

L^AT_EX support for Fedra Serif Pro

Michael Ummels

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Abstract

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

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1 Overview

The fedraserif package provides L^AT_EX support for the commercial Fedra[®] Serif Pro fonts¹ from Typotheque². 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 available options, see Section 3.

Acknowledgements

This package is heavily influenced by the MinionPro package, developed by Achim Blumensath, Andreas Böhmann 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

¹Fedra is a registered trademark of Typotheque VOF.

²<http://www.typotheque.com/fonts/>

Table 1: Summary of options

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

package is loaded if it is present in your L^AT_EX installation. If you want to pass options to these packages, you can either load these packages beforehand, or you can include the options in 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. Table 1 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.

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).

Table 2: Summary of font weights

| Weight | Series | Example |
|--------|--------|---|
| Book | sl | A Quick Brown Fox Jumps Over The Lazy Dog. |
| Demi | md | A Quick Brown Fox Jumps Over The Lazy Dog. |
| Medium | sb | A Quick Brown Fox Jumps Over The Lazy Dog. |
| Bold | ub | A Quick Brown Fox Jumps Over The Lazy Dog. |

4.2 Encodings

The package currently supports the OT1, T1, LY1, QX and T5 encodings for typesetting text with Latin characters, as well as the TS1 encoding for typesetting text symbols. 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, shown in Table 2. 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 L^AT_EX 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, all weights can be accessed using `\fontseries`. For instance, the Demi weight can be accessed using the command `\fontseries{md}`.

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 (see Table 3).

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.

Table 3: Summary of font shapes

| Shape | Example |
|-------|---|
| n | A Quick Brown Fox Jumps Over The Lazy Dog. |
| it | <i>A Quick Brown Fox Jumps Over The Lazy Dog.</i> |
| sc | A QUICK BROWN FOX JUMPS OVER THE LAZY DOG. |
| ssc | A QUICK BROWN FOX JUMPS OVER THE LAZY DOG. |
| scit | <i>A QUICK BROWN FOX JUMPS OVER THE LAZY DOG.</i> |
| sscit | <i>A QUICK BROWN FOX JUMPS OVER THE LAZY DOG.</i> |
| sw | <i>A Quick Brown Fox Jumps Over The Lazy Dog.</i> |
| scsw | <i>A QUICK BROWN FOX JUMPS OVER THE LAZY DOG.</i> |
| sscs | <i>A QUICK BROWN FOX JUMPS OVER THE LAZY DOG.</i> |

Table 4: Summary of figure versions

| | Lining figures | Text figures |
|--------------|----------------|--------------|
| Proportional | 0123456789 | o123456789 |
| Tabular | 0123456789 | o123456789 |

4.5 Figures

Fedra Serif Pro offers four main figure versions (see 4). 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*.

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:

$$\begin{array}{ll} \backslash\text{smallfrac}\{\langle\text{numerator}\rangle\}\{\langle\text{denominator}\rangle\} & \frac{3}{17} \\ \backslash\text{slantfrac}\{\langle\text{numerator}\rangle\}\{\langle\text{denominator}\rangle\} & \frac{3}{17} \end{array}$$

Note that only figures can be used for `\langle\text{numerator}\rangle` and `\langle\text{denominator}\rangle`.

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

`\openbullet{⟨number⟩}` ① ②
`\closedbullet{⟨number⟩}` ⑤ ⑥

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. ^{1.a} instead of ^{1.a}. However, this only works for footnote marks that consist of figures and the lowercase letters a–z.

4.7 Dingbats

Assuming that the `pifont` package is loaded, you can access Fedra Serif’s ornamental characters via:

`\Pisymbol{FedraSerifPro-Pi}{⟨number⟩}`

The available glyphs are listed in Table 5.

4.8 Additional notes

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

| | | |
|---------------------------------|----------------------------------|----------------------------------|
| <code>\textdblhyphen</code> | <code>\textdivorced</code> | <code>\textdied</code> |
| <code>\textleaf</code> | <code>\textmarried</code> | <code>\textmusicalnote</code> |
| <code>\textdblhyphenchar</code> | <code>\textdollaroldstyle</code> | <code>\textcentoldstyle</code> |
| <code>\textguarani</code> | <code>\textrecipe</code> | <code>\textpertenthousand</code> |
| <code>\textpilcrow</code> | <code>\textbaht</code> | <code>\textdiscount</code> |
| <code>\textlquill</code> | <code>\textrquill</code> | <code>\textcopyleft</code> |
| <code>\textreferencemark</code> | | |

In addition to the monetary symbols defined by the TS1 encoding, the following currency symbols are available:

| | | | | | |
|---|----------------------------|---|--------------------------|---|---------------------------|
| ₧ | <code>\textcruzeiro</code> | ₣ | <code>\textfranc</code> | ₧ | <code>\textmill</code> |
| ₪ | <code>\textpeseta</code> | ₧ | <code>\textrupee</code> | ₪ | <code>\textsheqel</code> |
| ₧ | <code>\textkip</code> | ₧ | <code>\texttugrik</code> | ₪ | <code>\texthryvnia</code> |

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.

Table 5: Dingbats available with the fedraserif package

| number | glyph | number | glyph | number | glyph | number | glyph |
|--------|-------|--------|-------|--------|-------|--------|-------|
| 100 | · | 128 | Ⓚ | 156 | ☎ | 184 | · |
| 101 | • | 129 | Ⓜ | 157 | 📄 | 185 | · |
| 102 | ◦ | 130 | ⓧ | 158 | 🏠 | 186 | * |
| 103 | ▪ | 131 | ⓧ | 159 | 📁 | 187 | * |
| 104 | ◆ | 132 | Ⓜ | 160 | 🌐 | 188 | * |
| 105 | ■ | 133 | ☺ | 161 | ✍ | 189 | * |
| 106 | □ | 134 | ★ | 162 | 🕒 | 190 | ⋯ |
| 107 | ■ | 135 | ● | 163 | 📄 | 191 | ⚫ |
| 108 | □ | 136 | → | 164 | 📄 | 192 | — |
| 109 | ▶ | 137 | ← | 165 | 🛒 | 193 | — |
| 110 | ◀ | 138 | ↑ | 166 | ⬇ | 194 | — |
| 111 | ▶ | 139 | ↓ | 167 | 🏠 | 195 | — |
| 112 | ◀ | 140 | ↗ | 168 | 🕯 | 196 | — |
| 113 | ▶ | 141 | ↖ | 169 | 🕯 | 197 | — |
| 114 | ◀ | 142 | ↙ | 170 | 🕯 | 198 | — |
| 115 | ▷ | 143 | ↘ | 171 | 📄 | 199 | — |
| 116 | ◁ | 144 | 👉 | 172 | 📄 | 200 | — |
| 117 | ▶ | 145 | 👈 | 173 | ☀ | 201 | — |
| 118 | ◀ | 146 | 👉 | 174 | ☀ | 202 | ▲ |
| 119 | ▷ | 147 | 👈 | 175 | ☀ | 203 | + |
| 120 | ◁ | 148 | 👉 | 176 | ☺ | 204 | ★ |
| 121 | ● | 149 | 👉 | 177 | ~ | 205 | * |
| 122 | ○ | 150 | ✓ | 178 | ~ | 206 | ▲ |
| 123 | ● | 151 | □ | 179 | ~ | 207 | ✦ |
| 124 | ◎ | 152 | ☑ | 180 | ~ | 208 | ★ |
| 125 | ◎ | 153 | ☒ | 181 | — | 209 | ★ |
| 126 | ♥ | 154 | ☒ | 182 | — | 210 | ✱ |
| 127 | ♡ | 155 | 📄 | 183 | — | | |

Table 6: The different styles for letters in math mode

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

5.1 Letters

In \TeX and \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 always 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. For an illustration of the differences between the three values for `math-style`, see Table 6.

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. Additionally, the following letters and letter-like symbols are can be typeset:

| | | | | | |
|---------------|--|----------------|---|------------|------------------------------------|
| β | <code>\varbeta</code> ³ | κ | <code>\varkappa</code> ³ | \digamma | <code>\digamma</code> ³ |
| ε | <code>\backepsilon</code> ³ | ε | <code>\varbackepsilon</code> ³ | \hslash | <code>\hslash</code> |
| λ | <code>\lambdabar</code> | λ | <code>\lambdaslash</code> | \eth | <code>\eth</code> ³ |
| \emptyset | <code>\slashedzero</code> | \mathring{O} | <code>\mho</code> | ℓ | <code>\upell</code> |
| \hbar | <code>\uphbar</code> | \beth | <code>\beth</code> | λ | <code>\gimel</code> |
| \daleth | <code>\daleth</code> | | | | |

5.2 Digits

By default, digits in math mode are typeset 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` is active, set 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.

³The 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>`, respectively.

Table 7: NFSS classification

| Encoding | Family | Series | Shape |
|---------------------------------|--|------------------------------|---|
| OT1, T1, TS1, LY1, QX, T5 | FedraSerifPro-LF, FedraSerifPro-OsF, FedraSerifPro-TLF, FedraSerifPro-TOsF | sl, m, md, b (bx), sb, ub | n, it (sl), sw, sc, scit (scsl), scsw, ssc, sscit (sscs), sscsw |
| OML | FedraSerifPro-TOsF (FedraSerifPro-LF, FedraSerifPro-OsF, FedraSerifPro-TLF) | sl, m, md, b (bx), sb, ub | n, it |
| U | FedraSerifPro-Extra | sl, m, md, b (bx), sb, ub | n, it (sl) |
| U | FedraSerifPro-Pi | m, md, b (sb, bx), ub | n |
| U | FedraSerifPro-BB | m | n |

5.3 Blackboard characters

Fedra Serif Pro has a limited set of blackboard characters, namely \mathbb{N} , \mathbb{Z} , \mathbb{Q} , \mathbb{R} , \mathbb{C} , \mathbb{k} and \mathbb{l} . To use these characters for the math blackboard alphabet `\mathbb{b}`, 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.

6 NFSS classification

Table 7 lists all fonts made available with this package. Parenthesised combinations are provided via substitutions.

7 Implementation

7.1 Options

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

```

1 \package
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 9). So we simply pass on the relevant options. Additional care has to be taken to pass the right options to `fdsymbol`.

```

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 }

```

The next option toggles the math font setup.

```

35 \fdrsf@boolkey{nomath}{%
36 \iffdrsf@nomath\fdrsf@mathfalse\else\fdrsf@mathtrue\fi%
37 }

```

Figure style

```

38 \newcommand\fdrsf@family{FedraSerifPro}
39 \newcommand\fdrsf@textfig{LF}
40 \newcommand\fdrsf@mathfig{\fdrsf@textfig}
41 \newcommand\fdrsf@textfamily{\fdrsf@family-\fdrsf@textfig}
42 \newcommand\fdrsf@mathfamily{\fdrsf@family-\fdrsf@mathfig}
43 \newcommand\fdrsf@mathtfamily{\fdrsf@family-T\fdrsf@mathfig}
44 \newcommand\fdrsf@mathshape{it}

45 \fdrsf@choicekey{figures}{text,osf,lining,lf}{%
46   \ifcase\@tempb\relax
47     \renewcommand\fdrsf@textfig{OsF}%
48   \or
49     \renewcommand\fdrsf@textfig{OsF}%
50   \or
51     \renewcommand\fdrsf@textfig{LF}%
52   \or
53     \renewcommand\fdrsf@textfig{LF}%
54   \fi
55 }
56 \fdrsf@boolkey{stdmathdigits}{%
57   \iffdrsf@stdmathdigits
58     \renewcommand\fdrsf@mathfig{LF}%
59   \fi
60 }

```

Math styles

```

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

```

Other options

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

```

76 %
77 \fdrsf@boolkey{fedrabb}{%
78   \iffdrsf@fedrabb
79     \renewcommand\fdrsf@load@bb{%
80       \DeclareMathAlphabet\mathbb{U}{\fdrsf@family-BB}{m}{n}%
81       \renewcommand\Bbbk{\mathbb{k}}}%
82   }%
83 \fi
84 }
85 \newcommand\fdrsf@load@bb{}

```

This option allows to use superior 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`.

```

86 \fdrsf@boolkey{footnotemarks}{%
87   \iffdrsf@footnotemarks
88     \@ifundefined{deffootnotemark}{%
89       \def\@makefnmark{%
90         \begingroup
91         \usefont{U}{\fdrsf@family-Extra}{m}{n}%
92         \@thefnmark\kern0.1em%
93         \endgroup
94       }%
95     }{%
96       \deffootnotemark{%
97         \begingroup
98         \usefont{U}{\fdrsf@family-Extra}{m}{n}%
99         \thefootnotemark
100        \endgroup
101      }%
102    }%
103   \@ifundefined{deffootnote}{%
104     \deffootnote[1em]{1.5em}{1em}{%
105       \begingroup
106       \usefont{U}{\fdrsf@family-Extra}{m}{n}%
107       \thefootnotemark\kern0.1em%
108       \endgroup
109     }%
110   }%
111 \fi
112 }

```

Defaults

```

113 \ExecuteOptionsX{math-style=tex}
114 \ProcessOptionsX\relax

```

7.2 Font selection

```

115 \RequirePackage[scale=0.9]{fedraserif-fd}
116 \@ifpackageloaded{textcomp}{\RequirePackage{textcomp}}
117 \iffdrsf@text
118 \renewcommand\rmdefault{\fdrsf@textfamily}
119 \DeclareEncodingSubset{TS1}{\fdrsf@family-LF}{1}
120 \DeclareEncodingSubset{TS1}{\fdrsf@family-TLF}{1}
121 \DeclareEncodingSubset{TS1}{\fdrsf@family-OsF}{1}
122 \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.

```

123 \AtBeginDocument{
124   \UndeclareTextCommand{\textcompwordmark}{T1}
125   \UndeclareTextCommand{\textvisiblespace}{T1}
126   \UndeclareTextCommand{\textperthousand}{T1}
127   \UndeclareTextCommand{\textpertenthousand}{T1}
128   \UndeclareTextCommand{\textsterling}{T1}
129   \UndeclareTextCommand{\textsection}{T1}
130   \UndeclareTextCommand{\textmu}{QX}
131   \UndeclareTextCommand{\texteuro}{QX}
132   \UndeclareTextCommand{\textEuro}{QX}
133   \let\textEuro\texteuro
134   \UndeclareTextCommand{\textdagger}{QX}
135   \UndeclareTextCommand{\textdaggerdbl}{QX}
136   \UndeclareTextCommand{\textdegree}{QX}
137   \UndeclareTextCommand{\textsection}{QX}
138   \UndeclareTextCommand{\textregistered}{QX}
139   \UndeclareTextCommand{\copyright}{QX}
140   \let\copyright\textcopyright
141   \UndeclareTextCommand{\textdiv}{QX}
142   \UndeclareTextCommand{\textminus}{QX}
143   \UndeclareTextCommand{\texttimes}{QX}
144   \UndeclareTextCommand{\textpm}{QX}
145   \UndeclareTextCommand{\textbullet}{QX}
146   \UndeclareTextCommand{\textcurrency}{QX}
147   \UndeclareTextCommand{\textperthousand}{QX}
148   \UndeclareTextCommand{\textanglearc}{QX}
149   \UndeclareTextCommand{\textvisiblespace}{T5}

```

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

```

150   \DeclareTextSymbol{\textcruzeiro}{TS1}{192}

```

```

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

```

The font selection commands such as `\figureversion`, `\textsw`, and `\textssc` are provided by the `fontaxes` package.

```

170 \IfFileExists{fontaxes.sty}{
171 \RequirePackage{fontaxes}[2007/03/31]
172 \let\oldstylenums\textfigures
173 }{}

```

7.3 Math font setup

We use `FdSymbol` for most mathematical symbols.

```

174 \iffdrsf@math
175 \RequirePackage[scale=0.9]{fdsymbol}[2011/11/01]

```

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

```

176 \renewcommand\fdsy@text[1]{%
177 \ifx\fdsy@bold\math@version
178 \text{\usefont{T1}{\fdrsf@mathfamily}{b}{n}#1}%
179 \else
180 \text{\usefont{T1}{\fdrsf@mathfamily}{m}{n}#1}%
181 \fi
182 }

```

Redefine the standard math versions normal and bold.

```

183 \DeclareSymbolFont{operators}{T1}{\fdrsf@mathfamily}{m}{n}
184 \SetSymbolFont{operators}{bold}{T1}{\fdrsf@mathfamily}{b}{n}
185 \DeclareSymbolFont{letters}{OML}{\fdrsf@family-TOf}{m}{\fdrsf@mathshape}

```

```

186 \SetSymbolFont{letters}{bold}{OML}{\fdrsf@family-T0sF}{b}{\fdrsf@mathshape}
187 \DeclareMathAlphabet{\mathrm}{T1}{\fdrsf@mathfamily}{m}{n}
188 \SetMathAlphabet{\mathrm}{bold}{T1}{\fdrsf@mathfamily}{b}{n}
189 \DeclareMathAlphabet{\mathit}{T1}{\fdrsf@mathfamily}{m}{it}
190 \SetMathAlphabet{\mathit}{bold}{T1}{\fdrsf@mathfamily}{b}{it}
191 \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.

```

192 \DeclareMathVersion{tabular}
193 \SetSymbolFont{operators}{tabular}{T1}{\fdrsf@mathtfamily}{m}{n}
194 \SetMathAlphabet{\mathrm}{tabular}{T1}{\fdrsf@mathtfamily}{m}{n}
195 \SetMathAlphabet{\mathit}{tabular}{T1}{\fdrsf@mathtfamily}{m}{it}
196 \SetMathAlphabet{\mathbf}{tabular}{T1}{\fdrsf@mathtfamily}{b}{n}
197 \DeclareMathVersion{boldtabular}
198 \SetSymbolFont{operators}{boldtabular}{T1}{\fdrsf@mathtfamily}{b}{n}
199 \SetSymbolFont{letters}{boldtabular}{OML}{\fdrsf@family-T0sF}{b}{\fdrsf@mathshape}
200 \SetMathAlphabet{\mathrm}{boldtabular}{T1}{\fdrsf@mathtfamily}{b}{n}
201 \SetMathAlphabet{\mathit}{boldtabular}{T1}{\fdrsf@mathtfamily}{b}{it}
202 \SetMathAlphabet{\mathbf}{boldtabular}{T1}{\fdrsf@mathtfamily}{b}{n}

203 \DeclareMathAccent{\grave}{\mathalpha}{operators}{"00}
204 \DeclareMathAccent{\acute}{\mathalpha}{operators}{"01}
205 \DeclareMathAccent{\hat}{\mathalpha}{operators}{"02}
206 \DeclareMathAccent{\tilde}{\mathalpha}{operators}{"03}
207 \DeclareMathAccent{\ddot}{\mathalpha}{operators}{"04}
208 \DeclareMathAccent{\mathring}{\mathalpha}{operators}{"06}
209 \DeclareMathAccent{\check}{\mathalpha}{operators}{"07}
210 \DeclareMathAccent{\breve}{\mathalpha}{operators}{"08}
211 \DeclareMathAccent{\bar}{\mathalpha}{operators}{"09}
212 \DeclareMathAccent{\dot}{\mathalpha}{operators}{"0A}
213 \let\hbar\undefined
214 \DeclareMathSymbol{\hbar}{\mathord}{letters}{"AE}
215 \DeclareMathSymbol{\uphbar}{\mathord}{letters}{"B6}
216 \DeclareMathSymbol{\partial}{\mathord}{letters}{"40}
217 \DeclareMathSymbol{\ell}{\mathord}{letters}{"60}
218 \DeclareMathSymbol{\upell}{\mathord}{letters}{"B9}
219 \DeclareMathSymbol{\slashedzero}{\mathord}{letters}{"B8}
220 \let\mho\undefined
221 \DeclareMathSymbol{\mho}{\mathord}{letters}{"BA}
222 \DeclareMathSymbol{\nabla}{\mathord}{letters}{"BB}
223 \DeclareRobustCommand{\lambdabar}{\middlebar\lambda}
224 \DeclareRobustCommand{\lambdaslash}{\middleslash\lambda}

```

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

```

225 \fdrsf@load@bb

```

7.4 Greek and Hebrew letters

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

```

226 \newcommand*\fdrsf@greek@capital}[3]{
227   \expandafter\DeclareMathSymbol%
228     \expandafter{\csname it#1\endcsname}{\mathord}{letters}{#2}
229   \expandafter\DeclareMathSymbol%
230     \expandafter{\csname up#1\endcsname}{\mathord}{letters}{#3}
231   \iffdrsf@greek@upper@upright
232     \expandafter\let\csname #1\expandafter\endcsname\csname up#1\endcsname
233   \else
234     \expandafter\let\csname #1\expandafter\endcsname\csname it#1\endcsname
235   \fi
236 }
237 \newcommand*\fdrsf@greek@letter}[3]{
238   \expandafter\DeclareMathSymbol%
239     \expandafter{\csname it#1\endcsname}{\mathord}{letters}{#2}
240   \expandafter\DeclareMathSymbol%
241     \expandafter{\csname up#1\endcsname}{\mathord}{letters}{#3}
242   \iffdrsf@greek@lower@upright
243     \expandafter\let\csname #1\expandafter\endcsname\csname up#1\endcsname
244   \else
245     \expandafter\let\csname #1\expandafter\endcsname\csname it#1\endcsname
246   \fi
247 }
248 \fdrsf@greek@capital{\Gamma}{00}{80}
249 \fdrsf@greek@capital{\Delta}{01}{81}
250 \fdrsf@greek@capital{\Theta}{02}{82}
251 \fdrsf@greek@capital{\Lambda}{03}{83}
252 \fdrsf@greek@capital{\Xi}{04}{84}
253 \fdrsf@greek@capital{\Pi}{05}{85}
254 \fdrsf@greek@capital{\Sigma}{06}{86}
255 \fdrsf@greek@capital{\Upsilon}{07}{87}
256 \fdrsf@greek@capital{\Phi}{08}{88}
257 \fdrsf@greek@capital{\Psi}{09}{89}
258 \fdrsf@greek@capital{\Omega}{0A}{8A}
259 \fdrsf@greek@letter{\alpha}{0B}{8B}
260 \fdrsf@greek@letter{\beta}{0C}{8C}
261 \fdrsf@greek@letter{\gamma}{0D}{8D}
262 \fdrsf@greek@letter{\delta}{0E}{8E}
263 \fdrsf@greek@letter{\epsilon}{0F}{8F}
264 \fdrsf@greek@letter{\zeta}{10}{90}
265 \fdrsf@greek@letter{\eta}{11}{91}
266 \fdrsf@greek@letter{\theta}{12}{92}

```



```

267 \fdrsf@greek@letter{iota}{13}{93}
268 \fdrsf@greek@letter{kappa}{14}{94}
269 \fdrsf@greek@letter{lambda}{15}{95}
270 \fdrsf@greek@letter{mu}{16}{96}
271 \fdrsf@greek@letter{nu}{17}{97}
272 \fdrsf@greek@letter{xi}{18}{98}
273 \fdrsf@greek@letter{pi}{19}{99}
274 \fdrsf@greek@letter{rho}{1A}{9A}
275 \fdrsf@greek@letter{sigma}{1B}{9B}
276 \fdrsf@greek@letter{tau}{1C}{9C}
277 \fdrsf@greek@letter{upsilon}{1D}{9D}
278 \fdrsf@greek@letter{phi}{1E}{9E}
279 \fdrsf@greek@letter{chi}{1F}{9F}
280 \fdrsf@greek@letter{psi}{20}{A0}
281 \fdrsf@greek@letter{omega}{21}{A1}
282 \fdrsf@greek@letter{varepsilon}{22}{A2}
283 \fdrsf@greek@letter{vartheta}{23}{A3}
284 \fdrsf@greek@letter{varpi}{19}{99}
285 \fdrsf@greek@letter{varrho}{1A}{9A}
286 \fdrsf@greek@letter{varsigma}{26}{A6}
287 \fdrsf@greek@letter{varphi}{27}{A7}

```

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

```

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

```

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

```

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

```

7.5 Bullet figures

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

```

299 \iffdrsf@text
300 \newcommand*{\fdrsf@@openbullet}[2]{%
301 \ifx#2\end

```

```

302     \char3#1%
303     \let\next\@gobble
304   \else
305     \char2#1\kern-0.02em%
306     \let\next\fdrsf@openbullet
307   \fi
308   \next#2%
309 }
310 \newcommand*\fdrsf@openbullet}[2]{%
311   \ifx#2\end
312     \char0#1%
313     \let\next\@gobble
314   \else%
315     \char1#1\kern-0.02em%
316     \let\next\fdrsf@openbullet
317   \fi
318   \next#2%
319 }
320 \DeclareRobustCommand*\openbullet}[1]{%
321   \begingroup
322   \usefont{U}{\fdrsf@family-Pi}{m}{n}%
323   \edef\@tempa{#1}\expandafter\fdrsf@openbullet\@tempa\end
324   \endgroup
325 }
326 \newcommand*\fdrsf@closedbullet}[2]{%
327   \ifx#2\end
328     \char7#1%
329     \let\next\@gobble
330   \else
331     \char6#1\kern-0.02em%
332     \let\next\fdrsf@closedbullet
333   \fi
334   \next#2%
335 }
336 \newcommand*\fdrsf@closedbullet}[2]{%
337   \ifx#2\end
338     \char4#1%
339     \let\next\@gobble
340   \else
341     \char5#1\kern-0.02em%
342     \let\next\fdrsf@closedbullet
343   \fi
344   \next#2%
345 }
346 \DeclareRobustCommand*\closedbullet}[1]{%

```

```

347 \begingroup
348 \usefont{U}{\fdrsf@family-Pi}{m}{n}%
349 \edef\@tempa{#1}\expandafter\fdrsf@closedbullet\@tempa\end
350 \endgroup
351 }
352 \fi

```

7.6 Superior and inferior figures

The following command converts numbers to inferior figures.

```

353 \newcommand*{\fdrsf@inferior}[1]{%
354 \ifx#1\end
355 \let\next\relax
356 \else
357 \char"1#1%
358 \let\next\fdrsf@inferior
359 \fi
360 \next
361 }
362 \newcommand*{\fdrsf@inferior}[1]{%
363 \begingroup
364 \edef\@tempa{#1}\expandafter\fdrsf@inferior\@tempa\end
365 \endgroup
366 }

```

`\fdrsf@ensuretext` switches to text mode, if necessary.

```

367 \newcommand*{\fdrsf@ensuretext}[1]{%
368 \ifmmode
369 \fdsy@text{#1}%
370 \else
371 #1%
372 \fi
373 }

```

We provide two commands for generating numerical fractions.

```

374 \newcommand*{\fdrsf@smallfrac}[2]{%
375 \begingroup
376 \fontencoding{U}\fontfamily{\fdrsf@family-Extra}\fontshape{n}\selectfont
377 \leavevmode
378 \setbox\@tempboxa\vbox{%
379 \baselineskip\z@skip%
380 \lineskip.25ex%
381 \lineskiplimit-\maxdimen
382 \ialign{\hfil##\hfil\crr
383 \vbox to 1.25ex{\vss\hbox{#1}\vskip.25ex}\crr
384 \leavevmode\leaders\hrule height 0.91ex depth -0.87ex\hfill\crr

```

```

385     \vtop to 1ex{\vbox{\hbox{\fdrsf@inferior{#2}}\vss}\crrc
386     \noalign{\vskip-1.2ex}}}%
387   \box\@tempboxa
388   \endgroup
389 }
390 \DeclareRobustCommand*{\smallfrac}[2]{%
391   \fdrsf@ensuretext{\kern0.08em\fdrsf@smallfrac{#1}{#2}\kern0.1em}%
392 }
393 \newcommand*{\fdrsf@slantfrac}[2]{%
394   \begingroup
395   \fontencoding{U}\fontfamily{\fdrsf@family-Extra}\fontshape{n}\selectfont
396   #1\kern-0.05em/\kern0em\fdrsf@inferior{#2}%
397   \endgroup
398 }
399 \DeclareRobustCommand*{\slantfrac}[2]{%
400   \fdrsf@ensuretext{\kern0.08em\fdrsf@slantfrac{#1}{#2}\kern0.1em}%
401 }

```

7.7 Logos

```

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

```

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

```

415 \iffdrsf@text
416 \normalfont
417 \fi
418 \</package>

```

8 Microtype configuration file

The microtype configuration. All four families use the same file (cf. section 9).

```

419 \<*mtcfg>
420 \SetProtrusion

```

```

421 [ name = FedraSerifPro-n ]
422 { }
423 {
424     . = { ,700},
425     {,}= { ,500},
426     : = { ,500},
427     ; = { ,300},
428     ! = { ,100},
429     ? = { ,100},
430     @ = {50,50},
431     ~ = {200,250},
432     \% = {50,50},
433     * = {200,200},
434     + = {250,250},
435     ( = {100, }, ) = { ,200},
436     / = {100,200},
437     - = {600,600},
438     \textendash = {450,450}, \textemdash = {260,260},
439     \textquoteleft = {300,400}, \textquoteright = {300,400},
440     \textquotedblleft = {300,300}, \textquotedblright = {300,300}
441 }

442 \SetProtrusion
443 [ name = FedraSerifPro-OT1,
444     load = FedraSerifPro-n ]
445 { encoding = {OT1},
446     family = {FedraSerifPro-0sF,FedraSerifPro-LF,FedraSerifPro-T0sF,FedraSerifPro-TLF},
447     shape = {n,sc,ssc} }
448 { }

449 \SetProtrusion
450 [ name = FedraSerifPro-T1,
451     load = FedraSerifPro-n ]
452 { encoding = {T1,LY1},
453     family = {FedraSerifPro-0sF,FedraSerifPro-LF,FedraSerifPro-T0sF,FedraSerifPro-TLF},
454     shape = {n,sc,ssc} }
455 {
456     _ = {100,100},
457     \textbackslash = {100,200},
458     \quotesinglbase = {400,400}, \quotedblbase = {400,400},
459     \guilsinglleft = {400,300}, \guilsinglright = {300,400},
460     \guillemotleft = {200,200}, \guillemotright = {200,200},
461     \textexclamdown = {100, }, \textquestiondown = {100, },
462     \textbraceleft = {400,200}, \textbraceright = {200,400},
463     \textless = {200,100}, \textgreater = {100,200}
464 }

```

```

465\SetProtrusion
466 [ name      = FedraSerifPro-QX,
467   load      = FedraSerifPro-n   ]
468 { encoding = {QX},
469   family   = {FedraSerifPro-0sF,FedraSerifPro-LF,FedraSerifPro-T0sF,FedraSerifPro-TLF},
470   shape    = {n,sc,ssc} }
471 {
472   _ = {100,100},
473   \textbackslash = {100,200},   \textellipsis = {100,200},
474   \textperiodcentered = {500,700}, \quotedblbase = {400,400},
475   \textquotedbl = {400,400},   \textquotesingle = {400,400},
476   \guillemotleft = {200,200},  \guillemotright = {200,200},
477   \textexclamdown = {100, },   \textquestiondown = {100, },
478   \textbraceleft = {400,200},  \textbraceright = {200,400},
479   \textless = {200,100},       \textgreater = {100,200}
480 }
481\SetProtrusion
482 [ name      = FedraSerifPro-T5,
483   load      = FedraSerifPro-n   ]
484 { encoding = {T5},
485   family   = {FedraSerifPro-0sF,FedraSerifPro-LF,FedraSerifPro-T0sF,FedraSerifPro-TLF},
486   shape    = {n,sc,ssc} }
487 {
488   _ = {100,100},
489   \textbackslash = {100,200},
490   \quotesinglbase = {400,400},   \quotedblbase = {400,400},
491   \guilsinglleft = {400,300},   \guilsinglright = {300,400},
492   \guillemotleft = {200,200},  \guillemotright = {200,200},
493   \textbraceleft = {400,200},  \textbraceright = {200,400},
494   \textless = {200,100},       \textgreater = {100,200}
495 }
496\SetProtrusion
497 [ name      = FedraSerifPro-it ]
498 { }
499 {
500   . = { ,500},
501   {,}= { ,500},
502   : = { ,300},
503   ; = { ,300},
504   & = {50,50},
505   \% = {100, },
506   * = {200,200},
507   + = {150,200},
508   @ = {50,50},
509   ~ = {150,150},

```

```

510      ( = {200, },      ) = {      ,200},
511      / = {100,200},
512      - = {630,630},
513      \textendash      = {200,200},      \textemdash      = {150,150},
514      \textquoteleft   = {400,200},      \textquoteright   = {400,200},
515      \textquotedblleft = {400,200},      \textquotedblright = {400,200}
516  }

517 \SetProtrusion
518 [ name      = FedraSerifPro-OT1-it,
519   load      = FedraSerifPro-it      ]
520 { encoding = OT1,
521   family   = {FedraSerifPro-OsF,FedraSerifPro-LF,FedraSerifPro-T0sF,FedraSerifPro-TLF},
522   shape     = {it,scit,sscit,sw,scsw,sscs} }
523 { }

524 \SetProtrusion
525 [ name      = FedraSerifPro-T1-it,
526   load      = FedraSerifPro-it      ]
527 { encoding = {T1,LY1},
528   family   = {FedraSerifPro-OsF,FedraSerifPro-LF,FedraSerifPro-T0sF,FedraSerifPro-TLF},
529   shape     = {it,sl,sw,scit,scsl,scsw} }
530 {
531   _ = {      ,100},
532   \textbackslash      = {100,200},
533   \quotesinglbase     = {300,700},      \quotedblbase     = {400,500},
534   \guilsinglleft      = {400,400},      \guilsinglright    = {300,500},
535   \guillemotleft      = {300,300},      \guillemotright    = {300,300},
536   \textexclamdown     = {100,      },      \textquestiondown  = {200,      },
537   \textbraceleft      = {200,100},      \textbraceright    = {200,200},
538 }

539 \SetProtrusion
540 [ name      = FedraSerifPro-QX-it,
541   load      = FedraSerifPro-it      ]
542 { encoding = {QX},
543   family   = {FedraSerifPro-OsF,FedraSerifPro-LF,FedraSerifPro-T0sF,FedraSerifPro-TLF},
544   shape     = {it,sl,sw,scit,scsl,scsw} }
545 {
546   _ = {      ,100},
547   \textbackslash      = {100,200},      \textellipsis      = {100,200},
548   \textperiodcentered = {500,700},      \quotedblbase     = {400,500},
549   \textquotedbl      = {400,400},      \textquotesingle   = {400,400},
550   \guillemotleft      = {300,300},      \guillemotright    = {300,300},
551   \textexclamdown     = {100,      },      \textquestiondown  = {200,      },
552   \textbraceleft      = {200,100},      \textbraceright    = {200,200},
553 }

```

```

554 \SetProtrusion
555   [ name      = FedraSerifPro-T5-it,
556     load      = FedraSerifPro-it   ]
557   { encoding = {T5},
558     family   = {FedraSerifPro-0sF,FedraSerifPro-LF,FedraSerifPro-T0sF,FedraSerifPro-TLF},
559     shape    = {it,sl,sw,scit,scsl,scsw} }
560   {
561     _ = { ,100},
562     \textbackslash = {100,200},
563     \quotesinglbase = {300,700}, \quotedblbase = {400,500},
564     \guilsinglleft = {400,400}, \guilsinglright = {300,500},
565     \guillemotleft = {300,300}, \guillemotright = {300,300},
566     \textbraceleft = {200,100}, \textbraceright = {200,200},
567   }
568 \end{mtcfg}

```

9 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.

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

```

569 \fontdef
570 \ifx\fdrsf@variant@normal\undefined\else\endinput\fi

```

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

```

571 \ifx\@nodocument\relax\else
572   \NeedsTeXFormat{LaTeX2e}
573   \RequirePackage{xkeyval}
574 \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.

```

575 \ifx\@nodocument\relax
576   \begingroup
577   \escapechar'\
578 \fi

```

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


```

579 \newcommand*\fdrsf@makeglobal[1]{%
580   \global\expandafter\let\csname #1\expandafter\endcsname
581   \csname #1\endcsname
582 }

```

9.1 Options

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

```

583 \newcommand\fdrsf@variant@normal{A}
584 \newcommand\fdrsf@variant@large{A}
585 \newcommand\fdrsf@mweight@normal{Book}
586 \newcommand\fdrsf@mweight@small{Book}
587 \newcommand\fdrsf@bweight@normal{Medium}
588 \newcommand\fdrsf@bweight@small{Medium}
589 \newcommand\fdrsf@scale{1.0}

590 \ifx\@nodocument\relax\else
591   \newcommand*\fdrsf@fd@choicekey[3]{%
592     \define@choicekey*{fedrerasif-fd.sty}{#1}[\@tempa\@tempb]{#2}{#3}%
593   }
594   \fdrsf@fd@choicekey{variant}{a,b,auto}{%
595     \ifcase\@tempb\relax
596       \renewcommand\fdrsf@variant@normal{A}
597       \renewcommand\fdrsf@variant@large{A}
598     \or
599       \renewcommand\fdrsf@variant@normal{B}
600       \renewcommand\fdrsf@variant@large{B}
601     \or
602       \renewcommand\fdrsf@variant@normal{A}
603       \renewcommand\fdrsf@variant@large{B}
604     \fi
605   }
606   \fdrsf@fd@choicekey{normalweight}{book,demi,auto}{%
607     \ifcase\@tempb\relax
608       \renewcommand\fdrsf@mweight@normal{Book}
609       \renewcommand\fdrsf@mweight@small{Book}
610     \or
611       \renewcommand\fdrsf@mweight@normal{Demi}
612       \renewcommand\fdrsf@mweight@small{Demi}
613     \or
614       \renewcommand\fdrsf@mweight@normal{Book}
615       \renewcommand\fdrsf@mweight@small{Demi}
616     \fi
617   }
618   \fdrsf@fd@choicekey{boldweight}{medium,bold,auto}{%

```

```

619 \ifcase\@tempb\relax
620 \renewcommand\fdrsf@bweight@normal{Medium}
621 \renewcommand\fdrsf@bweight@small{Medium}
622 \or
623 \renewcommand\fdrsf@bweight@normal{Bold}
624 \renewcommand\fdrsf@bweight@small{Bold}
625 \or
626 \renewcommand\fdrsf@bweight@normal{Medium}
627 \renewcommand\fdrsf@bweight@small{Bold}
628 \fi
629 }
630 \define@key{fedraserif-fd.sty}{scale}[0.9]{\renewcommand*\fdrsf@scale{#1}}
631 \ProcessOptionsX\relax
632 \fi

633 \fdrsf@makeglobal{\fdrsf@variant@normal}
634 \fdrsf@makeglobal{\fdrsf@variant@large}
635 \fdrsf@makeglobal{\fdrsf@mweight@normal}
636 \fdrsf@makeglobal{\fdrsf@mweight@small}
637 \fdrsf@makeglobal{\fdrsf@bweight@normal}
638 \fdrsf@makeglobal{\fdrsf@bweight@small}
639 \fdrsf@makeglobal{\fdrsf@scale}

```

9.2 Font configuration

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

```

640 \newcommand*{\fdrsf@addconfig}[4][{}]{%
641 \for\@tempa:=#3\do{%
642 \expandafter
643 \gdef\csname fdrsfc@config@#2@#1@\@tempa\endcsname{#4}%
644 }%
645 }
646 \newcommand*{\fdrsf@useconfig}[3]{%
647 \ifundefined{fdrsfc@config@#2@#1@#3}{%
648 \ifundefined{fdrsfc@config@#2@#3}{%
649 {\csname fdrsfc@config@#2@#3\endcsname}%
650 }{\csname fdrsfc@config@#2@#1@#3\endcsname}%
651 }
652 \fdrsf@makeglobal{\fdrsf@useconfig}

```

Now we can build up the configuration database.

```

653 \fdrsf@addconfig{weight/normal}{sl}{Book}
654 \fdrsf@addconfig{weight/small}{sl}{Book}
655 \fdrsf@addconfig{weight/normal}{m}{\fdrsf@mweight@normal}
656 \fdrsf@addconfig{weight/small}{m}{\fdrsf@mweight@small}
657 \fdrsf@addconfig{weight/normal}{md}{Demi}

```

```

658 \fdrsf@addconfig{weight/small}{md}{Demi}
659 \fdrsf@addconfig{weight/normal}{sb}{Medium}
660 \fdrsf@addconfig{weight/small}{sb}{Medium}
661 \fdrsf@addconfig{weight/normal}{b}{\fdrsf@bweight@normal}
662 \fdrsf@addconfig{weight/small}{b}{\fdrsf@bweight@small}
663 \fdrsf@addconfig{weight/small}{ub}{Bold}
664 \fdrsf@addconfig{weight/normal}{ub}{Bold}
665 \fdrsf@addconfig{subs/series}{bx}{b}
666 \fdrsf@addconfig{italic}{it,scit,sscit,sw,scsw,sscs}{Italic}
667 \fdrsf@addconfig[OML]{italic}{n}{French}
668 \fdrsf@addconfig[OML]{italic}{it}{Mixed}
669 \fdrsf@addconfig{shape}{sc,scit}{-sc}
670 \fdrsf@addconfig{shape}{ssc,sscit}{-ssc}
671 \fdrsf@addconfig{shape}{sw}{-sw}
672 \fdrsf@addconfig{shape}{scsw}{-scsw}
673 \fdrsf@addconfig{shape}{sscs}{-sscs}
674 \fdrsf@addconfig{subs/shape}{sl}{it}
675 \fdrsf@addconfig{subs/shape}{scsl}{scit}
676 \fdrsf@addconfig{subs/shape}{sscs}{sscit}

```

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

```

677 \newcommand*\DeclareFedraSerifShape[4]{%
678   \edef\@tempa{\fdrsf@useconfig{#1}{subs/series}{#3}}%
679   \edef\@tempb{\fdrsf@useconfig{#1}{subs/shape}{#4}}%
680   \ifx\@tempa\empty\ifx\@tempb\empty
681     \DeclareFontShape{#1}{FedraSerifPro-#2}{#3}{#4}{%
682       <-7.1>s*[\fdrsf@scale]%
683       FSerPro\fdrsf@variant@normal-%
684       \fdrsf@useconfig{#1}{weight/small}{#3}%
685       \fdrsf@useconfig{#1}{italic}{#4}-#2%
686       \fdrsf@useconfig{#1}{shape}{#4}-#1%
687       <7.1-12.1>s*[\fdrsf@scale]%
688       FSerPro\fdrsf@variant@normal-%
689       \fdrsf@useconfig{#1}{weight/normal}{#3}%
690       \fdrsf@useconfig{#1}{italic}{#4}-#2%
691       \fdrsf@useconfig{#1}{shape}{#4}-#1%
692       <12.1->s*[\fdrsf@scale]%
693       FSerPro\fdrsf@variant@large-%
694       \fdrsf@useconfig{#1}{weight/normal}{#3}%
695       \fdrsf@useconfig{#1}{italic}{#4}-#2%
696       \fdrsf@useconfig{#1}{shape}{#4}-#1%
697     }{}%
698   \else
699     \DeclareFontShape{#1}{FedraSerifPro-#2}{#3}{#4}{%
700       <->ssub* FedraSerifPro-#2/#3/\@tempb
701     }{}%

```

```

702 \fi\else
703   \DeclareFontShape{#1}{FedraSerifPro-#2}{#3}{#4}{%
704     <->ssub* FedraSerifPro-#2/\@tempa/#4%
705   }{%
706   \fi
707 }
708 \fdrsf@makeglobal{DeclareFedraSerifShape}

```

Finally, we provide commands to declare a complete family.

```

709 \newcommand*\DeclareFedraSerifFamily[4]{%
710   \DeclareFontFamily{#1}{FedraSerifPro-#2}{}%
711   \@for\fdrsf@series:=#3\do{%
712     \@for\fdrsf@shape:=#4\do{%
713       \DeclareFontShape{#1}{#2}{\fdrsf@series}{\fdrsf@shape}%
714     }%
715   }%
716 }
717 \fdrsf@makeglobal{DeclareFedraSerifFamily}
718 \newcommand*\DeclareFedraSerifLargeFamily[2]{%
719   \DeclareFedraSerifFamily{#1}{#2}{sl,m,md,sb,b,bx,ub}%
720   {n,it,sc,ssc,scit,sscit,sw,scsw,sscs,sl,scsl,sscs}%
721 }
722 \fdrsf@makeglobal{DeclareFedraSerifLargeFamily}
723 \newcommand*\DeclareFedraSerifSmallFamily[2]{%
724   \DeclareFedraSerifFamily{#1}{#2}{sl,m,md,sb,b,bx,ub}{n,it,sl}%
725 }
726 \fdrsf@makeglobal{DeclareFedraSerifSmallFamily}
727 \newcommand*\DeclareFedraSerifTinyFamily[2]{%
728   \DeclareFedraSerifFamily{#1}{#2}{sl,m,md,sb,b,bx,ub}{n}%
729 }
730 \fdrsf@makeglobal{DeclareFedraSerifTinyFamily}
731 \newcommand*\DeclareFedraSerifMathFamily[1]{%
732   \def\@tempa{#1}%
733   \def\@tempb{TOf}%
734   \DeclareFontFamily{OML}{FedraSerifPro-#1}{\skewchar\font=127}%
735   \@for\fdrsf@series:=m,md,sb,b,bx,ub\do{%
736     \@for\fdrsf@shape:=n,it\do{%
737       \ifx\@tempa\@tempb
738         \DeclareFontShape{OML}{TOf}{\fdrsf@series}{\fdrsf@shape}%
739       \else
740         \DeclareFontShape{OML}{FedraSerifPro-#1}{\fdrsf@series}{\fdrsf@shape}{%
741           <->ssub* FedraSerifPro-TOf/\fdrsf@series/\fdrsf@shape
742         }{%
743         \fi
744       }%
745     }%

```

```

746 }
747 \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.

748 \gdef\fdrsf@Microtype@Aliases{%
749   \DeclareMicrotypeAlias{FedraSerifPro-LF}{FedraSerifPro}%
750   \DeclareMicrotypeAlias{FedraSerifPro-OsF}{FedraSerifPro}%
751   \DeclareMicrotypeAlias{FedraSerifPro-TLF}{FedraSerifPro}%
752   \DeclareMicrotypeAlias{FedraSerifPro-TOsF}{FedraSerifPro}%
753 }
754 \@ifundefined{Microtype@Hook}{%
755   \global\let\Microtype@Hook\fdrsf@Microtype@Aliases
756 }{%
757   \@addto@macro\Microtype@Hook{\fdrsf@Microtype@Aliases}%
758 }%
759 \@ifundefined{DeclareMicrotypeAlias}{\fdrsf@Microtype@Aliases}%

760 \ifx\@nodocument\relax
761   \endgroup
762 \fi
763 \fontdef

```

10 Font definition files

Using the above macros, the various FD files become simple two-liners.

```

764 {*fd}
765 \input{fedraserif-fd.sty}
766 {ot1 & lf}\DeclareFedraSerifLargeFamily{OT1}{LF}
767 {ot1 & osf}\DeclareFedraSerifLargeFamily{OT1}{OsF}
768 {ot1 & tlf}\DeclareFedraSerifLargeFamily{OT1}{TLF}
769 {ot1 & tosf}\DeclareFedraSerifLargeFamily{OT1}{TOsF}
770 {t1 & lf}\DeclareFedraSerifLargeFamily{T1}{LF}
771 {t1 & osf}\DeclareFedraSerifLargeFamily{T1}{OsF}
772 {t1 & tlf}\DeclareFedraSerifLargeFamily{T1}{TLF}
773 {t1 & tosf}\DeclareFedraSerifLargeFamily{T1}{TOsF}
774 {ts1 & lf}\DeclareFedraSerifLargeFamily{TS1}{LF}
775 {ts1 & osf}\DeclareFedraSerifLargeFamily{TS1}{OsF}
776 {ts1 & tlf}\DeclareFedraSerifLargeFamily{TS1}{TLF}
777 {ts1 & tosf}\DeclareFedraSerifLargeFamily{TS1}{TOsF}
778 {ly1 & lf}\DeclareFedraSerifLargeFamily{LY1}{LF}
779 {ly1 & osf}\DeclareFedraSerifLargeFamily{LY1}{OsF}
780 {ly1 & tlf}\DeclareFedraSerifLargeFamily{LY1}{TLF}

```

```

781 \ly1 & tosf\DeclareFedraSerifLargeFamily{LY1}{T0sF}
782 \qx & lf\DeclareFedraSerifLargeFamily{QX}{LF}
783 \qx & osf\DeclareFedraSerifLargeFamily{QX}{0sF}
784 \qx & tlf\DeclareFedraSerifLargeFamily{QX}{TLF}
785 \qx & tosf\DeclareFedraSerifLargeFamily{QX}{T0sF}
786 \t5 & lf\DeclareFedraSerifLargeFamily{T5}{LF}
787 \t5 & osf\DeclareFedraSerifLargeFamily{T5}{0sF}
788 \t5 & tlf\DeclareFedraSerifLargeFamily{T5}{TLF}
789 \t5 & tosf\DeclareFedraSerifLargeFamily{T5}{T0sF}
790 \oml & lf\DeclareFedraSerifMathFamily{LF}
791 \oml & osf\DeclareFedraSerifMathFamily{0sF}
792 \oml & tlf\DeclareFedraSerifMathFamily{TLF}
793 \oml & tosf\DeclareFedraSerifMathFamily{T0sF}
794 \u & extra\DeclareFedraSerifSmallFamily{U}{Extra}
795 \u & orn\DeclareFedraSerifTinyFamily{U}{Pi}
796 \u & bb\DeclareFedraSerifFamily{U}{BB}{m}{n}
797 \fd

```