_Bold.ttf
8.	Segoe_UI_Bold_Italic.ttf	segoeui	/Users/voss/Library/Fonts/Segoe/Segoe_UI_Bold_Italic.ttf
9.	Segoe_UI_Italic.ttf	segoeui	/Users/voss/Library/Fonts/Segoe/Segoe_UI_Italic.ttf

Font: segoeui

Fonttype ttf(system) --> | Regular | Bold | Italic | BoldItalic |

```
bash-3.2$ findfont -o 6 arial
```

We are using Lua 5.3

Check for file /usr/local/texlive/2021/texmf-var/luatex-cache/generic/names/luafload-names

1.	Arial Black.ttf	arialblack	/System/Library/Fonts/Supplemental/Arial Black.ttf
2.	Arial Bold Italic.ttf	arial	/System/Library/Fonts/Supplemental/Arial Bold Italic.ttf
3.	Arial Bold.ttf	arial	/System/Library/Fonts/Supplemental/Arial Bold.ttf
4.	Arial Italic.ttf	arial	/System/Library/Fonts/Supplemental/Arial Italic.ttf
5.	Arial Narrow Bold Italic.ttf	arialnarrow	/System/Library/Fonts/Supplemental/Arial Narrow Bold Italic.ttf
6.	Arial Narrow Bold.ttf	arialnarrow	/System/Library/Fonts/Supplemental/Arial Narrow Bold.ttf
7.	Arial Narrow Italic.ttf	arialnarrow	/System/Library/Fonts/Supplemental/Arial Narrow Italic.ttf
8.	Arial Narrow.ttf	arialnarrow	/System/Library/Fonts/Supplemental/Arial Narrow.ttf
9.	Arial Rounded Bold.ttf	arialroundedmtbold	/System/Library/Fonts/Supplemental/Arial Rounded Bold.ttf
10.	Arial Unicode.ttf	arialunicodem	/Library/Fonts/Arial Unicode.ttf
11.	Arial Unicode.ttf	arialunicodem	/System/Library/Fonts/Supplemental/Arial Unicode.ttf
12.	Arial.ttf	arial	/System/Library/Fonts/Supplemental/Arial.ttf
13.	Arial.ttf	arial	/Users/voss/Library/Fonts/Arial/Arial.ttf
14.	ArialHB.ttc	arialhebrew	/System/Library/Fonts/ArialHB.ttc
15.	ArialHB.ttc	arialhebrewdeskinterface	/System/Library/Fonts/ArialHB.ttc
16.	ArialHB.ttc	arialhebrewscholar	/System/Library/Fonts/ArialHB.ttc
17.	ArialHB.ttc	arialhebrew	/System/Library/Fonts/ArialHB.ttc

Run otinfo:6

Family: Arial Narrow
Subfamily: Bold
Full name: Arial Narrow Bold
PostScript name: ArialNarrow-Bold
Version: Version 2.38.1x
Unique ID: Arial Narrow Bold : 2007
Description: Monotype Drawing Office 1982. A contemporary sans serif design, Arial contains more humanist characteristics than many of its predecessors and as such
Designer: Robin Nicholas, Patricia Saunders
Manufacturer: The Monotype Corporation
Trademark: Arial is a trademark of The Monotype Corporation in the United States and/or other countries.
Copyright: © 2007 The Monotype Corporation. All Rights Reserved.
License Description: You may use this font to display and print content as permitted by the license terms for the product in which this font is included. You may only (i)
Vendor ID: TMC

4 List of all fonts

```
bash-3.2$ findfont -n minion
```

We are using Lua 5.3

Check for file /usr/local/texlive/texmf-var/luatex-cache/generic/names/luaotfload-names

Nr.	Fontname	Path
1.	MinionMath-Bold.otf	/Users/voss/Library/Fonts/MinionMath/
2.	MinionMath-Regular.otf	/Users/voss/Library/Fonts/MinionMath/
3.	MinionPro-Bold.otf	/Users/voss/Library/Fonts/MinionPro/
4.	MinionPro-BoldCn.otf	/Users/voss/Library/Fonts/MinionPro/
5.	MinionPro-BoldCnIt.otf	/Users/voss/Library/Fonts/MinionPro/
6.	MinionPro-BoldIt.otf	/Users/voss/Library/Fonts/MinionPro/
7.	MinionPro-Capt.otf	/Users/voss/Library/Fonts/MinionPro/
8.	MinionPro-Disp.otf	/Users/voss/Library/Fonts/MinionPro/
9.	MinionPro-It.otf	/Users/voss/Library/Fonts/MinionPro/
10.	MinionPro-Medium.otf	/Users/voss/Library/Fonts/MinionPro/
11.	MinionPro-MediumIt.otf	/Users/voss/Library/Fonts/MinionPro/
12.	MinionPro-Regular.otf	/Users/voss/Library/Fonts/MinionPro/
13.	MinionPro-Semibold.otf	/Users/voss/Library/Fonts/MinionPro/
14.	MinionPro-SemiboldIt.otf	/Users/voss/Library/Fonts/MinionPro/
15.	MinionPro-Subh.otf	/Users/voss/Library/Fonts/MinionPro/

4 List of all fonts

This possible with the symbolic fontname "*" instead of a real fontname:

```
bash-3.2$ findfont "*"
```

This list maybe really long!

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