Support for the Lucida OpenType fonts from TUG

Herbert Voß

June 16, 2023

Contents

1 Introduction

This document contains examples of the Lucida OpenType fonts available through TUG. They can be used with any OpenType-aware application, including the LuaTEX and XƎTEX extensions of TEX (but not pdfTEX).

A brief overview:

- Math fonts: Lucida Bright Math and Lucida Bright Math Demi, extended OpenType versions of the original Type 1 Lucida math fonts.

- Three text families (regular, italic, bold, bold italic) also coming from the original Type 1 distribution: Lucida Bright, Lucida Sans, and Lucida Sans Typewriter.

- Three specialized fonts from the original Type 1 distribution: Blackletter, Calligraphy, and Handwriting.

® Lucida is a trademark of Bigelow & Holmes Inc. registered in the U.S. Patent & Trademark Office and other jurisdictions.

- Two additional monospaced font families (same four variants): Lucida Grande Mono DK and Lucida Console DK. These have O (oh), and Q glyphs modified to a somewhat squarish shape, and the 0 (zero) glyph open rather than slashed, as preferred by Don Knuth. As usual, Lucida ConsoleDK has shorter capitals than Grande Mono, among other smaller changes. (If you don't have the DK fonts and want to remake this document as a test, you'll need to remove the references to them.)

The package **lucida-otf** supports all families with specific optional arguments:

name	*meaning*
RM	Lucida Bright (Roman)
SS	Lucida Sans
TT	Lucida Sans Typewriter
GTT	Lucida GrandeDK
CTT	Lucida ConsoleDK
MM	Lucida Math
MMbold	Lucida Boldmath
BL	Lucida Blacklatter
CAL	Lucida Calligraphy
HW	Lucida Handwriting
DefaultFeatures	for all font styles

Except math all fonts are preset with **Scale=0.92**. For this documentation we use instead:

```
\usepackage[TT={Scale=0.88,FakeStretch=0.9},
            SS={Scale=0.9},
            RM={Scale=0.9},
            DefaultFeatures={Ligatures=TeX}]{lucida-otf}  % support opentype lucida fonts
```

The standard font families **rm**, **sf**, and **tt** can be used as usual for any LaTeX engine. The other specific Lucida fonts can be used by one of the macros **\LucidaBlackletter**, **\LucidaCalligraphy**, **\LucidaHandwriting**, **\LucidaGrandeMonoDK**, and **\LucidaConsoleDK**. They are defined as:

```
% The specialized one-off fonts:
\newfontface\LucidaBlackletter{Lucida Blackletter OT}[\lucidaBL@features]
\newfontface\LucidaCalligraphy{Lucida Calligraphy OT Italic}[\lucidaCAL@features]
\newfontface\LucidaHandwriting{Lucida Handwriting OT Italic}[\lucidaHW@features]
%
% GrandeMono and Console fonts for an example:
```

```
\newfontfamily\LucidaGrandeMonoDK{LucidaGrandeMonoDK}[
  \lucidaGrandeTT@features,
      ItalicFont = * Italic,
        BoldFont = * Bold,
  BoldItalicFont = * Bold Italic
]
%
\newfontfamily\LucidaConsoleDK{LucidaConsoleDK}[%
  \lucidaConsoleTT@features,
      ItalicFont = * Italic,
        BoldFont = * Bold,
  BoldItalicFont = * Bold Italic
]
```

By default the fonts are defined by their symbolic name. As an alternative you can load the package with the option **usefilenames**.

```
\usepackage[usefilenames,
            TT={Scale=0.88,FakeStretch=0.9},
            SS={Scale=0.9},
            RM={Scale=0.9},
            DefaultFeatures={Ligatures=TeX}]{lucida-otf}  % support opentype math fonts
```

Then all definitions uses the extension **.otf** and the filename of the fonts:

```
% The specialized one-off fonts:
\newfontface\LucidaBlackletter{LucidaBlackletterOT}[Extension=.otf,\lucidaBL@features]
\newfontface\LucidaCalligraphy{LucidaCalligraphyOT-Italic}[Extension=.otf,\lucidaCAL@features]
\newfontface\LucidaHandwriting{LucidaHandwritingOT-Italic}[Extension=.otf,\lucidaHW@features]
%
% GrandeMono and Console fonts for an example:

\newfontfamily\LucidaGrandeMonoDK{LucidaGrandeMonoDK}[
       Extension = .otf,
  \lucidaGrandeTT@features,
      ItalicFont = *-Italic,
        BoldFont = *-Bold,
  BoldItalicFont = *-BoldItalic
]
%
\newfontfamily\LucidaConsoleDK{LucidaConsoleDK}[%
       Extension = .otf,
```

```
  \lucidaConsoleTT@features,
      ItalicFont = *-Italic,
        BoldFont = *-Bold,
  BoldItalicFont = *-BoldItalic
]
```

2   Kerning

For LuaLATEX the package uses by default a kerning table (Kerning table **lucida-otf.kern**
was created by Bruno Bischoffberger (**https://github.com/whilealive/LaTexStyles**) and ex-
tended by the original kernings from YandY (**http://tug.org/yandy**).

An example (Blue is *with* kerning):
AC, AG, AJ, AO, AQ, AS, AT, AU, AV, AW, Aa, Ac, Ae, Ao, Ap, Aq, At, Av, Ay, Az,
Ce, Co, Cw, Cy, Da, De, Do, Fa, Fe, Fy, Ha, He, Ib, Io, Iq, Ja, Je, Jo, Ka, Ke, Ko, Ku,
Ky, Ly, Na, Ni, No, Oa, Og, Oh, Ok, Ol, Ot, Pa, Po, Pv, Pw, Ra, Rd, Re, Rj, Ro, Ru,
Rw, Ry, Ta, Td, Te, To, Tr, Ts, Tu, Tw, Ty, Tz, Va, Ve, Vo, Vs, Wa, We, Wo, Wy, Ya,
Ye, Yi, Yo, Yp, Ys, Yu, Za, Ze, Zo, Zu, Zü, Zy

If you do not want to use the kerning table, then load the package with the optional
argument **useKerning=false**.

3   Text examples

The basic text family is **LucidaBrightOT**, with the usual four variants—regular, italic, bold,
and bold italic, all with oldstyle figures; small caps are available in the upright shapes.

For £45, almost anything can be found floating in fields. ¡THE   **LucidaBrightOT**
DAZED BROWN FOX QUICKLY GAVE 12345–67890 JUMPS! —
¿But aren't Kafka's Schloß and Æsop's Œuvres often naïve
vis-à-vis the dæmonic phœnix's official rôle in fluffy soufflés?
Sphinx of black quartz, judge my vow. 0123456789.

For £45, almost anything can be found floating in fields. ¡THE   **LucidaBrightOT-Italic**
DAZED BROWN FOX QUICKLY GAVE 12345–67890 JUMPS! —
¿But aren't Kafka's Schloß and Æsop's Œuvres often naïve
vis-à-vis the dæmonic phœnix's official rôle in fluffy soufflés?
0123456789.

For £45, almost anything can be found floating in fields. ¡THE DAZED BROWN FOX QUICKLY GAVE 12345–67890 JUMPS! — ¿But aren't Kafka's Schloß and Æsop's Œuvres often naïve vis-à-vis the dæmonic phœnix's official rôle in fluffy soufflés? SPHINX OF BLACK QUARTZ, JUDGE MY VOW. 0123456789.   `LucidaBrightOT-Demibold`

For £45, almost anything can be found floating in fields. ¡THE DAZED BROWN FOX QUICKLY GAVE 12345–67890 JUMPS! — ¿But aren't Kafka's Schloß and Æsop's Œuvres often naïve vis-à-vis the dæmonic phœnix's official rôle in fluffy soufflés? 0123456789.   `LucidaBrightOT-DemiboldItalic`

For £45, almost anything can be found floating in fields. ¡THE DAZED BROWN FOX QUICKLY GAVE 12345–67890 JUMPS! — ¿But aren't Kafka's Schloß and Æsop's Œuvres often naïve vis-à-vis the dæmonic phœnix's official rôle in fluffy soufflés?   `LucidaSansOT`

For £45, almost anything can be found floating in fields. ¡THE DAZED BROWN FOX QUICKLY GAVE 12345–67890 JUMPS! — ¿But aren't Kafka's Schloß and Æsop's Œuvres often naïve vis-à-vis the dæmonic phœnix's official rôle in fluffy soufflés?   `LucidaSansOT-Italic`

For £45, almost anything can be found floating in fields. ¡THE DAZED BROWN FOX QUICKLY GAVE 12345–67890 JUMPS! — ¿But aren't Kafka's Schloß and Æsop's Œuvres often naïve vis-à-vis the dæmonic phœnix's official rôle in fluffy soufflés?   `LucidaSansOT-Demibold`

For £45, almost anything can be found floating in fields. ¡THE DAZED BROWN FOX QUICKLY GAVE 12345–67890 JUMPS! — ¿But aren't Kafka's Schloß and Æsop's Œuvres often naïve vis-à-vis the dæmonic phœnix's official rôle in fluffy soufflés?   `LucidaSansOT-DemiboldItalic`

```
For £45, almost anything can be found floating in fields.
¡THE DAZED BROWN FOX QUICKLY GAVE 12345–67890 JUMPS! —
¿But aren't Kafka's Schloß and Æsop's Œuvres often naïve
vis-à-vis the dæmonic phœnix's official rôle in fluffy
soufflés?
```
`LucidaSansTypewriterOT`

```
For £45, almost anything can be found floating in fields.
¡THE DAZED BROWN FOX QUICKLY GAVE 12345–67890 JUMPS! —
¿But aren't Kafka's Schloß and Æsop's Œuvres often naïve
vis-à-vis the dæmonic phœnix's official rôle in fluffy
soufflés?
`LucidaSansTypewriterOT-Oblique`

For £45, almost anything can be found floating in fields. ¡THE DAZED BROWN FOX QUICKLY GAVE 12345–67890 JUMPS! – ¿But aren't Kafka's Schloß and Æsop's Œuvres often naïve vis-à-vis the dæmonic phœnix's official rôle in fluffy soufflés?   LucidaSansTypewriterOT-Bold

For £45, almost anything can be found floating in fields. ¡THE DAZED BROWN FOX QUICKLY GAVE 12345–67890 JUMPS! – ¿But aren't Kafka's Schloß and Æsop's Œuvres often naïve vis-à-vis the dæmonic phœnix's official rôle in fluffy soufflés?   LucidaSansTypewriterOT-BoldOblique

For £45, almost anything can be found floating in fields. ¡THE DAZED BROWN FOX QUICKLY GAVE 12345–67890 JUMPS! – ¿But aren't Kafka's Schloß and Æsop's Œuvres often naïve vis–à–vis the dæmonic phœnix's official rôle in fluffy soufflés?   LucidaGrandeMonoDK

For £45, almost anything can be found floating in fields. ¡THE DAZED BROWN FOX QUICKLY GAVE 12345–67890 JUMPS! – ¿But aren't Kafka's Schloß and Æsop's Œuvres often naïve vis–à–vis the dæmonic phœnix's official rôle in fluffy soufflés?   LucidaGrandeMonoDK-Italic

For £45, almost anything can be found floating in fields. ¡THE DAZED BROWN FOX QUICKLY GAVE 12345–67890 JUMPS! – ¿But aren't Kafka's Schloß and Æsop's Œuvres often naïve vis–à–vis the dæmonic phœnix's official rôle in fluffy soufflés?   LucidaGrandeMonoDK-Bold

For £45, almost anything can be found floating in fields. ¡THE DAZED BROWN FOX QUICKLY GAVE 12345–67890 JUMPS! – ¿But aren't Kafka's Schloß and Æsop's Œuvres often naïve vis–à–vis the dæmonic phœnix's official rôle in fluffy soufflés?   LucidaGrandeMonoDK-BoldItalic

For £45, almost anything can be found floating in fields. ¡THE DAZED BROWN FOX QUICKLY GAVE 12345–67890 JUMPS! — ¿But aren't Kafka's Schloß and Æsop's Œuvres often naïve vis-à-vis the dæmonic phœnix's official rôle in fluffy soufflés?

LucidaConsoleDK

For £45, almost anything can be found floating in fields. ¡THE DAZED BROWN FOX QUICKLY GAVE 12345–67890 JUMPS! — ¿But aren't Kafka's Schloß and Æsop's Œuvres often naïve vis-à-vis the dæmonic phœnix's official rôle in fluffy soufflés?

LucidaConsoleDK-Italic

For £45, almost anything can be found floating in fields. ¡THE DAZED BROWN FOX QUICKLY GAVE 12345–67890 JUMPS! — ¿But aren't Kafka's Schloß and Æsop's Œuvres often naïve vis-à-vis the dæmonic phœnix's official rôle in fluffy soufflés?

LucidaConsoleDK-Bold

For £45, almost anything can be found floating in fields. ¡THE DAZED BROWN FOX QUICKLY GAVE 12345–67890 JUMPS! — ¿But aren't Kafka's Schloß and Æsop's Œuvres often naïve vis-à-vis the dæmonic phœnix's official rôle in fluffy soufflés?

LucidaConsoleDK-BoldItalic

for £45, almost anything can be found floating in fields. ¡THE DAZED BROWN FOX QUICKLY GAVE 12345–67890 JUMPS! — ¿But aren't Kafka's Schloß and Æsop's Œuvres often naïve vis-à-vis the dæmonic phœnix's official rôle in fluffy soufflés?

LucidaBlackletterOT

For £45, almost anything can be found floating in fields. ¡THE DAZED BROWN FOX QUICKLY GAVE 12345-67890 JUMPS! — ¿But aren't Kafka's Schloß and Æsop's Œuvres often naïve vis-à-vis the dæmonic phœnix's official rôle in fluffy soufflés?

LucidaCalligraphyOT

For £45, almost anything can be found floating in fields. ¡THE DAZED BROWN FOX QUICKLY GAVE 12345-67890 JUMPS! — ¿But aren't Kafka's Schloß and Æsop's Œuvres often naïve vis-à-vis the dæmonic phœnix's official rôle in fluffy soufflés?

LucidaHandwritingOT

4   Math examples

```
Here's some text. And here's some math:
\[
  \phi(x)=\int_{-\infty}^{x} e^{-x^{2}/2}
\]
And now bold math:
\boldmath
\[
  \phi(x)=\int_{-\infty}^{x} e^{-x^{2}/2}
\]
\unboldmath
Euro and copyright symbols are available: \texteuro\ \textcopyright.
```

Here's some text. And here's some math:

$$\phi(x) = \int_{-\infty}^{x} e^{-x^2/2}$$

And now bold math:

$$\phi(x) = \int_{-\infty}^{x} e^{-x^2/2}$$

Euro and copyright symbols are available: € ©.

```
And now more bold math:
\[
  \symbf{\phi(x)}=\int_{-\infty}^{x} e^{-x^{2}/2}
\]
```

And now more bold math:

$$\boldsymbol{\phi(\mathbf{x})} = \int_{-\infty}^{x} e^{-x^2/2}$$

5   Closing

If you have questions or problems regarding installation or use, please email `lucida@tug.org`; this is an open and publicly archived list for Lucida discussion; you can subscribe on the web at `http://lists.tug.org/lucida`. On the other hand, questions or problems related to ordering or licensing should go to `lucida-admin@tug.org`.

Finally, B&H's web site for Lucida is `http://lucidafonts.com`, and the home page for Lucida and TEX is `http://tug.org/lucida`.

The font list of this documentation is:

References

[1] Charles Bigelow and Kris Holmes. "The design of Lucida: an integrated family of types for electronic literacy". In: *Text Processing and Document Manipulation*. Proceedings of the International Conference. Ed. by J. C. van Vliet. Cambridge: Cambridge University Press, Apr. 14, 1986, pp. 1–17. ISBN: 0-521-32592-7.

[2] Bigelow & Holmes. *Lucida$^{©}$ Fonts – Exclusive Styles & Weights. Typographic Facts*. URL: http://lucidafonts.com/pages/facts (visited on 03/24/2017).

[3] *Fontconfig. A library for configuring and customizing font access*. June 15, 2016. URL: https://www.freedesktop.org/wiki/Software/fontconfig/ (visited on 03/18/2017).

[4] WIKIPEDIA. *List of typographic features*. Feb. 21, 2017. URL: https://en.wikipedia.org/wiki/List_of_typographic_features (visited on 03/24/2017).

[5] WIKIPEDIA. *Lucida*. Oct. 19, 2016. URL: https://en.wikipedia.org/wiki/Lucida (visited on 04/03/2017).