

L^AT_EX support for Fedra Sans Pro

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Abstract

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

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1 Overview

The fedrasans package provides L^AT_EX support for the commercial Fedra[®] Sans Pro fonts¹ from Typotheque². You can load this package by adding

```
\usepackage[<options>]{fedrasans}
```

to the preamble of your document. If no options are specified, this will change the default sans-serif font to Fedra Sans Pro; use the option `alt` to select Fedra Sans Alt Pro. In order to use Fedra Sans as the main font for the document (not only when `\sffamily` is selected), you can use the option `sfdefault`. For all available options, see Section 3.

Acknowledgements

See the acknowledgements for the fedraserif package, on which this package is based.

2 Interferences with other packages

The fedrasans package is designed as a companion to the fedraserif package, which provides L^AT_EX support for the serif version of Fedra. Since it is not possible to switch the math fonts in the middle of a document, care has to be taken with one of the two packages is loaded with math support. In particular, if the fedrasans package is loaded with math

¹Fedra is a registered trademark of Typotheque VOF.

²<http://www.typotheque.com/fonts/>

Table 1: Summary of options

| Key | Values | Section |
|----------------------------|---------------------------------------|---------|
| <code>alt</code> | <code>true, false*</code> | 4.1 |
| <code>boldweight</code> | <code>Medium*, Bold, auto</code> | 4.3 |
| <code>fedrabb</code> | <code>true, false*</code> | 5.3 |
| <code>footnotemarks</code> | <code>true, false*</code> | 4.6 |
| <code>figures</code> | <code>lining* (lf), text (osf)</code> | 4.5 |
| <code>math</code> | <code>true, false*</code> | 5 |
| <code>math-style</code> | <code>tex*, iso, french</code> | 5.1 |
| <code>normalweight</code> | <code>Book*, Demi, auto</code> | 4.3 |
| <code>sfdefault</code> | <code>true, false*</code> | 1, 5 |
| <code>stdmathdigits</code> | <code>true, false*</code> | 5.2 |

support (i.e. using the `sfdefault` or `math` option), then the `fedraserif` package must be loaded with the option `math=false`, or an error will occur.

In order to use Fedra Sans as a math font, you need to have the `fdsymbol` package (version 0.7 or higher) installed. Apart from `fdsymbol`, the `fedrasans` package automatically loads the packages `textcomp` and (if math support is enabled) `amsmath`. Additionally, the `fontaxes` 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 the `\documentclass` command. If the `math` option is used, the `fedrasans` 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 `fedrasans` 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 Sans Pro comes in two variants, which are licensed separately: the alternative variant (Fedra Sans Alt Pro) shown here is a bit more conservative than the original variant, which features a long `f`, diamond-shaped dots, open counters, as well as a few

Table 2: Summary of font weights

| Weight | Series | Example |
|--------|--------|---|
| Light | l | A Quick Brown Fox Jumps Over The Lazy Dog. |
| 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. |

other characteristics. By default, the package use the original variant. If you prefer the alternative variant, you can select it by passing the option `alt`.

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 Sans Pro family come in five weights, which are (in increasing order) Light, 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 accessed using `\fontseries`. For instance, the Light weight can be accessed using the command `\fontseries{1}`.

4.4 Shapes

In addition to the normal small caps shapes `sc` and `scit`, there are letterspaced versions `ssc` and `sscit` (see Table 3).

If the `fontaxes` package is available, you can use the commands `\sscshape` and `\textssc{<text>}` to switch to letterspaced small caps.

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> |

Table 4: Summary of figure versions

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

4.5 Figures

Fedra Sans 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:

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

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

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

`\openbullet{⟨number⟩}` ① 234
`\closedbullet{⟨number⟩}` ⑤ 678

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

Table 5: Dingbats available with the fedrasans package

| number | glyph | number | glyph | number | glyph | number | glyph |
|--------|-------|--------|-------|--------|-------|--------|-------|
| 100 | · | 120 | ⦿ | 140 | ✎ | 160 | 📄 |
| 101 | ■ | 121 | ⊙ | 141 | ✎ | 161 | 📄 |
| 102 | □ | 122 | ♥ | 142 | ✎ | 162 | 📄 |
| 103 | ■ | 123 | ♡ | 143 | ✎ | 163 | 📄 |
| 104 | □ | 124 | Ⓢ | 144 | ✎ | 164 | 📄 |
| 105 | ▶ | 125 | Ⓢ | 145 | ✎ | 165 | 📄 |
| 106 | ◀ | 126 | Ⓢ | 146 | ✓ | 166 | 📄 |
| 107 | ▷ | 127 | Ⓢ | 147 | □ | 167 | 📄 |
| 108 | ◁ | 128 | Ⓢ | 148 | ☑ | 168 | 📄 |
| 109 | ▶ | 129 | ☺ | 149 | ☒ | 169 | 📄 |
| 110 | ◀ | 130 | ★ | 150 | ✉ | 170 | 📄 |
| 111 | ▷ | 131 | ● | 151 | 📄 | 171 | 📄 |
| 112 | ◁ | 132 | → | 152 | 📄 | 172 | 📄 |
| 113 | ▶ | 133 | ← | 153 | 📄 | 173 | 📄 |
| 114 | ◀ | 134 | ↑ | 154 | 📄 | 174 | 📄 |
| 115 | ▷ | 135 | ↓ | 155 | 📄 | 175 | 📄 |
| 116 | ◁ | 136 | ↗ | 156 | 📄 | 176 | 📄 |
| 117 | ● | 137 | ↖ | 157 | 📄 | | |
| 118 | ○ | 138 | ↗ | 158 | 📄 | | |
| 119 | ● | 139 | ↘ | 159 | 📄 | | |

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{FedraSansPro-Pi}{\langle number \rangle}
```

The available glyphs are listed in Table 5.

4.8 Additional notes

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

| | | |
|----------------------------------|--------------------------------|---------------------------------|
| <code>\textdblhyphen</code> | <code>\textlangle</code> | <code>\textrangle</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>\textacutedbl</code> |
| <code>\textgravedbl</code> | <code>\textguarani</code> | <code>\textrecipe</code> |
| <code>\textpertenthousand</code> | <code>\textpilcrow</code> | <code>\textbaht</code> |
| <code>\textdiscount</code> | <code>\textopenbullet</code> | <code>\textlquill</code> |
| <code>\extrquill</code> | <code>\textcopyleft</code> | <code>\textreferencemark</code> |

In addition to the monetary symbols defined by the TSI 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 only change the math font to Fedra Sans Pro (with mathematical symbols taken from FdSymbol) if the option `sfdefault` has been selected. In order to allow for a more fine-grained control, you can enable or disable using the `math` option. Note that all other options described in this section only have an effect if `math` support is enabled.

5.1 Letters

In $\text{T}_{\text{E}}\text{X}$ and $\text{L}^{\text{A}}\text{T}_{\text{E}}\text{X}$, 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 $\text{T}_{\text{E}}\text{X}$ 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 `fedrasans` 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:

Table 6: The different styles for letters in math mode

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

| | | | | | |
|---------------|---|--------|------------------------------------|---------------|--|
| β | <code>\varbeta</code> ³ | f | <code>\digamma</code> ³ | ε | <code>\backepsilon</code> ³ |
| ε | <code>\varbackepsilon</code> ³ | h | <code>\hslash</code> | λ | <code>\lambdabar</code> |
| λ | <code>\lambdaslash</code> | \eth | <code>\eth</code> ³ | \emptyset | <code>\slashedzero</code> |
| \mho | <code>\mho</code> | ℓ | <code>\upell</code> | \hbar | <code>\uphbar</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.

5.3 Blackboard characters

If you also have the `fedraserif` package installed, you can use the option `fedrabb` to change the math blackboard alphabet to Fedra Serif. See the documentation of the `fedraserif` package for more information. Note that this option only works if the `fedraserif` is loaded *before* the `fedrasans` package.

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.

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 |
|---------------------------------|--|---------------------------------|---|
| OTI, TI, TSI, LYI, QX, T5 | FedraSansPro-LF, FedraSansPro-OsF, FedraSansPro-TLF, FedraSansPro-TOsF | l, sl, m, md, b (bx), sb, ub | n, it (sl), sc, scit (scsl), ssc, sscit (sscsl) |
| OML | FedraSansPro-TOsF (FedraSansPro-LF, FedraSansPro-OsF, FedraSansPro-TLF) | sl, m, md, b (bx), sb, ub | n, it |
| U | FedraSansPro-Extra | l, sl, m, md, b (bx), sb, ub | n, it (sl) |
| U | FedraSansPro-Pi | l, sl, m, md, b (bx), sb, ub | n |

```

1 {\package}
2 \RequirePackage{xkeyval}
3 \newcommand*\fdrss@boolkey[2]{%
4   \define@boolkey{fedrasans.sty}[fdrss@]{#1}[true]{#2}%
5 }
6 \newcommand*\fdrss@choicekey[3]{%
7   \define@choicekey*{fedrasans.sty}{#1}[\@tempa\@tempb]{#2}{#3}%
8 }

```

Font selection

The package `fedrasans-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`.

```

9 \fdrss@boolkey{alt}{%
10   \PassOptionsToPackage{alt=#1}{fedrasans-fd}%
11 }
12 \fdrss@choicekey{normalweight}{book,demi,auto}{%
13   \PassOptionsToPackage{normalweight=#1}{fedrasans-fd}%
14   \ifcase\@tempb\relax
15     \PassOptionsToPackage{normalweight=book}{fdsymbol}%
16   \or
17     \PassOptionsToPackage{normalweight=regular}{fdsymbol}%
18   \or

```

```

19 \PassOptionsToPackage{normalweight=auto}{fdsymbol}%
20 \fi
21 }
22 \fdrss@choicekey{boldweight}{medium,bold,auto}{%
23 \PassOptionsToPackage{boldweight=#1}{fedrasans-fd}%
24 \PassOptionsToPackage{boldweight=#1}{fdsymbol}%
25 }

```

The next option sets the default font to a sans-serif font.

```

26 \fdrss@boolkey{sfdefault}{%
27 \iffdrss@sfdefault\renewcommand{\familydefault}{\sfdefault}\fdrss@mathtrue\fi%
28 }

```

The next option toggles the math font setup.

```

29 \fdrss@boolkey{math}{}

```

Figure style

```

30 \newcommand\fdrss@family{FedraSansPro}
31 \newcommand\fdrss@textfig{LF}
32 \newcommand\fdrss@mathfig{\fdrss@textfig}
33 \newcommand\fdrss@textfamily{\fdrss@family-\fdrss@textfig}
34 \newcommand\fdrss@mathfamily{\fdrss@family-\fdrss@mathfig}
35 \newcommand\fdrss@mathtfamily{\fdrss@family-T\fdrss@mathfig}
36 \newcommand\fdrss@mathshape{it}

37 \fdrss@choicekey{figures}{text,osf,lining,lf}{%
38 \ifcase\@tempb\relax
39 \renewcommand\fdrss@textfig{OsF}%
40 \or
41 \renewcommand\fdrss@textfig{OsF}%
42 \or
43 \renewcommand\fdrss@textfig{LF}%
44 \or
45 \renewcommand\fdrss@textfig{LF}%
46 \fi
47 }
48 \fdrss@boolkey{stdmathdigits}{%
49 \iffdrss@stdmathdigits
50 \renewcommand\fdrss@mathfig{LF}%
51 \fi
52 }

```

Math styles

```

53 \newif\iffdrss@greek@upper@upright
54 \newif\iffdrss@greek@lower@upright
55 \fdrss@choicekey{math-style}{tex,iso,french}{%

```

```

56 \ifcase\@tempb\relax
57   \fdrss@greek@upper@uprighttrue
58   \fdrss@greek@lower@uprightfalse
59 \or
60   \fdrss@greek@upper@uprightfalse
61   \fdrss@greek@lower@uprightfalse
62 \or
63   \fdrss@greek@upper@uprighttrue
64   \fdrss@greek@lower@uprighttrue
65   \renewcommand\fdrss@mathshape{n}
66 \fi
67 }

```

Other options

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

```

68 %
69 \fdrss@boolkey{fedrabb}{%
70   \iffdrss@fedrabb
71     \renewcommand\fdrss@load@bb{%
72       \DeclareMathAlphabet\mathbb{U}{\fdrsf@family-BB}{m}{n}%
73       \renewcommand\Bbbk{\mathbb{k}}}%
74   }%
75 \fi
76 }
77 \newcommand\fdrss@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`.

```

78 \fdrss@boolkey{footnotemarks}{%
79   \iffdrss@footnotemarks
80     \ifundefined{deffootnotemark}{%
81       \def\@makefnmark{%
82         \begingroup
83         \usefont{U}{\fdrss@family-Extra}{m}{n}%
84         \@thefnmark\kern0.1em%
85         \endgroup
86       }%
87     }{%
88       \deffootnotemark{%
89         \begingroup
90         \usefont{U}{\fdrss@family-Extra}{m}{n}%
91         \thefootnotemark

```

```

92     \endgroup
93   }%
94 }%
95 \@ifundefined{deffootnote}{}{%
96   \deffootnote[1em]{1.5em}{1em}{%
97     \begingroup
98     \usefont{U}{\fdrss@family-Extra}{m}{n}%
99     \thefootnotemark\kern0.1em%
100   \endgroup
101   }%
102 }%
103 \fi
104 }

```

Defaults

```

105 \ExecuteOptionsX{math-style=tex}
106 \ProcessOptionsX\relax

```

7.2 Font selection

```

107 \RequirePackage[scale=0.9]{fedrasans-fd}
108 \@ifpackageloaded{textcomp}{}{\RequirePackage{textcomp}}
109 \renewcommand\sfddefault{\fdrss@textfamily}
110 \DeclareEncodingSubset{TS1}{\fdrss@family-LF}{1}
111 \DeclareEncodingSubset{TS1}{\fdrss@family-TLF}{1}
112 \DeclareEncodingSubset{TS1}{\fdrss@family-OsF}{1}
113 \DeclareEncodingSubset{TS1}{\fdrss@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.

```

114 \AtBeginDocument{
115   \UndeclareTextCommand{\textcompwordmark}{T1}
116   \UndeclareTextCommand{\textvisiblespace}{T1}
117   \UndeclareTextCommand{\textperthousand}{T1}
118   \UndeclareTextCommand{\textpertenthousand}{T1}
119   \UndeclareTextCommand{\textsterling}{T1}
120   \UndeclareTextCommand{\textsection}{T1}
121   \UndeclareTextCommand{\textmu}{QX}
122   \UndeclareTextCommand{\texteuro}{QX}
123   \UndeclareTextCommand{\textEuro}{QX}
124   \let\textEuro\texteuro
125   \UndeclareTextCommand{\textdagger}{QX}
126   \UndeclareTextCommand{\textdaggerdbl}{QX}
127   \UndeclareTextCommand{\textdegree}{QX}

```

```

128 \UndeclareTextCommand{\textsection}{QX}
129 \UndeclareTextCommand{\textregistered}{QX}
130 \UndeclareTextCommand{\copyright}{QX}
131 \let\copyright\textcopyright
132 \UndeclareTextCommand{\textdiv}{QX}
133 \UndeclareTextCommand{\textminus}{QX}
134 \UndeclareTextCommand{\texttimes}{QX}
135 \UndeclareTextCommand{\textpm}{QX}
136 \UndeclareTextCommand{\textbullet}{QX}
137 \UndeclareTextCommand{\textcurrency}{QX}
138 \UndeclareTextCommand{\textperthousand}{QX}
139 \UndeclareTextCommand{\textanglearc}{QX}
140 \UndeclareTextCommand{\textvisiblespace}{T5}

```

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

```

141 \DeclareTextSymbol{\textcruzeiro}{TS1}{192}
142 \DeclareTextSymbol{\textfranc}{TS1}{193}
143 \DeclareTextSymbol{\textmill}{TS1}{194}
144 \DeclareTextSymbol{\textpeseta}{TS1}{195}
145 \DeclareTextSymbol{\textrupee}{TS1}{196}
146 \DeclareTextSymbol{\textsheqel}{TS1}{197}
147 \DeclareTextSymbol{\textkip}{TS1}{198}
148 \DeclareTextSymbol{\texttugrik}{TS1}{199}
149 \DeclareTextSymbol{\texthryvnia}{TS1}{200}
150 \DeclareTextSymbolDefault{\textcruzeiro}{TS1}
151 \DeclareTextSymbolDefault{\textfranc}{TS1}
152 \DeclareTextSymbolDefault{\textmill}{TS1}
153 \DeclareTextSymbolDefault{\textpeseta}{TS1}
154 \DeclareTextSymbolDefault{\textrupee}{TS1}
155 \DeclareTextSymbolDefault{\textsheqel}{TS1}
156 \DeclareTextSymbolDefault{\textkip}{TS1}
157 \DeclareTextSymbolDefault{\texttugrik}{TS1}
158 \DeclareTextSymbolDefault{\texthryvnia}{TS1}
159 }

```

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

```

160 \IfFileExists{fontaxes.sty}{
161   \RequirePackage{fontaxes}[2007/03/31]
162   \let\oldstylenums\textfigures
163 }{}

```

7.3 Math font setup

We use `FdSymbol` for most mathematical symbols.

```

164 \iffdrss@math
165 \RequirePackage[scale=0.9,opstyle=sans]{fdsymbol}[2011/11/01]

```

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

```

166 \renewcommand\fdsy@text[1]{%
167   \ifx\fdsy@bold\math@version
168     \text{\usefont{T1}{\fdrss@mathfamily}{b}{n}#1}%
169   \else
170     \text{\usefont{T1}{\fdrss@mathfamily}{m}{n}#1}%
171   \fi
172 }
```

Redefine the standard math versions normal and bold.

```

173 \DeclareSymbolFont{operators}{T1}{\fdrss@mathfamily}{m}{n}
174 \SetSymbolFont{operators}{bold}{T1}{\fdrss@mathfamily}{b}{n}
175 \DeclareSymbolFont{letters}{OML}{\fdrss@family-T0sF}{m}{\fdrss@mathshape}
176 \SetSymbolFont{letters}{bold}{OML}{\fdrss@family-T0sF}{b}{\fdrss@mathshape}
177 \DeclareMathAlphabet{\mathrm}{T1}{\fdrss@mathfamily}{m}{n}
178 \SetMathAlphabet{\mathrm}{bold}{T1}{\fdrss@mathfamily}{b}{n}
179 \DeclareMathAlphabet{\mathit}{T1}{\fdrss@mathfamily}{m}{it}
180 \SetMathAlphabet{\mathit}{bold}{T1}{\fdrss@mathfamily}{b}{it}
181 \DeclareMathAlphabet{\mathbf}{T1}{\fdrss@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.

```

182 \DeclareMathVersion{tabular}
183 \SetSymbolFont{operators}{tabular}{T1}{\fdrss@mathtfamily}{m}{n}
184 \SetMathAlphabet{\mathrm}{tabular}{T1}{\fdrss@mathtfamily}{m}{n}
185 \SetMathAlphabet{\mathit}{tabular}{T1}{\fdrss@mathtfamily}{m}{it}
186 \SetMathAlphabet{\mathbf}{tabular}{T1}{\fdrss@mathtfamily}{b}{n}
187 \DeclareMathVersion{boldtabular}
188 \SetSymbolFont{operators}{boldtabular}{T1}{\fdrss@mathtfamily}{b}{n}
189 \SetSymbolFont{letters}{boldtabular}{OML}{\fdrss@family-T0sF}{b}{\fdrss@mathshape}
190 \SetMathAlphabet{\mathrm}{boldtabular}{T1}{\fdrss@mathtfamily}{b}{n}
191 \SetMathAlphabet{\mathit}{boldtabular}{T1}{\fdrss@mathtfamily}{b}{it}
192 \SetMathAlphabet{\mathbf}{boldtabular}{T1}{\fdrss@mathtfamily}{b}{n}

193 \DeclareMathAccent{\grave}{\mathalpha}{operators}{"00}
194 \DeclareMathAccent{\acute}{\mathalpha}{operators}{"01}
195 \DeclareMathAccent{\hat}{\mathalpha}{operators}{"02}
196 \DeclareMathAccent{\tilde}{\mathalpha}{operators}{"03}
197 \DeclareMathAccent{\ddot}{\mathalpha}{operators}{"04}
198 \DeclareMathAccent{\mathring}{\mathalpha}{operators}{"06}
199 \DeclareMathAccent{\check}{\mathalpha}{operators}{"07}
200 \DeclareMathAccent{\breve}{\mathalpha}{operators}{"08}
201 \DeclareMathAccent{\bar}{\mathalpha}{operators}{"09}
202 \DeclareMathAccent{\dot}{\mathalpha}{operators}{"0A}
203 \let\hbar\undefined
```

```

204 \DeclareMathSymbol{\hbar}{\mathord}{letters}{"AE}
205 \DeclareMathSymbol{\uphbar}{\mathord}{letters}{"B5}
206 \DeclareMathSymbol{\partial}{\mathord}{letters}{"40}
207 \DeclareMathSymbol{\ell}{\mathord}{letters}{"60}
208 \DeclareMathSymbol{\upell}{\mathord}{letters}{"B9}
209 \DeclareMathSymbol{\slashedzero}{\mathord}{letters}{"B8}
210 \let\mho\undefined
211 \DeclareMathSymbol{\mho}{\mathord}{letters}{"BA}
212 \DeclareMathSymbol{\nabla}{\mathord}{letters}{"BB}
213 \DeclareRobustCommand{\lambdabar}{\middlebar\lambda}
214 \DeclareRobustCommand{\lambdaslash}{\middleslash\lambda}

```

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

```

215 \fdrss@load@bb

```

7.4 Greek and Hebrew letters

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

```

216 \newcommand*{\fdrss@greek@capital}[3]{
217   \expandafter\DeclareMathSymbol%
218   \expandafter{\csname it#1\endcsname}{\mathord}{letters}{#2}
219   \expandafter\DeclareMathSymbol%
220   \expandafter{\csname up#1\endcsname}{\mathord}{letters}{#3}
221   \iffdrss@greek@upper@upright
222   \expandafter\let\csname #1\expandafter\endcsname\csname up#1\endcsname
223   \else
224   \expandafter\let\csname #1\expandafter\endcsname\csname it#1\endcsname
225   \fi
226 }
227 \newcommand*{\fdrss@greek@letter}[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   \iffdrss@greek@lower@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
236   \fi
237 }
238 \fdrss@greek@capital{Gamma}{"00}{"80}
239 \fdrss@greek@capital{Delta}{"01}{"81}
240 \fdrss@greek@capital{Theta}{"02}{"82}
241 \fdrss@greek@capital{Lambda}{"03}{"83}

```

```

242 \fdrss@greek@capital{Xi}{ "04}{ "84}
243 \fdrss@greek@capital{Pi}{ "05}{ "85}
244 \fdrss@greek@capital{Sigma}{ "06}{ "86}
245 \fdrss@greek@capital{Upsilon}{ "07}{ "87}
246 \fdrss@greek@capital{Phi}{ "08}{ "88}
247 \fdrss@greek@capital{Psi}{ "09}{ "89}
248 \fdrss@greek@capital{Omega}{ "0A}{ "8A}
249 \fdrss@greek@letter{alpha}{ "0B}{ "8B}
250 \fdrss@greek@letter{beta}{ "0C}{ "8C}
251 \fdrss@greek@letter{gamma}{ "0D}{ "8D}
252 \fdrss@greek@letter{delta}{ "0E}{ "8E}
253 \fdrss@greek@letter{epsilon}{ "0F}{ "8F}
254 \fdrss@greek@letter{zeta}{ "10}{ "90}
255 \fdrss@greek@letter{eta}{ "11}{ "91}
256 \fdrss@greek@letter{theta}{ "12}{ "92}
257 \fdrss@greek@letter{iota}{ "13}{ "93}
258 \fdrss@greek@letter{kappa}{ "14}{ "94}
259 \fdrss@greek@letter{lambda}{ "15}{ "95}
260 \fdrss@greek@letter{mu}{ "16}{ "96}
261 \fdrss@greek@letter{nu}{ "17}{ "97}
262 \fdrss@greek@letter{xi}{ "18}{ "98}
263 \fdrss@greek@letter{pi}{ "19}{ "99}
264 \fdrss@greek@letter{rho}{ "1A}{ "9A}
265 \fdrss@greek@letter{sigma}{ "1B}{ "9B}
266 \fdrss@greek@letter{tau}{ "1C}{ "9C}
267 \fdrss@greek@letter{upsilon}{ "1D}{ "9D}
268 \fdrss@greek@letter{phi}{ "1E}{ "9E}
269 \fdrss@greek@letter{chi}{ "1F}{ "9F}
270 \fdrss@greek@letter{psi}{ "20}{ "A0}
271 \fdrss@greek@letter{omega}{ "21}{ "A1}
272 \fdrss@greek@letter{varepsilon}{ "22}{ "A2}
273 \fdrss@greek@letter{vartheta}{ "23}{ "A3}
274 \fdrss@greek@letter{varpi}{ "19}{ "99}
275 \fdrss@greek@letter{varrho}{ "1A}{ "9A}
276 \fdrss@greek@letter{varsigma}{ "26}{ "A6}
277 \fdrss@greek@letter{varphi}{ "27}{ "A7}

```

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

```

278 \fdrss@greek@letter{varbeta}{ "A8}{ "B0}
279 \fdrss@greek@letter{digamma}{ "A9}{ "B1}
280 \fdrss@greek@letter{backepsilon}{ "AA}{ "B2}
281 \fdrss@greek@letter{varbackepsilon}{ "AB}{ "B3}
282 \fdrss@greek@letter{eth}{ "AC}{ "B4}
283 \fi

```


7.5 Bullet figures

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

```
284 \newcommand*{\fdrss@@openbullet}[2]{%
285   \ifx#2\end
286     \char3#1%
287   \let\next\@gobble
288 \else
289   \char2#1\kern-0.02em%
290   \let\next\fdrss@@openbullet
291 \fi
292 \next#2%
293 }
294 \newcommand*{\fdrss@openbullet}[2]{%
295   \ifx#2\end
296     \char0#1%
297   \let\next\@gobble
298 \else%
299   \char1#1\kern-0.02em%
300   \let\next\fdrss@@openbullet
301 \fi
302 \next#2%
303 }
304 \DeclareRobustCommand*{\openbullet}[1]{%
305   \begingroup
306   \usefont{U}{\fdrss@family-Pi}{m}{n}%
307   \edef\@tempa{#1}\expandafter\fdrss@openbullet\@tempa\end
308   \endgroup
309 }
310 \newcommand*{\fdrss@@closedbullet}[2]{%
311   \ifx#2\end
312     \char7#1%
313   \let\next\@gobble
314 \else
315   \char6#1\kern-0.02em%
316   \let\next\fdrss@@closedbullet
317 \fi
318 \next#2%
319 }
320 \newcommand*{\fdrss@closedbullet}[2]{%
321   \ifx#2\end
322     \char4#1%
323   \let\next\@gobble
324 \else
325   \char5#1\kern-0.02em%
```

```

326 \let\next\fdrss@@closedbullet
327 \fi
328 \next#2%
329 }
330 \DeclareRobustCommand*\closedbullet}[1]{%
331 \begingroup
332 \usefont{U}{\fdrss@family-Pi}{m}{n}%
333 \edef\@tempa{#1}\expandafter\fdrss@closedbullet\@tempa\end
334 \endgroup
335 }

```

7.6 Superior and inferior figures

The following command converts numbers to inferior figures.

```

336 \newcommand*\fdrss@@inferior}[1]{%
337 \ifx#1\end
338 \let\next\relax
339 \else
340 \char"1#1%
341 \let\next\fdrss@@inferior
342 \fi
343 \next
344 }
345 \newcommand*\fdrss@inferior}[1]{%
346 \begingroup
347 \edef\@tempa{#1}\expandafter\fdrss@@inferior\@tempa\end
348 \endgroup
349 }

```

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

```

350 \newcommand*\fdrss@ensuretext}[1]{%
351 \ifmmode
352 \fdsy@text{#1}%
353 \else
354 #1%
355 \fi
356 }

```

We provide two commands for generating numerical fractions.

```

357 \newcommand*\fdrss@smallfrac}[2]{%
358 \begingroup
359 \fontencoding{U}\fontfamily{\fdrss@family-Extra}\fontshape{n}\selectfont
360 \leavevmode
361 \setbox\@tempboxa\vbox{%
362 \baselineskip\z@skip%
363 \lineskip.25ex%

```

```

364 \lineskiplimit-\maxdimen
365 \ialign{\hfil##\hfil\cr
366 \vbox to 1.25ex{\vss\hbox{#1}\vskip.25ex}\cr
367 \leavevmode\leaders\hrule height 0.91ex depth -0.87ex\hfill\cr
368 \vtop to 1ex{\vbox{\hbox{\fdrss@inferior{#2}}\vss}\cr
369 \noalign{\vskip-1.2ex}}}%
370 \box\@tempboxa
371 \endgroup
372 }
373 \DeclareRobustCommand*\smallfrac}[2]{%
374 \fdrss@ensuretext{\kern0.08em\fdrss@smallfrac{#1}{#2}\kern0.1em}%
375 }
376 \newcommand*\fdrss@slantfrac}[2]{%
377 \begingroup
378 \fontencoding{U}\fontfamily{\fdrss@family-Extra}\fontshape{n}\selectfont
379 #1\kern-0.05em/\kern0em\fdrss@inferior{#2}%
380 \endgroup
381 }
382 \DeclareRobustCommand*\slantfrac}[2]{%
383 \fdrss@ensuretext{\kern0.08em\fdrss@slantfrac{#1}{#2}\kern0.1em}%
384 }

```

7.7 Logos

```

385 \iffdrss@sfdefault
386 \DeclareRobustCommand{\LaTeX}{\kern-.26em%
387 {\sbox\z@ T%
388 \vbox to\ht\z@{\hbox{\check@mathfonts
389 \fontsize\sf@size\z@
390 \math@fontsfalse\selectfont
391 A}%
392 \vss}%
393 }%
394 \kern-.05em%
395 \TeX
396 }
397 \fi

```

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

```

398 \normalfont
399 \endpackage

```

8 Microtype configuration file

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

```

400 (*mtcfg)
401 \SetProtrusion
402 [ name = FedraSansPro-n ]
403 { }
404 {
405     . = { ,700},
406     {,}= { ,500},
407     : = { ,500},
408     ; = { ,300},
409     ! = { ,100},
410     ? = { ,100},
411     @ = {50,50},
412     ~ = {200,250},
413     \% = {50,50},
414     * = {200,200},
415     + = {250,250},
416     ( = {100, }, ) = { ,200},
417     / = {100,200},
418     - = {600,600},
419     \textendash = {450,450}, \textemdash = {260,260},
420     \textquoteleft = {300,400}, \textquoteright = {300,400},
421     \textquotedblleft = {300,300}, \textquotedblright = {300,300}
422 }
423 \SetProtrusion
424 [ name = FedraSansPro-OT1,
425     load = FedraSansPro-n ]
426 { encoding = {OT1},
427     family = {FedraSansPro-OsF,FedraSansPro-LF,FedraSansPro-T0sF,FedraSansPro-TLF},
428     shape = {n,sc,ssc} }
429 { }
430 \SetProtrusion
431 [ name = FedraSansPro-T1,
432     load = FedraSansPro-n ]
433 { encoding = {T1,LY1},
434     family = {FedraSansPro-OsF,FedraSansPro-LF,FedraSansPro-T0sF,FedraSansPro-TLF},
435     shape = {n,sc,ssc} }
436 {
437     _ = {100,100},
438     \textbackslash = {100,200},
439     \quotesinglbase = {400,400}, \quotedblbase = {400,400},
440     \guilsinglleft = {400,300}, \guilsinglright = {300,400},
441     \guillemotleft = {200,200}, \guillemotright = {200,200},
442     \textexclamdown = {100, }, \textquestiondown = {100, },
443     \textbraceleft = {400,200}, \textbraceright = {200,400},
444     \textless = {200,100}, \textgreater = {100,200}

```

```

445     }

446 \SetProtrusion
447 [ name      = FedraSansPro-QX,
448   load      = FedraSansPro-n ]
449 { encoding = {QX},
450   family   = {FedraSansPro-OsF,FedraSansPro-LF,FedraSansPro-T0sF,FedraSansPro-TLF},
451   shape     = {n,sc,ssc} }
452 {
453   _ = {100,100},
454   \textbackslash = {100,200},   \textellipsis = {100,200},
455   \textperiodcentered = {500,700}, \quotedblbase = {400,400},
456   \textquotedbl = {400,400},   \textquotesingle = {400,400},
457   \guillemotleft = {200,200},  \guillemotright = {200,200},
458   \textexclamdown = {100, },   \textquestiondown = {100, },
459   \textbraceleft = {400,200},  \textbraceright = {200,400},
460   \textless      = {200,100},  \textgreater    = {100,200}
461 }

462 \SetProtrusion
463 [ name      = FedraSansPro-T5,
464   load      = FedraSansPro-n ]
465 { encoding = {T5},
466   family   = {FedraSansPro-OsF,FedraSansPro-LF,FedraSansPro-T0sF,FedraSansPro-TLF},
467   shape     = {n,sc,ssc} }
468 {
469   _ = {100,100},
470   \textbackslash = {100,200},
471   \quotesinglbase = {400,400}, \quotedblbase = {400,400},
472   \guilsinglleft = {400,300},  \guilsinglright = {300,400},
473   \guillemotleft = {200,200},  \guillemotright = {200,200},
474   \textbraceleft = {400,200},  \textbraceright = {200,400},
475   \textless      = {200,100},  \textgreater    = {100,200}
476 }

477 \SetProtrusion
478 [ name      = FedraSansPro-it ]
479 { }
480 {
481   . = { ,500},
482   {,}= { ,500},
483   : = { ,300},
484   ; = { ,300},
485   & = {50,50},
486   \% = {100, },
487   * = {200,200},
488   + = {150,200},

```

```

489 @ = {50,50},
490 ~ = {150,150},
491 ( = {200, }, ) = { ,200},
492 / = {100,200},
493 - = {630,630},
494 \textendash = {200,200}, \textemdash = {150,150},
495 \textquoteleft = {400,200}, \textquoteright = {400,200},
496 \textquotedblleft = {400,200}, \textquotedblright = {400,200}
497 }

508 \SetProtrusion
509 [ name = FedraSansPro-OT1-it,
510 load = FedraSansPro-it ]
511 { encoding = OT1,
512 family = {FedraSansPro-OsF,FedraSansPro-LF,FedraSansPro-TOsF,FedraSansPro-TLF},
513 shape = {it,scit,sscit} }
514 { }

515 \SetProtrusion
516 [ name = FedraSansPro-T1-it,
517 load = FedraSansPro-it ]
518 { encoding = {T1,LY1},
519 family = {FedraSansPro-OsF,FedraSansPro-LF,FedraSansPro-TOsF,FedraSansPro-TLF},
520 shape = {it,sl,scit,scsl} }
521 {
522 _ = { ,100},
523 \textbackslash = {100,200},
524 \quotesinglbase = {300,700}, \quotedblbase = {400,500},
525 \guilsinglleft = {400,400}, \guilsinglright = {300,500},
526 \guillemotleft = {300,300}, \guillemotright = {300,300},
527 \textexclamdown = {100, }, \textquestiondown = {200, },
528 \textbraceleft = {200,100}, \textbraceright = {200,200},
529 }

530 \SetProtrusion
531 [ name = FedraSansPro-QX-it,
532 load = FedraSansPro-it ]
533 { encoding = {QX},
534 family = {FedraSansPro-OsF,FedraSansPro-LF,FedraSansPro-TOsF,FedraSansPro-TLF},
535 shape = {it,sl,scit,scsl} }
536 {
537 _ = { ,100},
538 \textbackslash = {100,200}, \textellipsis = {100,200},
539 \textperiodcentered = {500,700}, \quotedblbase = {400,500},
540 \textquotedbl = {400,400}, \textquotesingle = {400,400},
541 \guillemotleft = {300,300}, \guillemotright = {300,300},
542 \textexclamdown = {100, }, \textquestiondown = {200, },

```

```

533   \textbraceleft   = {200,100},   \textbraceright  = {200,200},
534   }
535 \SetProtrusion
536   [ name      = FedraSansPro-T5-it,
537     load      = FedraSansPro-it    ]
538   { encoding = {T5},
539     family   = {FedraSansPro-OsF,FedraSansPro-LF,FedraSansPro-T0sF,FedraSansPro-TLF},
540     shape    = {it,sl,scit,scsl} }
541   {
542     _ = { ,100},
543     \textbackslash = {100,200},
544     \quotesinglbase = {300,700},   \quotedblbase   = {400,500},
545     \guilsinglleft  = {400,400},   \guilsinglright = {300,500},
546     \guillemotleft  = {300,300},   \guillemotright = {300,300},
547     \textbraceleft  = {200,100},   \textbraceright = {200,200},
548   }
549 \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 `fedrasans-fd.sty`, which is included by every FD file. Since `fedrasans-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.

```

550 \fontdef
551 \ifx\fdrrs@ffamily\undefined\else\endinput\fi

```

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

```

552 \ifx\@nodocument\relax\else
553   \NeedsTeXFormat{LaTeX2e}
554   \RequirePackage{xkeyval}
555 \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.

```

556 \ifx\@nodocument\relax
557   \begingroup
558   \escapechar'\
559 \fi

```

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

```
560 \newcommand*\fdrss@makeglobal[1]{%
561   \global\expandafter\let\csname #1\expandafter\endcsname
562   \csname #1\endcsname
563 }
```

9.1 Options

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

```
564 \newcommand\fdrss@ffamily{FedraSansPro}
565 \newcommand\fdrss@mweight@normal{Book}
566 \newcommand\fdrss@mweight@small{Book}
567 \newcommand\fdrss@bweight@normal{Medium}
568 \newcommand\fdrss@bweight@small{Medium}
569 \newcommand\fdrss@scale{1.0}

570 \ifx\@nodocument\relax\else
571   \newcommand*\fdrss@fd@boolkey[2]{%
572     \define@boolkey{fedrasans-fd.sty}[fdrss@fd@]{#1}[true]{#2}%
573   }
574   \newcommand*\fdrss@fd@choickey[3]{%
575     \define@choickey*{fedrasans-fd.sty}{#1}[\@tempa\@tempb]{#2}{#3}%
576   }
577   \fdrss@fd@boolkey{alt}{%
578     \iffdrss@fd@alt\renewcommand\fdrss@ffamily{FedraSansAltPro}\fi%
579   }
580   \fdrss@fd@choickey{normalweight}{book,demi,auto}{%
581     \ifcase\@tempb\relax
582       \renewcommand\fdrss@mweight@normal{Book}
583       \renewcommand\fdrss@mweight@small{Book}
584     \or
585       \renewcommand\fdrss@mweight@normal{Demi}
586       \renewcommand\fdrss@mweight@small{Demi}
587     \or
588       \renewcommand\fdrss@mweight@normal{Book}
589       \renewcommand\fdrss@mweight@small{Demi}
590     \fi
591   }
592   \fdrss@fd@choickey{boldweight}{medium,bold,auto}{%
593     \ifcase\@tempb\relax
594       \renewcommand\fdrss@bweight@normal{Medium}
595       \renewcommand\fdrss@bweight@small{Medium}
596     \or
597       \renewcommand\fdrss@bweight@normal{Bold}
598       \renewcommand\fdrss@bweight@small{Bold}

```



```

599 \or
600 \renewcommand\fdrss@bweight@normal{Medium}
601 \renewcommand\fdrss@bweight@small{Bold}
602 \fi
603 }
604 \define@key{fedrasans-fd.sty}{scale}[0.9]{\renewcommand*\fdrss@scale{#1}}
605 \ProcessOptionsX\relax
606 \fi

607 \fdrss@makeglobal{\fdrss@ffamily}
608 \fdrss@makeglobal{\fdrss@mweight@normal}
609 \fdrss@makeglobal{\fdrss@mweight@small}
610 \fdrss@makeglobal{\fdrss@bweight@normal}
611 \fdrss@makeglobal{\fdrss@bweight@small}
612 \fdrss@makeglobal{\fdrss@scale}

```

9.2 Font configuration

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

```

613 \newcommand*{\fdrss@addconfig}[4][{}]{%
614 \@for\@tempa:=#3\do{%
615 \expandafter
616 \gdef\csname fdrss@config@#2@#1@\@tempa\endcsname{#4}%
617 }%
618 }
619 \newcommand*{\fdrss@useconfig}[3]{%
620 \ifundefined{fdrss@config@#2@#1@#3}{%
621 \ifundefined{fdrss@config@#2@#3}{%
622 {\csname fdrss@config@#2@#3\endcsname}%
623 }{\csname fdrss@config@#2@#1@#3\endcsname}%
624 }
625 \fdrss@makeglobal{\fdrss@useconfig}

```

Now we can build up the configuration database.

```

626 \fdrss@addconfig{weight/normal}{l}{Light}
627 \fdrss@addconfig{weight/small}{l}{Light}
628 \fdrss@addconfig{weight/normal}{sl}{Book}
629 \fdrss@addconfig{weight/small}{sl}{Book}
630 \fdrss@addconfig{weight/normal}{m}{\fdrss@mweight@normal}
631 \fdrss@addconfig{weight/small}{m}{\fdrss@mweight@small}
632 \fdrss@addconfig{weight/normal}{md}{Demi}
633 \fdrss@addconfig{weight/small}{md}{Demi}
634 \fdrss@addconfig{weight/normal}{sb}{Medium}
635 \fdrss@addconfig{weight/small}{sb}{Medium}
636 \fdrss@addconfig{weight/normal}{b}{\fdrss@bweight@normal}
637 \fdrss@addconfig{weight/small}{b}{\fdrss@bweight@small}

```

```

638 \fdrss@addconfig{weight/small}{ub}{Bold}
639 \fdrss@addconfig{weight/normal}{ub}{Bold}
640 \fdrss@addconfig{subs/series}{bx}{b}
641 \fdrss@addconfig{italic}{it,scit,sscit}{Italic}
642 \fdrss@addconfig[OML]{italic}{n}{French}
643 \fdrss@addconfig[OML]{italic}{it}{Mixed}
644 \fdrss@addconfig{shape}{sc,scit}{-sc}
645 \fdrss@addconfig{shape}{ssc,sscit}{-ssc}
646 \fdrss@addconfig{subs/shape}{sl}{it}
647 \fdrss@addconfig{subs/shape}{scsl}{scit}
648 \fdrss@addconfig{subs/shape}{sscs}{sscit}

```

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

```

649 \newcommand*\DeclareFedraSansShape[4]{%
650   \edef\@tempa{\fdrss@useconfig{#1}{subs/series}{#3}}%
651   \edef\@tempb{\fdrss@useconfig{#1}{subs/shape}{#4}}%
652   \ifx\@tempa\empty\ifx\@tempb\empty
653     \DeclareFontShape{#1}{FedraSansPro-#2}{#3}{#4}{%
654       <-7.1>s*[\fdrss@scale]%
655       \fdrss@ffamily-%
656       \fdrss@useconfig{#1}{weight/small}{#3}%
657       \fdrss@useconfig{#1}{italic}{#4}-#2%
658       \fdrss@useconfig{#1}{shape}{#4}-#1%
659       <7.1->s*[\fdrss@scale]%
660       \fdrss@ffamily-%
661       \fdrss@useconfig{#1}{weight/normal}{#3}%
662       \fdrss@useconfig{#1}{italic}{#4}-#2%
663       \fdrss@useconfig{#1}{shape}{#4}-#1%
664     }{}%
665   \else
666     \DeclareFontShape{#1}{FedraSansPro-#2}{#3}{#4}{%
667       <->ssub* FedraSansPro-#2/#3/\@tempb
668     }{}%
669   \fi\else
670     \DeclareFontShape{#1}{FedraSansPro-#2}{#3}{#4}{%
671       <->ssub* FedraSansPro-#2/\@tempa/#4%
672     }{}%
673   \fi
674 }
675 \fdrss@makeglobal\DeclareFedraSansShape

```

Finally, we provide commands to declare a complete family.

```

676 \newcommand*\DeclareFedraSansFamily[4]{%
677   \DeclareFontFamily{#1}{FedraSansPro-#2}{}%
678   \@for\fdrss@series:=#3\do{%
679     \@for\fdrss@shape:=#4\do{%

```

```

680     \DeclareFedraSansShape{#1}{#2}{\fdrss@series}{\fdrss@shape}%
681   }%
682 }%
683 }
684 \fdrss@makeglobal{DeclareFedraSansFamily}
685 \newcommand*{\DeclareFedraSansLargeFamily}[2]{%
686   \DeclareFedraSansFamily{#1}{#2}{l,sl,m,md,sb,b,bx,ub}%
687   {n,it,sc,ssc,scit,sscit,sl,scsl,sscs}%
688 }
689 \fdrss@makeglobal{DeclareFedraSansLargeFamily}
690 \newcommand*{\DeclareFedraSansSmallFamily}[2]{%
691   \DeclareFedraSansFamily{#1}{#2}{l,sl,m,md,sb,b,bx,ub}{n,it,sl}%
692 }
693 \fdrss@makeglobal{DeclareFedraSansSmallFamily}
694 \newcommand*{\DeclareFedraSansTinyFamily}[2]{%
695   \DeclareFedraSansFamily{#1}{#2}{l,sl,m,md,sb,b,bx,ub}{n}%
696 }
697 \fdrss@makeglobal{DeclareFedraSansTinyFamily}
698 \newcommand*{\DeclareFedraSansMathFamily}[1]{%
699   \def\@tempa{#1}%
700   \def\@tempb{T0sF}%
701   \DeclareFontFamily{OML}{FedraSansPro-#1}{\skewchar\font=127}%
702   \@for\fdrss@series:=sl,m,md,sb,b,bx,ub\do{%
703     \@for\fdrss@shape:=n,it\do{%
704       \ifx\@tempa\@tempb
705         \DeclareFedraSansShape{OML}{T0sF}{\fdrss@series}{\fdrss@shape}%
706       \else
707         \DeclareFontShape{OML}{FedraSansPro-#1}{\fdrss@series}{\fdrss@shape}{%
708           <->ssub* FedraSansPro-T0sF/\fdrss@series/\fdrss@shape
709         }{}%
710       \fi
711     }%
712   }%
713 }
714 \fdrss@makeglobal{DeclareFedraSansMathFamily}

```

We define font family aliases so that we can place all configurations for the FedraSansPro family variants into one microtype file: `mt-FedraSansPro.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.

```

715 \gdef\fdrss@Microtype@Aliases{%
716   \DeclareMicrotypeAlias{FedraSansPro-LF}{FedraSansPro}%
717   \DeclareMicrotypeAlias{FedraSansPro-Of}{FedraSansPro}%
718   \DeclareMicrotypeAlias{FedraSansPro-TLF}{FedraSansPro}%
719   \DeclareMicrotypeAlias{FedraSansPro-T0sF}{FedraSansPro}%

```

```

720 }
721 \@ifundefined{Microtype@Hook}{%
722   \global\let\Microtype@Hook\fdrss@Microtype@Aliases
723 }{%
724   \g@addto@macro\Microtype@Hook{\fdrss@Microtype@Aliases}%
725 }%
726 \@ifundefined{DeclareMicroTypeAlias}{{}\fdrss@Microtype@Aliases}%
727 \ifx\@nodocument\relax
728   \endgroup
729 \fi
730 \fontdef

```

10 Font definition files

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

```

731 (*fd)
732 \input{fedrasans-fd.sty}
733 <ot1 & lf>\DeclareFedraSansLargeFamily{OT1}{LF}
734 <ot1 & osf>\DeclareFedraSansLargeFamily{OT1}{OsF}
735 <ot1 & tlf>\DeclareFedraSansLargeFamily{OT1}{TLF}
736 <ot1 & tosf>\DeclareFedraSansLargeFamily{OT1}{TOsF}
737 <t1 & lf>\DeclareFedraSansLargeFamily{T1}{LF}
738 <t1 & osf>\DeclareFedraSansLargeFamily{T1}{OsF}
739 <t1 & tlf>\DeclareFedraSansLargeFamily{T1}{TLF}
740 <t1 & tosf>\DeclareFedraSansLargeFamily{T1}{TOsF}
741 <ts1 & lf>\DeclareFedraSansLargeFamily{TS1}{LF}
742 <ts1 & osf>\DeclareFedraSansLargeFamily{TS1}{OsF}
743 <ts1 & tlf>\DeclareFedraSansLargeFamily{TS1}{TLF}
744 <ts1 & tosf>\DeclareFedraSansLargeFamily{TS1}{TOsF}
745 <ly1 & lf>\DeclareFedraSansLargeFamily{LY1}{LF}
746 <ly1 & osf>\DeclareFedraSansLargeFamily{LY1}{OsF}
747 <ly1 & tlf>\DeclareFedraSansLargeFamily{LY1}{TLF}
748 <ly1 & tosf>\DeclareFedraSansLargeFamily{LY1}{TOsF}
749 <qx & lf>\DeclareFedraSansLargeFamily{QX}{LF}
750 <qx & osf>\DeclareFedraSansLargeFamily{QX}{OsF}
751 <qx & tlf>\DeclareFedraSansLargeFamily{QX}{TLF}
752 <qx & tosf>\DeclareFedraSansLargeFamily{QX}{TOsF}
753 <t5 & lf>\DeclareFedraSansLargeFamily{T5}{LF}
754 <t5 & osf>\DeclareFedraSansLargeFamily{T5}{OsF}
755 <t5 & tlf>\DeclareFedraSansLargeFamily{T5}{TLF}
756 <t5 & tosf>\DeclareFedraSansLargeFamily{T5}{TOsF}
757 <oml & lf>\DeclareFedraSansMathFamily{LF}
758 <oml & osf>\DeclareFedraSansMathFamily{OsF}
759 <oml & tlf>\DeclareFedraSansMathFamily{TLF}

```

```
760 \oml & tosf\DeclareFedraSansMathFamily{TOfF}  
761 \u & extra\DeclareFedraSansSmallFamily{U}{Extra}  
762 \u & orn\DeclareFedraSansTinyFamily{U}{Pi}  
763 \fd
```