The fedraserif package: LaTeX support for Fedra Serif Pro

Michael Ummels

v0.5 – 2011/08/29

Abstract

This document describes the fedraserif package, which provides LaTeX support for the commercial Fedra Serif Pro fonts in both text and math mode.

Contents

1 Overview

The fedraserif package provides LaTeX support for the commercial Fedra® Serif Pro fonts[1] from Typotheque[2]. You can load this package by adding

    \usepackage[⟨options⟩]{fedraserif}

to the preamble of your document. If no options are specified, this will change both the text font and the math font to Fedra Serif A; use the option `variant=B` to select Fedra Serif B. For the list of available options, see Section 3.

Acknowledgements

This package is heavily influenced by the MinionPro package, developed by Achim Blumensath, Andreas Bühmann and Michael Zedler, as well as the lucimatx package by Walter Schmidt. Additionally, I am indebted to Eddie Kohler for creating the LCDF typetools.

2 Interferences with other packages

In order to use Fedra Serif as a math font, you need to have the fdsymbol package (version 0.7 or higher) installed. Apart from fdsymbol, the fedraserif package automatically loads the packages textcomp and amsmath. Additionally, the fontaxes package, which is bundled with the MinionPro package, is loaded if it is present in your LaTeX installation. If you want to pass options to these packages, you can either load these packages beforehand, or you can include the options in

---

[1]Fedra is a registered trademark of Typotheque VOF.
[2]http://www.typotheque.com/fonts/

the `\documentclass` command. Unless the option `nomath` is used, the fedraserif package is *not* compatible with amssymb and amsfonts (since fdsymbol is not).

3   Options

All package options are set using a ⟨*key*⟩=⟨*value*⟩ syntax. Boolean options accept `true` and `false` as values, and setting a Boolean key without a value is equivalent to setting it to `true`. The following table lists all option keys of the fedraserif package with their possible values; values that are marked with an asterisk correspond to the default behaviour of the package.

key	values	see Section
boldweight	Medium*, Bold, auto	4.3
fedrabb	true, false*	5.3
footnotemarks	true, false*	4.6
figures	lining* (lf), text (osf)	4.5
math-style	tex*, iso, french	5.1
nomath	true, false*	5
normalweight	Book*, Demi, auto	4.3
stdmathdigits	true, false*	5.2
variant	A*, B	4.1

4   Font selection

4.1   Variants

Fedra Serif Pro comes in two variants: *Fedra Serif A* has a lower contrast and shorter ascenders, which makes it a good choice for small sizes, whereas *Fedra Serif B* has an increased contrast and longer ascenders. To select one variant, use the `variant` key: setting `variant=A` will select Fedra Serif A (the default), while `variant=B` will select Fedra Serif B. Additionally, setting `variant=auto` will select Fedra Serif A for text in normal and small sizes and Fedra Serif B for text in large sizes (larger than 12pt).

4.2   Encodings

The package currently supports the OT1, T1, LY1 and QX encodings for typesetting text with Latin characters. For typesetting text with accented characters, it is strongly recommended to change the default font encoding from OT1 to T1 or one of

the other encodings. This can be achieved by putting \usepackage[T1]{fontenc}
in the preamble of your document.

4.3   Weights

All fonts of the Fedra Serif Pro family come in four weights, which are (in increasing
order) Book, Demi, Medium and Bold. Of these, Book and Demi can be used as the
standard text font, while Medium and Bold can be used for bold text. The option
keys `normalweight` and `boldweight` allow to control which weights are used for
the standard LaTeX font series m and b (or bx), selected by \mdseries and \bfseries,
respectively. For example, to use the Demi weight as the standard text font, use the
option `normalweight=Demi`. By default, only the Book and the Medium weights
are used. Additionally, both keys can be set to the value `auto`, which selects a
weight depending on the font size (Book and Medium for normal and large sizes,
Demi and Bold for small sizes). Independently of these options, the Demi and the
Bold weight can always be accessed using the commands \fontseries{md} and
\fontseries{ub}, respectively.

4.4   Shapes

In addition to the normal small caps shapes `sc` and `scit`, there are letterspaced
versions `ssc` and `sscit`. Moreover, italic shapes with *swash capitals* are accessible
via the `sw`, `scsw` and `sscsw` shapes.

shape	example
sc	A Quick Brown Fox Jumps Over The Lazy Dog.
ssc	A Quick Brown Fox Jumps Over The Lazy Dog.
scit	A Quick Brown Fox Jumps Over The Lazy Dog.
sscit	A Quick Brown Fox Jumps Over The Lazy Dog.
sw	A Quick Brown Fox Jumps Over The Lazy Dog.
scsw	A Quick Brown Fox Jumps Over The Lazy Dog.
sscsw	A Quick Brown Fox Jumps Over The Lazy Dog.

If the fontaxes package is available, you can use the commands \sscshape
and \textssc{⟨*text*⟩} to switch to letterspaced small caps and the commands
\swshape and \textsw{⟨*text*⟩} to switch to swash capitals.

4.5   Figures

Fedra Serif Pro offers four main figure versions. On the one hand, one can choose
between *lining figures* and *text figures*, also known as *old-style figures*. On the other
hand, one can choose between *proportional figures* and *tabular figures*.

	lining figures	text figures
proportional	0123456789	0123456789
tabular	0123456789	0123456789

By default, proportional lining figures are used throughout the document. If you want to use text figures instead, use the option `figures=text` or `figures=osf`.

Assuming that the fontaxes package is installed on your system, you can use the command `\figureversion` to switch between different figure versions inside the document. Possible arguments are `text` or `osf` for text figures, `lining` or `lf` for lining figures, `tabular` or `tab` for tabular figures, and `proportional` or `prop` for proportional figures. Note that you can combine several arguments. For example, the command `\figureversion{osf,tabular}` selects tabular text figures.

Small and slanted fractions are fractions with a height matching the font's body size; they can be accessed via:

`\smallfrac{⟨numerator⟩}{⟨denominator⟩}` $\frac{3}{17}$
`\slantfrac{⟨numerator⟩}{⟨denominator⟩}` ³⁄₁₇

Note that only figures can be used for ⟨*numerator*⟩ and ⟨*denominator*⟩.

Finally, Fedra Serif Pro offers so-called bullet figures, which are enclosed by a circle; they can be accessed via:

`\openbullet{⟨number⟩}` ① ㉞
`\closedbullet{⟨number⟩}` ❺ ❻❼❽

As for small and slanted fractions, only figures can be used for ⟨*number*⟩.

4.6 Footnotes

By setting the option `footnotemarks`, footnote marks are set using special characters designed for this purpose, i.e. ¹ʼᵃ instead of [1,a]. However, this only works for footnote marks that consist of figures and the lowercase letters a–z.

4.7 Additional notes

Fedra Serif Pro implements a large subset of the glyphs made available by the TS1 encoding. However, the following glyphs are missing:

`\textdblhyphen`	`\textdivorced`	`\textdied`
`\textleaf`	`\textmarried`	`\textmusicalnote`
`\textdblhyphenchar`	`\textdollaroldstyle`	`\textcentoldstyle`
`\textguarani`	`\textpertenthousand`	`\textpilcrow`
`\textbaht`	`\textdiscount`	`\textlquill`
`\textrquill`	`\textcopyleft`	`\textreferencemark`

In addition to the monetary symbols defined by the TS1 encoding, the following commands are available for typesetting currencies:

\textcruzeiro	₢	\textfranc	₣	\textmill	₥
\textpeseta	Pts	\textrupee	₨	\textsheqel	₪
\textkip	₭	\texttugrik	₮	\texthryvnia	₴

5   Math support

By default, we change the math font to Fedra Serif Pro with mathematical symbols taken from FdSymbol. To disable this behaviour, use the option `nomath`. Note that all other options described in this section have no effect if this option is active.

5.1   Letters

The fedraserif package provides all letters available in math mode with the Computer Modern fonts, with the exception of \varpi and \varrho, which have the same shape as \pi and \rho, respectively.

In TeX or LaTeX, uppercase Greek letters are traditionally set upright in math mode, even when they are used as variables. This differs from the ISO standards ISO31-0:1992 to ISO31-13:1992, which mandate italics in this case. While the package employs the TeX tradition by default, you can select the ISO behaviour by setting the option `math-style=iso`. Independently of this option, you can alyways select upright and italic greek letters using the commands \upalpha, \italpha, \upGamma, \itGamma, etc. Additionally, the `math-style` key can take the value `french`, in which case all Greek and uppercase roman letters are typeset upright.

math-style	example
tex	$a, b, \ldots, A, B, \ldots, \alpha, \beta, \ldots, \Gamma, \Delta, \ldots$
iso	$a, b, \ldots, A, B, \ldots, \alpha, \beta, \ldots, \Gamma, \Delta, \ldots$
french	$a, b, \ldots, A, B, \ldots, \alpha, \beta, \ldots, \Gamma, \Delta, \ldots$

5.2   Digits

By default, digits in math mode are set in the default figure version for text mode (as selected by the `figures` key). To use lining figures in math mode even if `figures=text` has been set, use the option `stdmathdigits`.

Apart from the standard math versions `normal` and `bold`, the package introduces two new math versions `tabular` and `boldtabular`, in which digits are typeset as tabular figures.

5.3 Blackboard characters

Fedra Serif Pro has a limited set of blackboard characters, namely ℕ, ℤ, ℚ, ℝ, ℂ, 𝕜 and 𝕀. To use these characters for the math blackboard alphabet \mathbb, set the option fedrabb. If this option is not selected, the AMS blackboard bold font is used instead, which has the advantage that all uppercase roman letters are available.

5.4 Symbols

The fedraserif package provides all symbols defined by the fdsymbol package. Additionally, the following symbols are available in math mode:

ꞵ	\varbeta[3]	ϰ	\varkappa[3]	ϝ	\digamma[3]
϶	\backepsilon[3]	ɜ	\varbackepsilon[3]	ℏ	\hbar
ħ	\hslash	ƛ	\lambdabar	ƛ	\lambdaslash
ð	\eth[3]	0̸	\slashedzero	∇	\nabla
℧	\mho	ℓ	\upell	ℏ	\uphbar

6 The main style file

6.1 Options

We use xkeyval's key mechanism to declare all options.

```
1 ⟨*style⟩
2 \RequirePackage{xkeyval}
3 \newcommand*\fdrsf@boolkey[2]{%
4   \define@boolkey{fedraserif.sty}[fdrsf@]{#1}[true]{#2}%
5 }
6 \newcommand*\fdrsf@choicekey[3]{%
7   \define@choicekey*{fedraserif.sty}{#1}[\@tempa\@tempb]{#2}{#3}%
8 }
9 \newif\iffdrsf@text
10 \fdrsf@texttrue
11 \newif\iffdrsf@math
12 \fdrsf@mathtrue
```

Font selection

The package fedraserif-fd adapts the font definitions to the requested font set (see Section 8). So we simply pass on the relevant options. Additional care has to be taken to pass the right options to fdsymbol.

---

[3] The shape of the symbol is different if the option math-style=french is selected. Upright and italic shapes are also available directly via the commands \up⟨cmd⟩ and \it⟨cmd⟩.

```latex
13 \fdrsf@choicekey{variant}{a,b,auto}{%
14   \PassOptionsToPackage{variant=#1}{fedraserif-fd}%
15   \ifcase\@tempb\relax
16   \or
17     \PassOptionsToPackage{largedelims}{fdsymbol}%
18   \or
19   \fi
20 }
21 \fdrsf@choicekey{normalweight}{book,demi,auto}{%
22   \PassOptionsToPackage{normalweight=#1}{fedraserif-fd}%
23   \ifcase\@tempb\relax
24     \PassOptionsToPackage{normalweight=book}{fdsymbol}%
25   \or
26     \PassOptionsToPackage{normalweight=regular}{fdsymbol}%
27   \or
28     \PassOptionsToPackage{normalweight=auto}{fdsymbol}%
29   \fi
30 }
31 \fdrsf@choicekey{boldweight}{medium,bold,auto}{%
32   \PassOptionsToPackage{boldweight=#1}{fedraserif-fd}%
33   \PassOptionsToPackage{boldweight=#1}{fdsymbol}%
34 }
35 % The next option toggles the math font setup.
36 %    \begin{macrocode}
37 \fdrsf@boolkey{nomath}{%
38   \iffdrsf@nomath\fdrsf@mathfalse\else\fdrsf@mathtrue\fi%
39 }
```

Figure style

```latex
40 \newcommand\fdrsf@family{FedraSerifPro}
41 \newcommand\fdrsf@textfig{LF}
42 \newcommand\fdrsf@mathfig{\fdrsf@textfig}
43 \newcommand\fdrsf@textfamily{\fdrsf@family-\fdrsf@textfig}
44 \newcommand\fdrsf@mathfamily{\fdrsf@family-\fdrsf@mathfig}
45 \newcommand\fdrsf@mathtfamily{\fdrsf@family-T\fdrsf@mathfig}
46 \newcommand\fdrsf@mathshape{it}

47 \fdrsf@choicekey{figures}{text,osf,lining,lf}{%
48   \ifcase\@tempb\relax
49     \renewcommand\fdrsf@textfig{OsF}%
50   \or
51     \renewcommand\fdrsf@textfig{OsF}%
52   \or
53     \renewcommand\fdrsf@textfig{LF}%
54   \or
```

```
55      \renewcommand\fdrsf@textfig{LF}%
56    \fi
57 }
58 \fdrsf@boolkey{stdmathdigits}{%
59    \iffdrsf@stdmathdigits
60      \renewcommand\fdrsf@mathfig{LF}%
61    \fi
62 }
```

Math styles

```
63 \newif\iffdrsf@greek@upper@upright
64 \newif\iffdrsf@greek@lower@upright
65 \fdrsf@choicekey{math-style}{tex,iso,french}{%
66    \ifcase\@tempb\relax
67      \fdrsf@greek@upper@uprighttrue
68      \fdrsf@greek@lower@uprightfalse
69    \or
70      \fdrsf@greek@upper@uprightfalse
71      \fdrsf@greek@lower@uprightfalse
72    \or
73      \fdrsf@greek@upper@uprighttrue
74      \fdrsf@greek@lower@uprighttrue
75      \renewcommand\fdrsf@mathshape{n}
76    \fi
77 }
```

Other options

This options redefined the blackboard bold alphabet to use Fedra Serif's blackboard letters.

```
78 %
79 \fdrsf@boolkey{fedrabb}{%
80    \iffdrsf@fedrabb
81      \renewcommand{\fdrsf@load@bb}{%
82        \let\mathbb\undefined%
83        \DeclareMathAlphabet\mathbb{U}{\fdrsf@family-BB}{m}{n}%
84        \renewcommand{\Bbbk}{\mathbb{k}}%
85      }%
86    \fi
87 }
88 \newcommand{\fdrsf@load@bb}{}
```

This option allows to use superiour figures for footnote marks. If possible, we use the commands \deffootnotemark and \deffootnote provided by the KOMA-Script classes to change the formatting of footnote marks. Otherwise, we need to redefine \@makefnmark.

```
89 \fdrsf@boolkey{footnotemarks}{%
90   \iffdrsf@footnotemarks
91     \@ifundefined{deffootnotemark}{%
92       \def\@makefnmark{%
93         \begingroup%
94         \normalfont%
95         \fontfamily{\fdrsf@family-Extra}\fontencoding{U}\selectfont%
96         \@thefnmark\kern0.1em%
97         \endgroup%
98       }%
99     }{%
100      \deffootnotemark{%
101        \begingroup%
102        \fontfamily{\fdrsf@family-Extra}\fontencoding{U}\selectfont%
103        \thefootnotemark%
104        \endgroup%
105      }%
106    }%
107    \@ifundefined{deffootnote}{}{%
108      \deffootnote[1em]{1.5em}{1em}{%
109        \begingroup%
110        \fontfamily{\fdrsf@family-Extra}\fontencoding{U}\selectfont%
111        \thefootnotemark\kern0.1em%
112        \endgroup%
113      }%
114    }%
115  \fi
116 }
```

Defaults

```
117 \ExecuteOptionsX{math-style=tex}
118 \ProcessOptionsX\relax
```

6.2   Font selection

```
119 \RequirePackage[scale=0.9]{fedraserif-fd}
120 \@ifpackageloaded{textcomp}{}{\RequirePackage{textcomp}}
121 \iffdrsf@text
122   \renewcommand\rmdefault{\fdrsf@textfamily}
123   \DeclareEncodingSubset{TS1}{\fdrsf@family-LF}{1}
124   \DeclareEncodingSubset{TS1}{\fdrsf@family-TLF}{1}
125   \DeclareEncodingSubset{TS1}{\fdrsf@family-OsF}{1}
126   \DeclareEncodingSubset{TS1}{\fdrsf@family-TOsF}{1}
```

In order to accomodate ligatures and glyph variants, we had to remove some glyphs
from the standard encodings, but most of them can still be accessed through the

TS1 encoding.

```
127    \AtBeginDocument{
128      \UndeclareTextCommand{\textcompwordmark}{T1}
129      \UndeclareTextCommand{\textvisiblespace}{T1}
130      \UndeclareTextCommand{\textperthousand}{T1}
131      \UndeclareTextCommand{\textpertenthousand}{T1}
132      \UndeclareTextCommand{\textsterling}{T1}
133      \UndeclareTextCommand{\textsection}{T1}
134      \UndeclareTextCommand{\textmu}{QX}
135      \UndeclareTextCommand{\texteuro}{QX}
136      \UndeclareTextCommand{\textEuro}{QX}
137      \let\textEuro\texteuro
138      \UndeclareTextCommand{\textdagger}{QX}
139      \UndeclareTextCommand{\textdaggerdbl}{QX}
140      \UndeclareTextCommand{\textdegree}{QX}
141      \UndeclareTextCommand{\textsection}{QX}
142      \UndeclareTextCommand{\textregistered}{QX}
143      \UndeclareTextCommand{\copyright}{QX}
144      \UndeclareTextCommand{\textdiv}{QX}
145      \UndeclareTextCommand{\textminus}{QX}
146      \UndeclareTextCommand{\texttimes}{QX}
147      \UndeclareTextCommand{\textpm}{QX}
148      \UndeclareTextCommand{\textbullet}{QX}
149      \UndeclareTextCommand{\textcurrency}{QX}
150      \UndeclareTextCommand{\textperthousand}{QX}
151      \UndeclareTextCommand{\textanglearc}{QX}
```

Additional currency symbols are stored in empty slots of the TS1 encoding.

```
152      \DeclareTextSymbol{\textcruzeiro}{TS1}{192}
153      \DeclareTextSymbol{\textfranc}{TS1}{193}
154      \DeclareTextSymbol{\textmill}{TS1}{194}
155      \DeclareTextSymbol{\textpeseta}{TS1}{195}
156      \DeclareTextSymbol{\textrupee}{TS1}{196}
157      \DeclareTextSymbol{\textsheqel}{TS1}{197}
158      \DeclareTextSymbol{\textkip}{TS1}{198}
159      \DeclareTextSymbol{\texttugrik}{TS1}{199}
160      \DeclareTextSymbol{\texthryvnia}{TS1}{200}
161      \DeclareTextSymbolDefault{\textcruzeiro}{TS1}
162      \DeclareTextSymbolDefault{\textfranc}{TS1}
163      \DeclareTextSymbolDefault{\textmill}{TS1}
164      \DeclareTextSymbolDefault{\textpeseta}{TS1}
165      \DeclareTextSymbolDefault{\textrupee}{TS1}
166      \DeclareTextSymbolDefault{\textsheqel}{TS1}
167      \DeclareTextSymbolDefault{\textkip}{TS1}
168      \DeclareTextSymbolDefault{\texttugrik}{TS1}
169      \DeclareTextSymbolDefault{\texthryvnia}{TS1}
```

```
170    }
171 \fi
```

The font selection commands such as \figureversion, \textsw, and \textssc
are provided by the package fontaxes (bundled with MinionPro).

```
172 \IfFileExists{fontaxes.sty}{
173    \RequirePackage{fontaxes}[2007/03/31]
174    \let\oldstylenums\textfigures
175 }{}
```

Math fonts

We use FdSymbol for most mathematical symbols.

```
176 \iffdrsf@math
177    \RequirePackage[scale=0.9]{fdsymbol}[2011/08/28]
```

Some math symbols are taken from the text font by fdsymbol. Use the correct
math figure version for these.

```
178 \renewcommand\fdsy@text[1]{%
179    \ifx\fdsy@bold\math@version
180      \text{\fontfamily{\fdrsf@mathfamily}\fontseries{b}\selectfont#1}%
181    \else
182      \text{\fontfamily{\fdrsf@mathfamily}\fontseries{m}\selectfont#1}%
183    \fi}
```

Redefine the standard math versions normal and bold.

```
184    \DeclareSymbolFont{operators}{T1}{\fdrsf@mathfamily}{m}{n}
185    \SetSymbolFont{operators}{bold}{T1}{\fdrsf@mathfamily}{b}{n}
186    \DeclareSymbolFont{letters}{OML}{\fdrsf@family-TOsF}{m}{\fdrsf@mathshape}
187    \SetSymbolFont{letters}{bold}{OML}{\fdrsf@family-TOsF}{b}{\fdrsf@mathshape}
188    \DeclareMathAlphabet{\mathrm}{T1}{\fdrsf@mathfamily}{m}{n}
189    \SetMathAlphabet{\mathrm}{bold}{T1}{\fdrsf@mathfamily}{b}{n}
190    \DeclareMathAlphabet{\mathit}{T1}{\fdrsf@mathfamily}{m}{it}
191    \SetMathAlphabet{\mathit}{bold}{T1}{\fdrsf@mathfamily}{b}{it}
192    \DeclareMathAlphabet{\mathbf}{T1}{\fdrsf@mathfamily}{b}{n}
```

Extra math versions tabular and boldtabular, which use tabular figures instead
of proportional ones. These math versions can be useful in tables.

```
193    \DeclareMathVersion{tabular}
194    \SetSymbolFont{operators}{tabular}{T1}{\fdrsf@mathtfamily}{m}{n}
195    \SetMathAlphabet{\mathrm}{tabular}{T1}{\fdrsf@mathtfamily}{m}{n}
196    \SetMathAlphabet{\mathit}{tabular}{T1}{\fdrsf@mathtfamily}{m}{it}
197    \SetMathAlphabet{\mathbf}{tabular}{T1}{\fdrsf@mathtfamily}{b}{n}
198    \DeclareMathVersion{boldtabular}
199    \SetSymbolFont{operators}{boldtabular}{T1}{\fdrsf@mathtfamily}{b}{n}
200    \SetSymbolFont{letters}{boldtabular}{OML}{\fdrsf@family-TOsF}{b}{\fdrsf@mathshape}
201    \SetMathAlphabet{\mathrm}{boldtabular}{T1}{\fdrsf@mathtfamily}{b}{n}
```

```
202    \SetMathAlphabet{\mathit}{boldtabular}{T1}{\fdrsf@mathtfamily}{b}{it}
203    \SetMathAlphabet{\mathbf}{boldtabular}{T1}{\fdrsf@mathtfamily}{b}{n}

204    \DeclareMathAccent{\grave}{\mathalpha}{operators}{"00}
205    \DeclareMathAccent{\acute}{\mathalpha}{operators}{"01}
206    \DeclareMathAccent{\hat}{\mathalpha}{operators}{"02}
207    \DeclareMathAccent{\tilde}{\mathalpha}{operators}{"03}
208    \DeclareMathAccent{\ddot}{\mathalpha}{operators}{"04}
209    \DeclareMathAccent{\mathring}{\mathalpha}{operators}{"06}
210    \DeclareMathAccent{\check}{\mathalpha}{operators}{"07}
211    \DeclareMathAccent{\breve}{\mathalpha}{operators}{"08}
212    \DeclareMathAccent{\bar}{\mathalpha}{operators}{"09}
213    \DeclareMathAccent{\dot}{\mathalpha}{operators}{"0A}
```

Replace some symbols provided by FdSymbol with their Fedra counterparts.

```
214    \let\hbar\undefined
215    \DeclareMathSymbol{\hbar}{\mathord}{letters}{"AE}
216    \DeclareMathSymbol{\nabla}{\mathord}{letters}{"BB}
```

Define some more symbols, which are not provided by FdSymbol.

```
217    \DeclareMathSymbol{\uphbar}{\mathord}{letters}{"B6}
218    \DeclareMathSymbol{\partial}{\mathord}{letters}{"40}
219    \DeclareMathSymbol{\ell}{\mathord}{letters}{"60}
220    \DeclareMathSymbol{\upell}{\mathord}{letters}{"B9}
221    \DeclareMathSymbol{\slashedzero}{\mathord}{letters}{"B8}
222    \let\mho\undefined
223    \DeclareMathSymbol{\mho}{\mathord}{letters}{"BA}
224    \DeclareRobustCommand{\lambdabar}{\middlebar\lambda}
225    \DeclareRobustCommand{\lambdaslash}{\middleslash\lambda}
```

Execute the hook set up above to redefine the mathhbb alphabet.

```
226    \fdrsf@load@bb
```

6.3   Greek and Hebrew letters

We provide three math-mode commands for each Greek letter: for italic, upright and the default.

```
227    \newcommand*{\fdrsf@greek@capital}[3]{
228      \expandafter\DeclareMathSymbol%
229        \expandafter{\csname it#1\endcsname}{\mathord}{letters}{#2}
230      \expandafter\DeclareMathSymbol%
231        \expandafter{\csname up#1\endcsname}{\mathord}{letters}{#3}
232      \iffdrsf@greek@upper@upright
233        \expandafter\let\csname #1\expandafter\endcsname\csname up#1\endcsname
234      \else
235        \expandafter\let\csname #1\expandafter\endcsname\csname it#1\endcsname
```

```latex
236    \fi
237  }
238  \newcommand*{\fdrsf@greek@letter}[3]{
239    \expandafter\DeclareMathSymbol%
240      \expandafter{\csname it#1\endcsname}{\mathord}{letters}{#2}
241    \expandafter\DeclareMathSymbol%
242      \expandafter{\csname up#1\endcsname}{\mathord}{letters}{#3}
243    \iffdrsf@greek@lower@upright
244      \expandafter\let\csname #1\expandafter\endcsname\csname up#1\endcsname
245    \else
246      \expandafter\let\csname #1\expandafter\endcsname\csname it#1\endcsname
247    \fi
248  }
249  \fdrsf@greek@capital{Gamma}{"00}{"80}
250  \fdrsf@greek@capital{Delta}{"01}{"81}
251  \fdrsf@greek@capital{Theta}{"02}{"82}
252  \fdrsf@greek@capital{Lambda}{"03}{"83}
253  \fdrsf@greek@capital{Xi}{"04}{"84}
254  \fdrsf@greek@capital{Pi}{"05}{"85}
255  \fdrsf@greek@capital{Sigma}{"06}{"86}
256  \fdrsf@greek@capital{Upsilon}{"07}{"87}
257  \fdrsf@greek@capital{Phi}{"08}{"88}
258  \fdrsf@greek@capital{Psi}{"09}{"89}
259  \fdrsf@greek@capital{Omega}{"0A}{"8A}
260  \fdrsf@greek@letter{alpha}{"0B}{"8B}
261  \fdrsf@greek@letter{beta}{"0C}{"8C}
262  \fdrsf@greek@letter{gamma}{"0D}{"8D}
263  \fdrsf@greek@letter{delta}{"0E}{"8E}
264  \fdrsf@greek@letter{epsilon}{"0F}{"8F}
265  \fdrsf@greek@letter{zeta}{"10}{"90}
266  \fdrsf@greek@letter{eta}{"11}{"91}
267  \fdrsf@greek@letter{theta}{"12}{"92}
268  \fdrsf@greek@letter{iota}{"13}{"93}
269  \fdrsf@greek@letter{kappa}{"14}{"94}
270  \fdrsf@greek@letter{lambda}{"15}{"95}
271  \fdrsf@greek@letter{mu}{"16}{"96}
272  \fdrsf@greek@letter{nu}{"17}{"97}
273  \fdrsf@greek@letter{xi}{"18}{"98}
274  \fdrsf@greek@letter{pi}{"19}{"99}
275  \fdrsf@greek@letter{rho}{"1A}{"9A}
276  \fdrsf@greek@letter{sigma}{"1B}{"9B}
277  \fdrsf@greek@letter{tau}{"1C}{"9C}
278  \fdrsf@greek@letter{upsilon}{"1D}{"9D}
279  \fdrsf@greek@letter{phi}{"1E}{"9E}
280  \fdrsf@greek@letter{chi}{"1F}{"9F}
```

```
281  \fdrsf@greek@letter{psi}{"20}{"A0}
282  \fdrsf@greek@letter{omega}{"21}{"A1}
283  \fdrsf@greek@letter{varepsilon}{"22}{"A2}
284  \fdrsf@greek@letter{vartheta}{"23}{"A3}
285  \fdrsf@greek@letter{varpi}{"19}{"99}
286  \fdrsf@greek@letter{varrho}{"1A}{"9A}
287  \fdrsf@greek@letter{varsigma}{"26}{"A6}
288  \fdrsf@greek@letter{varphi}{"27}{"A7}
```

Some of the following symbols are not really Greek letters, but they are treated in the same way.

```
289  \fdrsf@greek@letter{varbeta}{"A8}{"B0}
290  \fdrsf@greek@letter{varkappa}{"A9}{"B1}
291  \fdrsf@greek@letter{digamma}{"AA}{"B2}
292  \fdrsf@greek@letter{backepsilon}{"AB}{"B3}
293  \fdrsf@greek@letter{varbackepsilon}{"AC}{"B4}
294  \fdrsf@greek@letter{eth}{"AD}{"B5}
```

Hebrew letters are provided by FdSymbol, but we replace them with their Fedra counterparts.

```
295  \DeclareMathSymbol{\aleph}{\mathord}{letters}{"BC}
296  \DeclareMathSymbol{\beth}{\mathord}{letters}{"BD}
297  \DeclareMathSymbol{\gimel}{\mathord}{letters}{"BE}
298  \DeclareMathSymbol{\daleth}{\mathord}{letters}{"BF}
299 \fi
```

6.4 Bullet figures

We provide two commands to access Fedra's bullet figures.

```
300 \iffdrsf@text
301   \newcommand*{\fdrsf@@openbullet}[2]{%
302     \ifx#2\end
303       \char3#1%
304       \let\next\@gobble
305     \else
306       \char2#1\kern-0.02em%
307       \let\next\fdrsf@@openbullet
308     \fi
309     \next#2%
310   }
311   \newcommand*{\fdrsf@openbullet}[2]{%
312     \ifx#2\end
313       \char0#1%
314       \let\next\@gobble
315     \else%
```

```
316      \char1#1\kern-0.02em%
317      \let\next\fdrsf@@openbullet
318    \fi
319    \next#2%
320  }
321  \DeclareRobustCommand*{\openbullet}[1]{%
322    \begingroup
323    \fontencoding{U}\fontfamily{\fdrsf@family-Orn}\selectfont
324    \edef\@tempa{#1}\expandafter\fdrsf@openbullet\@tempa\end
325    \endgroup
326  }
327  \newcommand*{\fdrsf@@closedbullet}[2]{%
328    \ifx#2\end
329      \char7#1%
330      \let\next\@gobble
331    \else
332      \char6#1\kern-0.02em%
333      \let\next\fdrsf@@closedbullet
334    \fi
335    \next#2%
336  }
337  \newcommand*{\fdrsf@closedbullet}[2]{%
338    \ifx#2\end
339      \char4#1%
340      \let\next\@gobble
341    \else
342      \char5#1\kern-0.02em%
343      \let\next\fdrsf@@closedbullet
344    \fi
345    \next#2%
346  }
347  \DeclareRobustCommand*{\closedbullet}[1]{%
348    \begingroup
349    \fontencoding{U}\fontfamily{\fdrsf@family-Orn}\selectfont
350    \edef\@tempa{#1}\expandafter\fdrsf@closedbullet\@tempa\end
351    \endgroup
352  }
353 \fi
```

6.5   Superior and inferior figures

We provide commands to convert numbers to inferior and superior figures.

```
354 \newcommand*{\fdrsf@@inferior}[1]{%
355   \ifx#1\end
```

```
356      \let\next\relax
357    \else
358      \char"1#1%
359      \let\next\fdrsf@@inferior
360    \fi
361    \next
362 }
363 \newcommand*{\fdrsf@inferior}[1]{%
364    \begingroup
365    \fontencoding{U}\fontfamily{\fdrsf@family-Extra}\selectfont
366    \edef\@tempa{#1}\expandafter\fdrsf@@inferior\@tempa\end
367    \endgroup
368 }
369 \newcommand*{\fdrsf@superior}[1]{%
370    \begingroup
371    \fontencoding{U}\fontfamily{\fdrsf@family-Extra}\selectfont#1%
372    \endgroup
373 }
```

\ensuretext switches to text mode, if necessary.

```
374 \newcommand*{\fdrsf@ensuretext}[1]{%
375    \ifmmode
376      \fdsy@text{#1}%
377    \else
378      #1%
379    \fi
380 }
```

We provide two commands for generating numerical fractions.

```
381 \newcommand*{\fdrsf@smallfrac}[2]{%
382    \leavevmode
383    \setbox\@tempboxa\vbox{%
384      \baselineskip\z@skip%
385      \lineskip.25ex%
386      \lineskiplimit-\maxdimen
387      \ialign{\hfil##\hfil\crcr
388        \vbox to 1.25ex{\vss\hbox{\fdrsf@superior{#1}}\vskip.25ex}\crcr
389        \leavevmode\leaders\hrule height 0.91ex depth -0.87ex\hfill\crcr
390        \vtop to 1ex{\vbox{}\hbox{\fdrsf@inferior{#2}}\vss}\crcr
391        \noalign{\vskip-1.2ex}}}%
392    \box\@tempboxa
393 }
394 \DeclareRobustCommand*{\smallfrac}[2]{%
395    \fdrsf@ensuretext{\kern0.08em\fdrsf@smallfrac{#1}{#2}\kern0.1em}%
396 }
397 \newcommand*{\fdrsf@slantfrac}[2]{%
```

```
398    \begingroup
399    \fontencoding{U}\fontfamily{\fdrsf@family-Extra}\selectfont
400    \fdrsf@superior{#1}\kern-0.05em/\kern0em\fdrsf@inferior{#2}%
401    \endgroup
402 }
403 \DeclareRobustCommand*{\slantfrac}[2]{%
404    \fdrsf@ensuretext{\kern0.08em\fdrsf@slantfrac{#1}{#2}\kern0.1em}%
405 }
```

6.6   Logos

```
406 \iffdrsf@text
407    \DeclareRobustCommand{\LaTeX}{L\kern-.26em%
408      {\sbox\z@ T%
409        \vbox to\ht\z@{\hbox{\check@mathfonts
410          \fontsize\sf@size\z@
411          \math@fontsfalse\selectfont
412          A}%
413        \vss}%
414      }%
415      \kern-.05em%
416      \TeX
417    }
418 \fi
```

Make the changes take effect. This concludes the main style file.

```
419 \iffdrsf@text
420    \normalfont
421 \fi
422 ⟨/style⟩
```

7   Support for character protrusion

The microtype configuration. All four families use the same file (cf. section 8).

```
423 ⟨*mtcfg⟩
424 \SetProtrusion
425    [ name = FedraSerifPro-n ]
426    {  }
427    {
428      . = {  ,700},
429    {,}= {  ,500},
430      : = {  ,500},
431      ; = {  ,300},
432      ! = {  ,100},
433      ? = {  ,100},
```

```
434      @ = {50,50},
435      ˜ = {200,250},
436     \% = {50,50},
437      * = {200,200},
438      + = {250,250},
439      ( = {100,    },    ) = {    ,200},
440      / = {100,200},
441      - = {600,600},
442     \textendash        = {450,450},   \textemdash        = {260,260},
443     \textquoteleft    = {300,400},   \textquoteright    = {300,400},
444     \textquotedblleft = {300,300},   \textquotedblright = {300,300}
445    }
446 \SetProtrusion
447    [ name     = FedraSerifPro-OT1,
448      load     = FedraSerifPro-n    ]
449    { encoding = {OT1},
450      family   = {FedraSerifPro-OsF,FedraSerifPro-LF,FedraSerifPro-TOsF,FedraSerifPro-TLF},
451      shape    = {n,sc,ssc} }
452    {  }
453 \SetProtrusion
454    [ name     = FedraSerifPro-T1,
455      load     = FedraSerifPro-n    ]
456    { encoding = {T1,LY1},
457      family   = {FedraSerifPro-OsF,FedraSerifPro-LF,FedraSerifPro-TOsF,FedraSerifPro-TLF},
458      shape    = {n,sc,ssc} }
459    {
460      _ = {100,100},
461     \textbackslash    = {100,200},
462     \quotesinglbase   = {400,400},   \quotedblbase      = {400,400},
463     \guilsinglleft    = {400,300},   \guilsinglright    = {300,400},
464     \guillemotleft    = {200,200},   \guillemotright    = {200,200},
465     \textexclamdown   = {100,   },   \textquestiondown  = {100,   },
466     \textbraceleft    = {400,200},   \textbraceright    = {200,400},
467     \textless         = {200,100},   \textgreater       = {100,200}
468    }
469 \SetProtrusion
470    [ name     = FedraSerifPro-it ]
471    {  }
472    {
473      . = { ,500},
474     {,}= { ,500},
475      : = { ,300},
476      ; = { ,300},
477      & = {50,50},
```

```
478    \% = {100, },
479    * = {200,200},
480    + = {150,200},
481    @ = {50,50},
482    ~ = {150,150},
483    ( = {200, },    ) = {  ,200},
484    / = {100,200},
485    - = {630,630},
486    \textendash     = {200,200},   \textemdash      = {150,150},
487    \textquoteleft  = {400,200},   \textquoteright  = {400,200},
488    \textquotedblleft = {400,200},  \textquotedblright = {400,200}
489    }
490 \SetProtrusion
491    [ name    = FedraSerifPro-OT1-it,
492      load    = FedraSerifPro-it      ]
493    { encoding = OT1,
494      family   = {FedraSerifPro-OsF,FedraSerifPro-LF,FedraSerifPro-TOsF,FedraSerifPro-TLF},
495      shape    = {it,scit,sscit,sw,scsw,sscsw} }
496    {  }
497 \SetProtrusion
498    [ name    = FedraSerifPro-T1-it,
499      load    = FedraSerifPro-it      ]
500    { encoding = {T1,LY1},
501      family   = {FedraSerifPro-OsF,FedraSerifPro-LF,FedraSerifPro-TOsF,FedraSerifPro-TLF},
502      shape    = {it,sl,sw,scit,scsl,scsw} }
503    {
504      _ = {  ,100},
505      \textbackslash   = {100,200},
506      \quotesinglbase  = {300,700},   \quotedblbase    = {400,500},
507      \guilsinglleft   = {400,400},   \guilsinglright  = {300,500},
508      \guillemotleft   = {300,300},   \guillemotright  = {300,300},
509      \textexclamdown  = {100,  },    \textquestiondown = {200,  },
510      \textbraceleft   = {200,100},   \textbraceright  = {200,200},
511    }
512 ⟨/mtcfg⟩
```

8 Font definition support package

As all font definitions look the same, we introduce macros to ease the configuration. These macros are stored in the file fedraserif-fd.sty, which is included by every FD file. Since fedraserif-fd.sty will be included several times and we do not know in which context the code is executed, we have to define all non-private commands as globals and avoid all \preambleonly commands.

20

We add a guard so that this file is executed only once even if it is included multiple times.

```
513 ⟨*fontdef⟩
514 \ifx\fdrsf@variant@normal\@undefined\else\endinput\fi
```

We distinguish between being loaded directly or via \usepackage in the preamble by checking \@nodocument.

```
515 \ifx\@nodocument\relax\else
516   \NeedsTeXFormat{LaTeX2e}
517   \RequirePackage{xkeyval}
518 \fi
```

Reset \escapechar (which is set to −1 in FD files) to make \newcommand work. The additional group does not harm; we have to make the important commands global anyway.

```
519 \ifx\@nodocument\relax
520   \begingroup
521   \escapechar'\\
522 \fi
```

The macro to make commands global is taken from the otfontdef package.

```
523 \newcommand*\fdrsf@makeglobal[1]{
524   \global\expandafter\let\csname #1\expandafter\endcsname
525   \csname #1\endcsname
526 }
```

8.1 Options

These are the default values if it is impossible to process options.

```
527 \newcommand\fdrsf@variant@normal{A}
528 \newcommand\fdrsf@variant@large{A}
529 \newcommand\fdrsf@mweight@normal{Book}
530 \newcommand\fdrsf@mweight@small{Book}
531 \newcommand\fdrsf@bweight@normal{Medium}
532 \newcommand\fdrsf@bweight@small{Medium}
533 \newcommand\fdrsf@scale{1.0}

534 \ifx\@nodocument\relax\else
535   \newcommand*\fdrsf@fd@choicekey[3]{%
536     \define@choicekey*{fedraserif-fd.sty}{#1}[\@tempa\@tempb]{#2}{#3}%
537   }
538   \fdrsf@fd@choicekey{variant}{a,b,auto}{%
539     \ifcase\@tempb\relax
540       \renewcommand\fdrsf@variant@normal{A}
541       \renewcommand\fdrsf@variant@large{A}
542     \or
```

```
543     \renewcommand\fdrsf@variant@normal{B}
544     \renewcommand\fdrsf@variant@large{B}
545   \or
546     \renewcommand\fdrsf@variant@normal{A}
547     \renewcommand\fdrsf@variant@large{B}
548   \fi
549 }
550 \fdrsf@fd@choicekey{normalweight}{book,demi,auto}{%
551   \ifcase\@tempb\relax
552     \renewcommand\fdrsf@mweight@normal{Book}
553     \renewcommand\fdrsf@mweight@small{Book}
554   \or
555     \renewcommand\fdrsf@mweight@normal{Demi}
556     \renewcommand\fdrsf@mweight@small{Demi}
557   \or
558     \renewcommand\fdrsf@mweight@normal{Book}
559     \renewcommand\fdrsf@mweight@small{Demi}
560   \fi
561 }
562 \fdrsf@fd@choicekey{boldweight}{medium,bold,auto}{%
563   \ifcase\@tempb\relax
564     \renewcommand\fdrsf@bweight@normal{Medium}
565     \renewcommand\fdrsf@bweight@small{Medium}
566   \or
567     \renewcommand\fdrsf@bweight@normal{Bold}
568     \renewcommand\fdrsf@bweight@small{Bold}
569   \or
570     \renewcommand\fdrsf@bweight@normal{Medium}
571     \renewcommand\fdrsf@bweight@small{Bold}
572   \fi
573 }
574 \define@key{fedraserif-fd.sty}{scale}[0.9]{\renewcommand*\fdrsf@scale{#1}}
575 \ProcessOptionsX\relax
576 \fi

577 \fdrsf@makeglobal{fdrsf@variant@normal}
578 \fdrsf@makeglobal{fdrsf@variant@large}
579 \fdrsf@makeglobal{fdrsf@mweight@normal}
580 \fdrsf@makeglobal{fdrsf@mweight@small}
581 \fdrsf@makeglobal{fdrsf@bweight@normal}
582 \fdrsf@makeglobal{fdrsf@bweight@small}
583 \fdrsf@makeglobal{fdrsf@scale}
```

8.2 Font Configuration

We define commands to write to and read from the configuration database.

```
584 \newcommand*{\fdrsf@addconfig}[4][]{%
585   \@for\@tempa:=#3\do{%
586     \expandafter%
587     \gdef\csname fdrsf@config@#2@#1@\@tempa\endcsname{#4}%
588   }%
589 }
590 \newcommand*{\fdrsf@useconfig}[3]{%
591   \@ifundefined{fdrsf@config@#2@#1@#3}{%
592     \@ifundefined{fdrsf@config@#2@@#3}{}%
593       {\csname fdrsf@config@#2@@#3\endcsname}%
594   }{\csname fdrsf@config@#2@#1@#3\endcsname}%
595 }
596 \fdrsf@makeglobal{fdrsf@useconfig}
```

Now we can build up the configuration database.

```
597 \fdrsf@addconfig{weight/normal}{m}{\fdrsf@mweight@normal}
598 \fdrsf@addconfig{weight/small}{m}{\fdrsf@mweight@small}
599 \fdrsf@addconfig{weight/normal}{md}{Demi}
600 \fdrsf@addconfig{weight/small}{md}{Demi}
601 \fdrsf@addconfig{weight/normal}{b}{\fdrsf@bweight@normal}
602 \fdrsf@addconfig{weight/small}{b}{\fdrsf@bweight@small}
603 \fdrsf@addconfig{weight/small}{ub}{Bold}
604 \fdrsf@addconfig{weight/normal}{ub}{Bold}
605 \fdrsf@addconfig{sub/weight}{sb,bx}{b}
606 \fdrsf@addconfig{italic}{it,scit,sscit,sw,scsw,sscsw}{Italic}
607 \fdrsf@addconfig[OML]{italic}{n}{French}
608 \fdrsf@addconfig[OML]{italic}{it}{Mixed}
609 \fdrsf@addconfig{shape}{sc,scit}{-sc}
610 \fdrsf@addconfig{shape}{ssc,sscit}{-ssc}
611 \fdrsf@addconfig{shape}{sw}{-sw}
612 \fdrsf@addconfig{shape}{scsw}{-scsw}
613 \fdrsf@addconfig{shape}{sscsw}{-sscsw}
614 \fdrsf@addconfig{sub/shape}{sl}{it}
615 \fdrsf@addconfig{sub/shape}{scsl}{scit}
616 \fdrsf@addconfig{sub/shape}{sscsl}{sscit}
```

This is the main macro to declare a single font shape.

```
617 \newcommand*{\DeclareFedraSerifShape}[4]{%
618   %\lowercase{\def\temp@enc{#1}}%
619   %\lowercase{\def\temp@fig{#2}}%
620   \edef\temp@subw{\fdrsf@useconfig{#1}{sub/weight}{#3}}%
621   \edef\temp@subs{\fdrsf@useconfig{#1}{sub/shape}{#4}}%
622   \ifx\temp@subw\empty\ifx\temp@subs\empty%
```

23

```
623    \DeclareFontShape{#1}{FedraSerifPro-#2}{#3}{#4}{%
624      <-7.1>s*[\fdrsf@scale]%
625        FSerPro\fdrsf@variant@normal-%
626        \fdrsf@useconfig{#1}{weight/small}{#3}%
627        \fdrsf@useconfig{#1}{italic}{#4}-#2%
628        \fdrsf@useconfig{#1}{shape}{#4}-#1%
629      <7.1-12.1>s*[\fdrsf@scale]%
630        FSerPro\fdrsf@variant@normal-%
631        \fdrsf@useconfig{#1}{weight/normal}{#3}%
632        \fdrsf@useconfig{#1}{italic}{#4}-#2%
633        \fdrsf@useconfig{#1}{shape}{#4}-#1%
634      <12.1->s*[\fdrsf@scale]%
635        FSerPro\fdrsf@variant@large-%
636        \fdrsf@useconfig{#1}{weight/normal}{#3}%
637        \fdrsf@useconfig{#1}{italic}{#4}-#2%
638        \fdrsf@useconfig{#1}{shape}{#4}-#1%
639    }{}%
640  \else%
641    \DeclareFontShape{#1}{FedraSerifPro-#2}{#3}{#4}{%
642      <->ssub* FedraSerifPro-#2/#3/\temp@subs%
643    }{}%
644  \fi\else%
645    \DeclareFontShape{#1}{FedraSerifPro-#2}{#3}{#4}{%
646      <->ssub* FedraSerifPro-#2/\temp@subw/#4%
647    }{}%
648  \fi%
649 }
650 \fdrsf@makeglobal{DeclareFedraSerifShape}
```

Finally, we provide commands to declare a complete family.

```
651 \newcommand*{\DeclareFedraSerifFamily}[4]{%
652   \DeclareFontFamily{#1}{FedraSerifPro-#2}{}%
653   \@for\fdrsf@series:=#3\do{%
654     \@for\fdrsf@shape:=#4\do{%
655       \DeclareFedraSerifShape{#1}{#2}{\fdrsf@series}{\fdrsf@shape}%
656     }%
657   }%
658 }
659 \fdrsf@makeglobal{DeclareFedraSerifFamily}
660 \newcommand*{\DeclareFedraSerifLargeFamily}[2]{%
661   \DeclareFedraSerifFamily{#1}{#2}{m,md,sb,b,bx,ub}%
662     {n,it,sc,ssc,scit,sscit,sw,scsw,sscsw,sl,scsl,sscsl}%
663 }
664 \fdrsf@makeglobal{DeclareFedraSerifLargeFamily}
665 \newcommand*{\DeclareFedraSerifSmallFamily}[2]{%
666   \DeclareFedraSerifFamily{#1}{#2}{m,md,sb,b,bx,ub}{n,it,sl}%
```

```
667 }
668 \fdrsf@makeglobal{DeclareFedraSerifSmallFamily}
669 \newcommand*{\DeclareFedraSerifTinyFamily}[2]{%
670   \DeclareFedraSerifFamily{#1}{#2}{m,md,sb,b,bx,ub}{n}%
671 }
672 \fdrsf@makeglobal{DeclareFedraSerifTinyFamily}
673 \newcommand*{\DeclareFedraSerifMathFamily}[2]{%
674   \DeclareFontFamily{#1}{FedraSerifPro-#2}{\skewchar\font=255}%
675   \@for\fdrsf@series:=m,md,sb,b,bx,ub\do{%
676     \@for\fdrsf@shape:=n,it\do{%
677       \DeclareFedraSerifShape{#1}{#2}{\fdrsf@series}{\fdrsf@shape}%
678     }%
679   }%
680 }
681 \fdrsf@makeglobal{DeclareFedraSerifMathFamily}
```

We define font family aliases so that we can place all configurations for the FedraSerifPro family variants into one microtype file: mt-FedraSerifPro.cfg. We use microtype's hook if microtype has not been loaded yet (which should be the case); otherwise we can execute the alias definitions directly.

```
682 \gdef\fdrsf@MicroType@Aliases{%
683   \DeclareMicrotypeAlias{FedraSerifPro-LF}{FedraSerifPro}%
684   \DeclareMicrotypeAlias{FedraSerifPro-OsF}{FedraSerifPro}%
685   \DeclareMicrotypeAlias{FedraSerifPro-TLF}{FedraSerifPro}%
686   \DeclareMicrotypeAlias{FedraSerifPro-TOsF}{FedraSerifPro}%
687 }
688 \@ifundefined{Microtype@Hook}{%
689   \global\let\Microtype@Hook\fdrsf@MicroType@Aliases
690 }{%
691   \g@addto@macro\Microtype@Hook{\fdrsf@Microtype@Aliases}%
692 }%
693 \@ifundefined{DeclareMicroTypeAlias}{}{\fdrsf@MicroType@Aliases}%

694 \ifx\@nodocument\relax
695   \endgroup
696 \fi
697 ⟨/fontdef⟩
```

9   Font definition files

```
698 ⟨*fd⟩
699 \input{fedraserif-fd.sty}
700 ⟨ot1 & lf⟩\DeclareFedraSerifLargeFamily{OT1}{LF}
701 ⟨ot1 & osf⟩\DeclareFedraSerifLargeFamily{OT1}{OsF}
702 ⟨ot1 & tlf⟩\DeclareFedraSerifLargeFamily{OT1}{TLF}
```

```
703 ⟨ot1 & tosf⟩\DeclareFedraSerifLargeFamily{OT1}{TOsF}
704 ⟨t1 & lf⟩\DeclareFedraSerifLargeFamily{T1}{LF}
705 ⟨t1 & osf⟩\DeclareFedraSerifLargeFamily{T1}{OsF}
706 ⟨t1 & tlf⟩\DeclareFedraSerifLargeFamily{T1}{TLF}
707 ⟨t1 & tosf⟩\DeclareFedraSerifLargeFamily{T1}{TOsF}
708 ⟨ts1 & lf⟩\DeclareFedraSerifLargeFamily{TS1}{LF}
709 ⟨ts1 & osf⟩\DeclareFedraSerifLargeFamily{TS1}{OsF}
710 ⟨ts1 & tlf⟩\DeclareFedraSerifLargeFamily{TS1}{TLF}
711 ⟨ts1 & tosf⟩\DeclareFedraSerifLargeFamily{TS1}{TOsF}
712 ⟨ly1 & lf⟩\DeclareFedraSerifLargeFamily{LY1}{LF}
713 ⟨ly1 & osf⟩\DeclareFedraSerifLargeFamily{LY1}{OsF}
714 ⟨ly1 & tlf⟩\DeclareFedraSerifLargeFamily{LY1}{TLF}
715 ⟨ly1 & tosf⟩\DeclareFedraSerifLargeFamily{LY1}{TOsF}
716 ⟨qx & lf⟩\DeclareFedraSerifLargeFamily{QX}{LF}
717 ⟨qx & osf⟩\DeclareFedraSerifLargeFamily{QX}{OsF}
718 ⟨qx & tlf⟩\DeclareFedraSerifLargeFamily{QX}{TLF}
719 ⟨qx & tosf⟩\DeclareFedraSerifLargeFamily{QX}{TOsF}
720 ⟨oml & tosf⟩\DeclareFedraSerifMathFamily{OML}{TOsF}
721 ⟨u & extra⟩\DeclareFedraSerifSmallFamily{U}{Extra}
722 ⟨u & orn⟩\DeclareFedraSerifSmallFamily{U}{Orn}
723 ⟨u & bb⟩\DeclareFedraSerifFamily{U}{BB}{m}{n}
724 ⟨/fd⟩
```

A   NFSS classification

Parenthesised combinations are provided via substitutions.

Encoding	Family	Series	Shape
OT1, T1, TS1, LY1, QX	FedraSerifPro-OsF, FedraSerifPro-LF, FedraSerifPro-TOsF, FedraSerifPro-TLF	m, md, b (sb, bx), ub	n, it (sl), sw, sc, scit (scsl) scsw, ssc, sscit (sscsl), sscsw
OML	FedraSerifPro-TOsF	m, md, b (sb, bx), ub	n, it
U	FedraSerifPro-Extra, FedraSerifPro-Orn	m, md, b (sb, bx), ub	n, it (sl)
U	FedraSerifPro-BB	m	n