

The `tpslifonts` package*

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1 Introduction

Presentations to be displayed ‘online’ with a video beamer have special needs concerning font configuration owing to low ‘screen’ resolution and bad contrast caused by possibly bad light conditions combined with color highlighting.

This package tries to cater to these needs by offering a holistic configuration of all document fonts, including text, typewriter, and math fonts. Special features are ‘smooth scaling’ of Type1 fonts and careful design size selection for optimal readability.

The default is to use “lcmss”, also called “slifonts” for text and the usual cmmt and cmm for typewriter and math. There’s a large variety of options and parameters for choosing different text and math fonts, all from the large “cm” family of fonts, which has the advantage that readability can be enhanced by scaling small design sizes. A couple of additional math fonts like ams and doublestroke fonts are supported.

For some of the options to yield satisfying results, it is necessary to install additional (free) Type1 fonts on your system. There’s no intention to support other font families like the typical “psnfss” PostScript fonts, as they usually don’t come in different design sizes, making the effort of tuning them for viewing futile. If you wish to use such a font, load it with the usual packages.

This package is part of the TeXPower bundle, to be found at <http://texpower.sourceforge.net/>

2 User interface

The package doesn’t define any user-level commands; the font configuration is done entirely by package options.

Furthermore, the accompanying example document slifontsexample gives a lot of information about the fonts configured and some examples of math typesetting. Please read the comments in slifontsexample.tex carefully and try out some of the configuration variants described therein.

3 Description of package options

3.1 Text font options

The default is to use L^AT_EX computer modern sans serif, an eminently readable font and my personal favourite.

Option	Meaning
cmr	Set computer modern roman text fonts.
cmfib	Set computer modern roman Fibonacci text fonts.
cmss	Set computer modern sans serif text fonts.
cmbright	Set computer modern bright text fonts.
concrete	Set concrete text fonts.

3.2 Design size bounding

Usually design sizes are ‘bounded’ by 8pt, that is, if an 8pt (or lower) design size of a font exists, it will be scaled to larger sizes even if larger design sizes exist, because large design sizes tend to be less readable at low resolutions. For sizes below 8pt, smaller design sizes are used if available.

The limit of 8pt is adjustable (downwards) by options.

Option	Meaning
scale7pt	Use 7pt as a bound.
scale6pt	Use 6pt as a bound.
scale5pt	Use 5pt as a bound.

3.3 Font scaling

The default `lcmss` text fonts have very high ‘small letters’, making normal-size fonts look small and difficult to read. There are options for scaling up math and typewriter fonts slightly so they harmonize a little more with text fonts.

Option	Meaning
scaleupmath	scale up math fonts
scaleuptt	scale up typewriter fonts

3.4 Math fonts

Because the availability of different fonts in different encodings is not really homogenous, we differentiate between the font used for operator names (plus upper case greek, digits and some symbols) and the font used for other symbols. In some cases (math extension font), the choices are quite limited anyway.

The default is to use `cmr` for operators and such and the standard `cmm` and relatives for symbols. The concrete option for concrete text fonts selects concrete math fonts by default, but as these don’t seem to exist in `Type1` format currently, it’s recommended to combine concrete text with Euler math.

Option	Meaning
eulermath	Use Euler math fonts. This implies the option <code>textops</code> (see below).
eulerdigits	Take digits also from the Euler fonts (default: the text font used). Can be used only in conjunction with the <code>eulermath</code> option.
cmbrightmath	Use cmbright math fonts.
textops	Take operator names, upper case greek, digits and some symbols from the text font rather than from some font matching the math font (default for Euler math).

4 Implementation

```
1 \RequirePackage{ifthen}
```

4.1 Options and general setup

Text fonts. The default is to use “slifonts” (lcmss).

```
2 \newcommand{\TPSFTextfont}{lcmss}
```

The option cmr sets “computer modern roman” text fonts.

```
3 \DeclareOption{cmr}{\renewcommand{\TPSFTextfont}{cmr}}
```

The option cmfib sets “computer modern roman Fibonacci” text fonts.

```
4 \DeclareOption{cmfib}{\renewcommand{\TPSFTextfont}{cmfib}}
```

The option cmss sets “computer modern roman sans serif” text fonts.

```
5 \DeclareOption{cmss}{\renewcommand{\TPSFTextfont}{cmss}}
```

The option cmbright sets “computer modern bright” text fonts.

```
6 \DeclareOption{cmbright}{\renewcommand{\TPSFTextfont}{cmbr}}
```

The option concrete sets “concrete” text fonts.

```
7 \DeclareOption{concrete}{
8 {%
9   \renewcommand{\TPSFTextfont}{ccr}%
10  \renewcommand{\TPSFMathfont}{ccm}%
11  \renewcommand{\TPSFOperatorfont}{ccr}%
12 }}
```

4.1.1 Design size selection

Usually design sizes are ‘bounded’ by 8pt, that is, if an 8pt (or lower) design size of a font exists, it will be scaled to larger sizes even if larger design sizes exist, to enhance readability at low resolutions. For sizes below 8pt, smaller design sizes are used if available.

```
13 \providecommand{\TPSFMaxDesignSize}{8}
```

The option scale5pt causes scaled 5pt design sizes to be used wherever possible.

```
14 \DeclareOption{scale5pt}{\renewcommand{\TPSFMaxDesignSize}{5}}
```

The option scale6pt causes scaled 6pt design sizes to be used wherever possible (for font sizes above 6pt).

```
15 \DeclareOption{scale6pt}{\renewcommand{\TPSFMaxDesignSize}{6}}
```

The option scale7pt causes scaled 7pt design sizes to be used wherever possible (for font sizes above 7pt).

```
16 \DeclareOption{scale7pt}{\renewcommand{\TPSFMaxDesignSize}{7}}
```

lcmss text fonts have very high ‘small letters’, making normal-size fonts look small and difficult to read. The option scaleupmath (scaleuptt) will scale up math (typewriter) fonts slightly so they harmonize a little more with text fonts. These options do not make much sense with other text fonts, hence a warning (but

no error message) is generated to remind the user they might have overlooked something.

```

17 \newboolean{TPSFscaleup}
18 \DeclareOption{scaleupmath}
19 {%
20   \providecommand\TPSFmathscale{1.15}%
21   \providecommand\TPSFeulerscale{1.1}%
22   \providecommand\TPSFcmbrscale{1.1}%
23   \setboolean{TPSFscaleup}{true}%
24 }
25
26 \DeclareOption{scaleuptt}
27 {\providecommand\TPSFttscale{1.2}\setboolean{TPSFscaleup}{true}}

```

4.1.2 Math fonts

Because the availability of different fonts in different encodings is not really homogenous, we differentiate between the font used for Operators (plus upper case greek, digits and some symbols) and the font used for other symbols. In some cases (math extension font), the choices are quite limited anyway.

The default is to use cmr for operators and such and the standard cmm and relatives for symbols.

```

28 \newcommand{\TPSFMathfont}{cmm}
29
30 \newcommand{\TPSFOpF@cmm}{cmrm}
31
32 \newcommand{\TPSFOpF@ccm}{ccr}
33
34 \newcommand{\TPSFOperatorfont}{cmr}

```

The option textops makes the operator font follow the text font.

```

35 \newboolean{TPSFtextops}
36 \DeclareOption{textops}{\setboolean{TPSFtextops}{true}}

```

The option eulermath sets euler math fonts (slightly adapted from the eulervm package to match lcmss better). When using this option, the operator font automatically follows the text font.

```

37 \DeclareOption{eulermath}
38 {\renewcommand{\TPSFMathfont}{euler}\setboolean{TPSFtextops}{true}}

```

The option eulerdigits works only in conjunction with eulermath and sets the euler-digits option of the eulervm package.

```

39 \newboolean{TPSFeulerdigits}
40 \DeclareOption{eulerdigits}
41 {%
42   \setboolean{TPSFeulerdigits}{true}%
43   \PassOptionsToPackage{euler-digits}{eulervm}%
44 }

```

The option `cmbrightmath` sets cmbright math fonts (slightly adapted from the cmbright package to match lcmss better).

```
45 \DeclareOption{cmbrightmath}{\renewcommand{\TPSFMathfont}{cmbrm}}
46
47 \newcommand{\TPSFOpF@cmbrm}{cmbrmt}
```

4.1.3 Process options

```
48 \ProcessOptions
```

Option postprocessing.

Parameters `\TPSFmathscale` and such can be (re)defined from outside the `tpslifonts` package to adjust scaling. If any of these scaling parameters is defined before the `tpslifonts` package is loaded, there is no need to give the respective option. Here, we test whether the parameters have been provided (either by defining them independently or by giving one of the “scaleup...” options), and define the ‘real’ scaling parameter for font definition accordingly.

```
49 \@ifundefined{TPSFmathscale}
50 {\let\TPSFmathscale\@undefined\let\mathscale@TPSF\empty}
51 {\def\mathscale@TPSF{[\TPSFmathscale]}}
52
53 \@ifundefined{TPSFeulerscale}
54 {\let\TPSFeulerscale\@undefined\let\eulerscale@TPSF\empty}
55 {\def\eulerscale@TPSF{[\TPSFeulerscale]}}
56
57 \@ifundefined{TPSFcmbrscale}
58 {\let\TPSFcmbrscale\@undefined\let\cmbrscale@TPSF\empty}
59 {\def\cmbrscale@TPSF{[\TPSFcmbrscale]}}
60
61 \@ifundefined{TPSFtttscale}
62 {\let\TPSFtttscale\@undefined\let\tttscale@TPSF\empty}
63 {\def\tttscale@TPSF{[\TPSFtttscale]}}
```

As mentioned above, the “scaleup...” options make sense really only if `lcmss` text fonts are used. Otherwise, we give a warning.

```
64 \ifthenelse{\boolean{TPSFscaleup}\and\not\equal{\TPSFTextfont}{lcmss}}
65 {%
66   \PackageWarning{tpslifonts}
67   {Using the ‘‘scaleup’’ Options makes sense only\MessageBreak
68     when lcmss text fonts are used.\MessageBreak
69     Watch closely whether the results of scaling math\MessageBreak
70     and/or typewriter fonts together with ‘‘\TPSFTextfont’’\MessageBreak
71     text fonts is what you intended to achieve.%
72   }%
73 }
74 {}
```

We need to set the math operator font corresponding to the settings of the `TPSFtextops` switch, the text and math fonts.

```
75 \ifthenelse{\boolean{TPSFtextops}}
76 {\let\TPSFOperatorfont\TPSFTextfont}
```

```

77 {%
78 \expandafter\let\expandafter\TPSFOperatorfont
79 \csname TPSFOpF@TPSFMathfont\endcsname
80 }

```

The cmbright package also sets text fonts, so if cmbright math is requested, we load the cmbright package first and later overwrite the text font settings (if no cmbright text fonts were requested).

```

81 \ifthenelse{\equal{\TPSFMathfont}{cmbrm}}
82 {%
83 \RequirePackage[standard-baselineskips]{cmbright}%
84 }

```

4.2 Font shape configuration

We need a couple of macros to help in configuring fonts. To increase readability in presentations, design size selection is restricted. Without any options, the largest design size used is 8pt. The options scale5pt ... scale7pt impose further constraints. Another restriction is caused by the availability of design sizes. Not all fonts exist in all design sizes. If no design size exists at all in the requested range (i.e. the font exists only in size 10), then the smallest available size has to be chosen no matter what.

`\FilterSizes@TPSF<name>{<list>}` filters out all sizes (represented as non-negative integer numbers) from the comma-separated `|list|` which are above the threshold in `\TPSFMaxDesignSize` and stores the result in the macro `|name|`. To avoid inconsistencies if all sizes exceed `\TPSFMaxDesignSize`, the first size is always passed.

```

85 \newcommand{\FilterSizes@TPSF}[2]{\expandafter\@FilterSizes@TPSF#2,\@nil#1}
86
87 \def\@FilterSizes@TPSF#1,#2\@nil#3%
88 {%
89 \def#3{#1}%
90 \ifx\empty#2\empty\else\@@FilterSizes@TPSF#2\@nil#3\fi
91 }
92
93 \def\@@FilterSizes@TPSF#1,#2\@nil#3%
94 {%
95 \ifnum#1>\TPSFMaxDesignSize\relax
96 \else
97 \expandafter\def\expandafter#3\expandafter{#3,#1}%
98 \ifx\empty#2\empty\else\@@FilterSizes@TPSF#2\@nil#3\fi
99 \fi
100 }

```

`\DeclareFontShape@TPSF \DeclareFontShape@TPSF[<scale>]`

`{<enc>}{<fam>}{<ser>}{<shp>}{<name>}{<sizes>}` declares a font with presentation-friendly design size selection (which means all design sizes above `\TPSFMaxDesignSize` are filtered out. The actually existing design sizes have to be provided in `<sizes>` as a comma-separated list of numbers. If `<s>` is one of

the sizes, it is expected that the corresponding font name can be constructed as `<name><s>`. If the optional argument `<scale>` is given, it has to be of the form `[<factor>]`, where `<factor>` specifies the scaling of the font (see the options “scaleupmath” and “scaleuppt” above).

```

101 \newcommand{\DeclareFontShape@TPSF}[7] []
102 {%
103   \FilterSizes@TPSF\sizes@TPSF{#7}%
104   \let\sizedecl@TPSF\empty
105   \def\fontname@TPSF{#6}%
106   \def\scale@TPSF{#1}%
107   \expandafter\parsesizes@TPSF\sizes@TPSF,,\@nil
108   \DeclareFontShape{#2}{#3}{#4}{#5}{\sizedecl@TPSF}{}%
109 }

110
111 \def\parsesizes@TPSF#1,#2\@nil
112 {%
113   \let\prevsize@TPSF\empty
114   \def\currsz@TPSF{#1}%
115   \@parsesizes@TPSF#2\@nil
116 }
117
118 \def\@parsesizes@TPSF#1,#2\@nil
119 {%
120   \edef\sizedecl@TPSF{\sizedecl@TPSF\space<\prevsize@TPSF-#1>s*\scale@TPSF \fontname@TPSF\currsz@TPSF}%
121   \def\currsz@TPSF{#1}%
122   \let\prevsize@TPSF\currsz@TPSF
123   \ifx\currsz@TPSF\empty\else\@parsesizes@TPSF#2\@nil\fi
124 }

```

4.3 Declaration of font shapes

The following is copied more or less verbatim from `type1cm.sty`, `type1ec.sty`, and other sources of font definitions for e.g. `cmbright` fonts. For fonts following the usual naming conventions, we use `\DeclareFontShape@TPSF` instead of `\DeclareFontShape` to implement design size bounding. For T1 ec fonts, the same is achieved by appropriate redefinition of `\EC@family`.

```

125 \begingroup
126 \nfss@catcodes

```

4.3.1 Text fonts for OT1 encoding

computer modern roman.

```

127 \DeclareFontFamily{OT1}{cmr}{\hyphenchar\font=45}
128
129 \DeclareFontShape@TPSF{OT1}{cmr}{m}{n}{cmr}{5,6,7,8,9,10,12,17}
130
131 \DeclareFontShape@TPSF{OT1}{cmr}{m}{sl}{cmsl}{8,9,10,12}

```



```

132
133 \DeclareFontShape@TPSF{OT1}{cmr}{m}{it}{cmti}{7,8,9,10,12}
134
135 \DeclareFontShape@TPSF{OT1}{cmr}{m}{sc}{cmcsc}{9,10}
136
137 \DeclareFontShape@TPSF{OT1}{cmr}{m}{ui}{cmu}{10}
138
139 \DeclareFontShape@TPSF{OT1}{cmr}{b}{n}{cmb}{10}
140
141 \DeclareFontShape@TPSF{OT1}{cmr}{bx}{n}{cmbx}{5,6,7,8,9,10,12}
142
143 \DeclareFontShape@TPSF{OT1}{cmr}{bx}{sl}{cmbxsl}{10}
144
145 \DeclareFontShape@TPSF{OT1}{cmr}{bx}{it}{cmbxti}{10}
146
147 \DeclareFontShape{OT1}{cmr}{bx}{ui}
148     {<->ssub * cmr/m/ui}{}
149
150 \DeclareFontFamily{OT1}{cmfr}{\hyphenchar\font=45}
151
152 \DeclareFontShape{OT1}{cmfr}{m}{n}{%
153     <->s*      cmff10
154 }{}
155 \DeclareFontShape{OT1}{cmfr}{m}{it}{
156     <->s*      cmfi10
157 }{}
158
159 \DeclareFontFamily{OT1}{cmdh}{\hyphenchar\font=45}
160
161 \DeclareFontShape{OT1}{cmdh}{m}{n}{
162     <->s*      cmdunh10
163 }{}
164
165 \DeclareFontFamily{OT1}{cmfib}{\hyphenchar\font=45}
166
167 \DeclareFontShape{OT1}{cmfib}{m}{n}{
168     <->s*      cmfib8
169 }{}
170
171 \DeclareFontShape{OT1}{cmfib}{m}{sl}
172     {<->ssub * cmr/m/sl}{}
173
174 \DeclareFontShape{OT1}{cmfib}{m}{it}
175     {<->ssub * cmr/m/it}{}
176
177 \DeclareFontShape{OT1}{cmfib}{m}{sc}
178     {<->ssub * cmr/m/sc}{}
179
180 \DeclareFontShape{OT1}{cmfib}{m}{ui}
181     {<->ssub * cmr/m/ui}{}

```

```

182
183 \DeclareFontShape{OT1}{cmfib}{b}{n}
184     {<->ssub * cmr/b/n}{ }
185
186 \DeclareFontShape{OT1}{cmfib}{bx}{n}
187     {<->ssub * cmr/bx/n}{ }
188
189 \DeclareFontShape{OT1}{cmfib}{bx}{sl}
190     {<->ssub * cmr/bx/sl}{ }
191
192 \DeclareFontShape{OT1}{cmfib}{bx}{it}
193     {<->ssub * cmr/bx/it}{ }
194
195 \DeclareFontShape{OT1}{cmfib}{bx}{ui}
196     {<->ssub * cmr/m/ui}{ }
197
198 computer modern sans serif.
197 \DeclareFontFamily{OT1}{cmss}{\hyphenchar\font=45}
198
199 \DeclareFontShape@TPSF{OT1}{cmss}{m}{n}{cmss}{8,9,10,12,17}
200
201 \DeclareFontShape{OT1}{cmss}{m}{it}
202     {<->sub*cmss/m/sl}{ }
203
204 \DeclareFontShape@TPSF{OT1}{cmss}{m}{sl}{cmssi}{8,9,10,12,17}
205
206 \DeclareFontShape{OT1}{cmss}{m}{sc}
207     {<->sub*cmr/m/sc}{ }
208
209 \DeclareFontShape{OT1}{cmss}{m}{ui}
210     {<->sub*cmr/m/ui}{ }
211
212 \DeclareFontShape@TPSF{OT1}{cmss}{sbc}{n}{cmssdc}{10}
213
214 \DeclareFontShape@TPSF{OT1}{cmss}{bx}{n}{cmssbx}{10}
215
216 \DeclareFontShape{OT1}{cmss}{bx}{ui}
217     {<->sub*cmr/bx/ui}{ }
218
219 slide computer modern sans serif.
218 \DeclareFontFamily{OT1}{lcmss}{\hyphenchar\font45 }
219
220 \DeclareFontShape@TPSF{OT1}{lcmss}{m}{n}{lcmss}{8}
221
222 \DeclareFontShape@TPSF{OT1}{lcmss}{m}{In}{ilcmss}{8}
223
224 \DeclareFontShape@TPSF{OT1}{lcmss}{m}{sl}{lcmssi}{8}
225
226 \DeclareFontShape@TPSF{OT1}{lcmss}{m}{Isl}{ilcmssi}{8}
227
228 \DeclareFontShape{OT1}{lcmss}{m}{it}{%

```

```

229 <->sub*lcms/m/sl{}
230
231 \DeclareFontShape{OT1}{lcms}{m}{it}{%
232 <->sub*lcms/m/IsI}{}
233
234 \DeclareFontShape@TPSF{OT1}{lcms}{b}{n}{lcmsb}{8}
235
236 \DeclareFontShape@TPSF{OT1}{lcms}{b}{In}{ilcmsb}{8}
237
238 \DeclareFontShape{OT1}{lcms}{bx}{n}{%
239 <->sub*lcms/b/n}{}
240
241 \DeclareFontShape{OT1}{lcms}{bx}{In}{%
242 <->sub*lcms/b/In}{}
243
244 \DeclareFontShape{OT1}{lcms}{m}{ui}{%
245 <->sub*cmr/m/ui}{}
246
247 \DeclareFontShape{OT1}{lcms}{bx}{ui}{%
248 <->sub*cmr/m/ui}{}
249
250 computer modern bright
251 \DeclareFontFamily{OT1}{cmbr}{\hyphenchar\font45}
252
253 \DeclareFontShape@TPSF{OT1}{cmbr}{m}{n}{cmbr}{8,9,10,17}
254
255 \DeclareFontShape@TPSF{OT1}{cmbr}{m}{sl}{cmbrsl}{8,9,10,17}
256
257 \DeclareFontShape{OT1}{cmbr}{m}{it}{%
258 <->ssub*cmbr/m/sl%
259 }{}
260
261 \DeclareFontShape{OT1}{cmbr}{b}{n}{%
262 <->ssub*cmbr/bx/n%
263 }{}
264
265 \DeclareFontShape@TPSF{OT1}{cmbr}{bx}{n}{cmbrbx}{10}
266
267 concrete roman
268 \DeclareFontFamily{OT1}{ccr}{\hyphenchar\font45 }
269
270 \DeclareFontShape@TPSF{OT1}{ccr}{m}{n}{ccr}{5,6,7,8,9,10}
271
272 \DeclareFontShape@TPSF{OT1}{ccr}{m}{sl}{ccsl}{9,10}
273
274 \DeclareFontShape@TPSF{OT1}{ccr}{m}{it}{ccti}{10}
275
276 \DeclareFontShape@TPSF{OT1}{ccr}{m}{sc}{cccsc}{10}
277
278 \DeclareFontShape{OT1}{ccr}{bx}{n} {<-> ssub * cmss/bx/n}{}
279 \DeclareFontShape{OT1}{ccr}{bx}{sl}{<-> ssub * cmss/bx/sl}{}

```

```

276 \DeclareFontShape{OT1}{ccr}{bx}{it}{<-> ssub * cmss/bx/it}{}
277 % \DeclareFontShape{OT1}{ccr}{bx}{n} {<-> ssub * cmr/bx/n}{}
278 % \DeclareFontShape{OT1}{ccr}{bx}{sl}{<-> ssub * cmr/bx/sl}{}
279 % \DeclareFontShape{OT1}{ccr}{bx}{it}{<-> ssub * cmr/bx/it}{}
280 \DeclareFontShape{OT1}{ccr}{sbc}{n} {<-> ssub * cmss/sbc/n}{}
281 \DeclareFontShape{OT1}{ccr}{sbc}{sl}{<-> ssub * cmss/sbc/n}{}
282 \DeclareFontShape{OT1}{ccr}{sbc}{it}{<-> ssub * cmss/sbc/n}{}
283
284 \DeclareFontShape@TPSF{OT1}{ccr}{c}{sl}{ccslc}{9}

```

4.3.2 Text fonts for T1 encoding

```

285 \let\ecscale@TPSF\empty
286
287 \ifcase\TPSFMaxDesignSize
288 \or\or\or\or\or
289 \providecommand{\EC@family}[5]{%
290   \DeclareFontShape{#1}{#2}{#3}{#4}{%
291     <->s*\ecscale@TPSF#50500%
292   }{}}
293 \or
294 \providecommand{\EC@family}[5]{%
295   \DeclareFontShape{#1}{#2}{#3}{#4}{%
296     <-6>s*\ecscale@TPSF#50500%
297     <6->s*\ecscale@TPSF#50600%
298   }{}}
299 \or
300 \providecommand{\EC@family}[5]{%
301   \DeclareFontShape{#1}{#2}{#3}{#4}{%
302     <-6>s*\ecscale@TPSF#50500%
303     <6-7>s*\ecscale@TPSF#50600%
304     <7->s*\ecscale@TPSF#50700%
305   }{}}
306 \or
307 \providecommand{\EC@family}[5]{%
308   \DeclareFontShape{#1}{#2}{#3}{#4}{%
309     <-6>s*\ecscale@TPSF#50500%
310     <6-7>s*\ecscale@TPSF#50600%
311     <7-8>s*\ecscale@TPSF#50700%
312     <8->s*\ecscale@TPSF#50800%
313   }{}}
314 \or
315 \providecommand{\EC@family}[5]{%
316   \DeclareFontShape{#1}{#2}{#3}{#4}{%
317     <-6>s*\ecscale@TPSF#50500%
318     <6-7>s*\ecscale@TPSF#50600%
319     <7-8>s*\ecscale@TPSF#50700%
320     <8-9>s*\ecscale@TPSF#50800%
321     <9->s*\ecscale@TPSF#50900%
322   }{}}

```

```

323 \or
324 \providecommand{\EC@family}[5]{%
325   \DeclareFontShape{#1}{#2}{#3}{#4}{%
326     <-6>s*\ecscale@TPSF#50500%
327     <6-7>s*\ecscale@TPSF#50600%
328     <7-8>s*\ecscale@TPSF#50700%
329     <8-9>s*\ecscale@TPSF#50800%
330     <9-10>s*\ecscale@TPSF#50900%
331     <10->s*\ecscale@TPSF#51000%
332   }{}}
333 \or
334 \providecommand{\EC@family}[5]{%
335   \DeclareFontShape{#1}{#2}{#3}{#4}{%
336     <-6>s*\ecscale@TPSF#50500%
337     <6-7>s*\ecscale@TPSF#50600%
338     <7-8>s*\ecscale@TPSF#50700%
339     <8-9>s*\ecscale@TPSF#50800%
340     <9-10>s*\ecscale@TPSF#50900%
341     <10-10.95>s*\ecscale@TPSF#51000%
342     <10.95->s*\ecscale@TPSF#51095%
343   }{}}
344 \or
345 \providecommand{\EC@family}[5]{%
346   \DeclareFontShape{#1}{#2}{#3}{#4}{%
347     <-6>s*\ecscale@TPSF#50500%
348     <6-7>s*\ecscale@TPSF#50600%
349     <7-8>s*\ecscale@TPSF#50700%
350     <8-9>s*\ecscale@TPSF#50800%
351     <9-10>s*\ecscale@TPSF#50900%
352     <10-10.95>s*\ecscale@TPSF#51000%
353     <10.95-12>s*\ecscale@TPSF#51095%
354     <12->s*\ecscale@TPSF#51200%
355   }{}}
356 \fi

european computer modern roman.
357 \input{t1cmr.fd}
358
359 \input{t1cmfr.fd}
360
361 \input{t1cmdh.fd}
362
363 \input{t1cmfib.fd}
364
365 \DeclareFontShape{T1}{cmfib}{m}{it}{
366   {<->ssub * cmr/m/it}{}}
367
368 \DeclareFontShape{T1}{cmfib}{m}{sc}{
369   {<->ssub * cmr/m/sc}{}}
370

```

```

371 \DeclareFontShape{T1}{cmfib}{m}{ui}
372     {<->ssub * cmr/m/ui}{ }
373
374 \DeclareFontShape{T1}{cmfib}{b}{n}
375     {<->ssub * cmr/b/n}{ }
376
377 \DeclareFontShape{T1}{cmfib}{bx}{n}
378     {<->ssub * cmr/bx/n}{ }
379
380 \DeclareFontShape{T1}{cmfib}{bx}{sl}
381     {<->ssub * cmr/bx/sl}{ }
382
383 \DeclareFontShape{T1}{cmfib}{bx}{it}
384     {<->ssub * cmr/bx/it}{ }
385
386 \DeclareFontShape{T1}{cmfib}{bx}{ui}
387     {<->ssub * cmr/m/ui}{ }
388
389     european computer modern roman sans serif.
390 \input{t1cmss.fd}
391
392 \DeclareFontShape@TPSF{T1}{cmss}{sbc}{n}{ecssdc}{10}
393
394     european slide computer modern sans serif.
395 \DeclareFontFamily{T1}{lcmss}{ }
396 \DeclareFontShape@TPSF{T1}{lcmss}{m}{n}{ec1q}{8}
397
398 \DeclareFontShape@TPSF{T1}{lcmss}{m}{In}{ieclq}{8}
399
400 \DeclareFontShape@TPSF{T1}{lcmss}{m}{sl}{ec1i}{8}
401
402 \DeclareFontShape@TPSF{T1}{lcmss}{m}{Isl}{iecli}{8}
403
404 \DeclareFontShape{T1}{lcmss}{m}{it}{ }
405     {<->sub*lcmss/m/sl}{ }
406
407 \DeclareFontShape{T1}{lcmss}{m}{Iit}{ }
408     {<->sub*lcmss/m/Is1}{ }
409
410 \DeclareFontShape@TPSF{T1}{lcmss}{bx}{n}{ec1b}{8}
411
412 \DeclareFontShape@TPSF{T1}{lcmss}{bx}{In}{ieclb}{8}
413
414 \DeclareFontShape@TPSF{T1}{lcmss}{bx}{sl}{ec1o}{8}
415
416 \DeclareFontShape@TPSF{T1}{lcmss}{bx}{Isl}{ieclo}{8}
417
418 \DeclareFontShape{T1}{lcmss}{bx}{it}{ }
419     {<->sub*lcmss/bx/sl}{ }
420
421 \DeclareFontShape{T1}{lcmss}{bx}{Iit}{ }
422     {<->sub*lcmss/bx/Is1}{ }

```

```

418      <->sub*lcms/bx/Is1}{%
419
420 \DeclareFontShape{T1}{lcms}{b}{n}{%
421   <->sub*lcms/bx/n}{%
422
423 \DeclareFontShape{T1}{lcms}{m}{ui}{%
424   <->sub*cmr/m/ui}{%
425
426 \DeclareFontShape{T1}{lcms}{bx}{ui}{%
427   <->sub*cmr/m/ui}{%
428
429   european computer modern bright
428 \DeclareFontFamily{T1}{cmbr}{%
429
430 \DeclareFontShape@TPSF{T1}{cmbr}{m}{n}{ebmr}{8,9,10,17}
431
432 \DeclareFontShape@TPSF{T1}{cmbr}{m}{sl}{ebmo}{8,9,10,17}
433
434 \DeclareFontShape{T1}{cmbr}{m}{it}{%
435   <->ssub*cmbr/m/sl%
436 }{}
437
438 \DeclareFontShape@TPSF{T1}{cmbr}{sb}{n}{ebsr}{8,9,10,17}
439
440 \DeclareFontShape@TPSF{T1}{cmbr}{sb}{sl}{ebso}{8,9,10,17}
441
442 \DeclareFontShape{T1}{cmbr}{sb}{it}{%
443   <->ssub*cmbr/sb/sl%
444 }{}
445
446 \DeclareFontShape{T1}{cmbr}{b}{n}{%
447   <->ssub*cmbr/bx/n%
448 }{}
449
450 \DeclareFontShape{T1}{cmbr}{bx}{n}{%
451   <->sub*cmbr/sb/n%
452 }{}
453
454   european concrete roman
453 \DeclareFontFamily{T1}{ccr}{%
454
455 \DeclareFontShape@TPSF{T1}{ccr}{m}{n}{eorm}{5,6,7,8,9,10}
456
457 \DeclareFontShape@TPSF{T1}{ccr}{m}{sl}{eosl}{5,6,7,8,9,10}
458
459 \DeclareFontShape@TPSF{T1}{ccr}{m}{it}{eoti}{10}
460
461 \DeclareFontShape@TPSF{T1}{ccr}{m}{sc}{eocc}{10}
462
463 \DeclareFontShape{T1}{ccr}{bx}{n}{%
464   <->ssub*cmss/bx/n}{%

```

```

465
466 \DeclareFontShape{T1}{ccr}{bx}{sl}{%
467 <->ssub*cmss/bx/sl}{%
468
469 \DeclareFontShape{T1}{ccr}{bx}{it}{%
470 <->ssub*cmss/bx/it}{%
471
472 % \DeclareFontShape{T1}{ccr}{bx}{n}{%
473 % <->ssub*cmr/bx/n}{%
474
475 % \DeclareFontShape{T1}{ccr}{bx}{sl}{%
476 % <->ssub*cmr/bx/sl}{%
477
478 % \DeclareFontShape{T1}{ccr}{bx}{it}{%
479 % <->ssub*cmr/bx/it}{%
480
481 \DeclareFontShape{T1}{ccr}{sbc}{n}{%
482 <->ssubf*ecssdc10}{%

```

4.4 Typewriter fonts for OT1 encoding

computer modern typewriter.

```

483 \DeclareFontFamily{OT1}{cmtt}{\hyphenchar\font\m@ne}
484
485 \DeclareFontShape@TPSF[\ttscale@TPSF]{OT1}{cmtt}{m}{n}{cmtt}{8,9,10,12}
486
487 \DeclareFontShape@TPSF[\ttscale@TPSF]{OT1}{cmtt}{m}{it}{cmitt}{10}
488
489 \DeclareFontShape@TPSF[\ttscale@TPSF]{OT1}{cmtt}{m}{sl}{cmslitt}{10}
490
491 \DeclareFontShape@TPSF[\ttscale@TPSF]{OT1}{cmtt}{m}{sc}{cmctsc}{10}
492
493 \DeclareFontShape{OT1}{cmtt}{m}{ui}
494 {<->sub * cmtt/m/it}{%
495
496 \DeclareFontShape{OT1}{cmtt}{bx}{n}
497 {<->sub * cmtt/m/n}{%
498
499 \DeclareFontShape{OT1}{cmtt}{bx}{it}
500 {<->sub * cmtt/m/it}{%
501
502 \DeclareFontShape{OT1}{cmtt}{bx}{ui}
503 {<->sub * cmtt/m/it}{%

```

‘Slides’ computer modern typewriter exists only for compatibility with T1 encoding.

```

504 \DeclareFontFamily{OT1}{lcmitt}{\hyphenchar\font\m@ne}
505
506 \DeclareFontShape@TPSF[\ttscale@TPSF]{OT1}{lcmitt}{m}{n}{cmtt}{8,9,10,12}
507
508 \DeclareFontShape@TPSF[\ttscale@TPSF]{OT1}{lcmitt}{m}{it}{cmitt}{10}

```



```

509
510 \DeclareFontShape@TPSF[\ttscale@TPSF]{OT1}{lcmtt}{m}{sl}{cmtl}{10}
511
512 \DeclareFontShape@TPSF[\ttscale@TPSF]{OT1}{lcmtt}{m}{sc}{cmtcsc}{10}
513
514 \DeclareFontShape{OT1}{lcmtt}{m}{ui}
515   {<->sub * lcmtt/m/it}{ }
516
517 \DeclareFontShape{OT1}{lcmtt}{bx}{n}
518   {<->sub * lcmtt/m/n}{ }
519
520 \DeclareFontShape{OT1}{lcmtt}{bx}{it}
521   {<->sub * lcmtt/m/it}{ }
522
523 \DeclareFontShape{OT1}{lcmtt}{bx}{ui}
524   {<->sub * lcmtt/m/it}{ }
525
526 computer modern typewriter light.
527 \DeclareFontFamily{OT1}{cmtl}{\hyphenchar\font\m@ne}
528
529 \DeclareFontShape{OT1}{cmtl}{m}{n}{%
530   <->s*\ttscale@TPSF cmtl10%
531 }{}
532
533 \DeclareFontShape{OT1}{cmtl}{m}{sl}{%
534   <->s*\ttscale@TPSF cmtl10%
535 }{}
536
537 \DeclareFontShape{OT1}{cmtl}{m}{it}{<->ssub*cmtl/m/sl}{ }
538
539 \DeclareFontShape{OT1}{cmtl}{m}{ui}{<->ssub*cmtl/m/sl}{ }
540
541 \DeclareFontShape{OT1}{cmtl}{m}{sc}{cmtcsc}{10}
542
543 \DeclareFontShape{OT1}{lcmtt}{m}{ui}
544   {<->sub * lcmtt/m/it}{ }
545
546 \DeclareFontShape{OT1}{lcmtt}{bx}{n}
547   {<->sub * lcmtt/m/n}{ }
548
549 \DeclareFontShape{OT1}{lcmtt}{bx}{it}
550   {<->sub * lcmtt/m/it}{ }
551
552 \DeclareFontShape{OT1}{lcmtt}{bx}{ui}
553   {<->sub * lcmtt/m/it}{ }

```

4.5 Typewriter fonts for T1 encoding

```

536 \ifcase\TPSFMaxDesignSize
537   \or\or\or\or\or
538   \providecommand{\EC@ttfamily}[5]{%
539     \DeclareFontShape{#1}{#2}{#3}{#4}{%
540       <->s*\ttscale@TPSF#50800%
541     }{ }}
542   \or
543   \providecommand{\EC@ttfamily}[5]{%
544     \DeclareFontShape{#1}{#2}{#3}{#4}{%
545       <->s*\ttscale@TPSF#50800%
546     }{ }}
547   \or
548   \providecommand{\EC@ttfamily}[5]{%
549     \DeclareFontShape{#1}{#2}{#3}{#4}{%
550       <->s*\ttscale@TPSF#50800%
551     }{ }}
552   \or
553   \providecommand{\EC@ttfamily}[5]{%

```

```

554 \DeclareFontShape{#1}{#2}{#3}{#4}{%
555 <->s*\ttscale@TPSF#50800%
556 }{}
557 \or
558 \providecommand{\EC@ttfamily}[5]{%
559 \DeclareFontShape{#1}{#2}{#3}{#4}{%
560 <-9>s*\ttscale@TPSF#50800%
561 <9->s*\ttscale@TPSF#50900%
562 }{}
563 \or
564 \providecommand{\EC@ttfamily}[5]{%
565 \DeclareFontShape{#1}{#2}{#3}{#4}{%
566 <-9>s*\ttscale@TPSF#50800%
567 <9-10>s*\ttscale@TPSF#50900%
568 <10->s*\ttscale@TPSF#51000%
569 }{}
570 \or
571 \providecommand{\EC@ttfamily}[5]{%
572 \DeclareFontShape{#1}{#2}{#3}{#4}{%
573 <-9>s*\ttscale@TPSF#50800%
574 <9-10>s*\ttscale@TPSF#50900%
575 <10-10.95>s*\ttscale@TPSF#51000%
576 <10.95->s*\ttscale@TPSF#51095%
577 }{}
578 \or
579 \providecommand{\EC@ttfamily}[5]{%
580 \DeclareFontShape{#1}{#2}{#3}{#4}{%
581 <-9>s*\ttscale@TPSF#50800%
582 <9-10>s*\ttscale@TPSF#50900%
583 <10-10.95>s*\ttscale@TPSF#51000%
584 <10.95-12>s*\ttscale@TPSF#51095%
585 <12->s*\ttscale@TPSF#51200%
586 }{}
587 \fi

```

european computer modern typewriter.

```
588 \input{t1cmtt.fd}
```

european ‘Slides’ computer modern typewriter. There exists **one** dedicated font “ecltt8” for this setup.

```

589 \DeclareFontFamily{T1}{lcm tt}{\hyphenchar\font\m@ne}
590
591 \DeclareFontShape{T1}{lcm tt}{m}{n}{%
592 <->s*\ttscale@TPSF ecltt8%
593 }{}
594
595 \DeclareFontShape{T1}{lcm tt}{m}{In}{%
596 <->s*\ttscale@TPSF iec ltt8%
597 }{}
598
599 \DeclareFontShape{T1}{lcm tt}{m}{it}{%

```

```

600 <->s*\ttscale@TPSF ecit0800%
601 }{}
602
603 \DeclareFontShape{T1}{lcmitt}{m}{sl}{
604 <->s*\ttscale@TPSF ecst0800
605 }{}
606
607 \DeclareFontShape{T1}{lcmitt}{m}{sc}{
608 <->s*\ttscale@TPSF ectc0800
609 }{}
610
611 \DeclareFontShape{T1}{lcmitt}{m}{ui}
612 {<->sub * lcmitt/m/it}{}
613
614 \DeclareFontShape{T1}{lcmitt}{bx}{n}
615 {<->sub * lcmitt/m/n}{}
616
617 \DeclareFontShape{T1}{lcmitt}{bx}{it}
618 {<->sub * lcmitt/m/it}{}
619
620 \DeclareFontShape{T1}{lcmitt}{bx}{ui}
621 {<->sub * lcmitt/m/it}{}

```

european computer modern typewriter light.

```

622 \DeclareFontFamily{T1}{cmtl}{\hyphenchar\font\m@ne}
623
624 \DeclareFontShape{T1}{cmtl}{m}{n}{%
625 <->s*\ttscale@TPSF ebt110%
626 }{}
627
628 \DeclareFontShape{T1}{cmtl}{m}{sl}{%
629 <->s*\ttscale@TPSF ebto10%
630 }{}
631
632 \DeclareFontShape{T1}{cmtl}{m}{it}{<->ssub*cmtl/m/sl}{}

```

4.6 Typewriter fonts for mTT encoding

Used by cmtt.sty.

```

633 \@ifundefined{T@mTT}{}
634 {%
635 \DeclareFontFamily{mTT}{cmtt}{\hyphenchar\font\m@ne}
636 \DeclareFontShape@TPSF[\ttscale@TPSF]{mTT}{cmtt}{m}{n}{cmtt}{8,9,10,12}
637
638 \DeclareFontShape@TPSF[\ttscale@TPSF]{mTT}{cmtt}{m}{it}{cmtt}{10}
639
640 \DeclareFontShape@TPSF[\ttscale@TPSF]{mTT}{cmtt}{m}{sl}{cmtt}{10}
641
642 \DeclareFontShape@TPSF[\ttscale@TPSF]{mTT}{cmtt}{m}{sc}{cmtt}{10}
643
644 \DeclareFontShape{mTT}{cmtt}{m}{ui}

```

```

645  {<->sub * cmtt/m/it}{ }
646
647  \DeclareFontShape{mTT}{cmtt}{bx}{n}
648  {<->sub * cmtt/m/n}{ }
649
650  \DeclareFontShape{mTT}{cmtt}{bx}{it}
651  {<->sub * cmtt/m/it}{ }
652
653  \DeclareFontShape{mTT}{cmtt}{bx}{ui}
654  {<->sub * cmtt/m/it}{ }
655
656  \DeclareFontFamily{mTT}{lcmitt}{\hyphenchar\font\m@ne}
657
658  \DeclareFontShape@TPSF[\ttscale@TPSF]{mTT}{lcmitt}{m}{n}{cmtt}{8,9,10,12}
659
660  \DeclareFontShape@TPSF[\ttscale@TPSF]{mTT}{lcmitt}{m}{it}{cmtt}{10}
661
662  \DeclareFontShape@TPSF[\ttscale@TPSF]{mTT}{lcmitt}{m}{sl}{cmtt}{10}
663
664  \DeclareFontShape@TPSF[\ttscale@TPSF]{mTT}{lcmitt}{m}{sc}{cmtt}{10}
665
666  \DeclareFontShape{mTT}{lcmitt}{m}{ui}
667  {<->sub * lcmitt/m/it}{ }
668
669  \DeclareFontShape{mTT}{lcmitt}{bx}{n}
670  {<->sub * lcmitt/m/n}{ }
671
672  \DeclareFontShape{mTT}{lcmitt}{bx}{it}
673  {<->sub * lcmitt/m/it}{ }
674
675  \DeclareFontShape{mTT}{lcmitt}{bx}{ui}
676  {<->sub * lcmitt/m/it}{ }
677
678  \DeclareFontFamily{mTT}{cmtl}{\hyphenchar\font\m@ne}
679
680  \DeclareFontShape{mTT}{cmtl}{m}{n}{%
681    <->s*\ttscale@TPSF cmtl10%
682  }{ }
683
684  \DeclareFontShape{mTT}{cmtl}{m}{sl}{%
685    <->s*\ttscale@TPSF cmtl10%
686  }{ }
687
688  \DeclareFontShape{mTT}{cmtl}{m}{it}{<->ssub*cmtl/m/sl}{ }
689 }

```

4.7 Math fonts

computer modern math italic.

```

690 \DeclareFontFamily{OML}{cmm}{\skewchar\font127}
691
692 \DeclareFontShape@TPSF[\mathscale@TPSF]{OML}{cmm}{m}{it}{cmmi}{5,6,7,8,9,10,12}
693
694 \DeclareFontShape@TPSF[\mathscale@TPSF]{OML}{cmm}{m}{Iit}{icmmi}{8}
695
696 \DeclareFontShape@TPSF[\mathscale@TPSF]{OML}{cmm}{b}{it}{cmmib}{5,7,10}
697
698 \DeclareFontShape{OML}{cmm}{bx}{it}%
699     {<->ssub*cmm/b/it}{}
700
701 \DeclareFontFamily{OML}{cmr}{\skewchar\font127 }
702 \DeclareFontShape{OML}{cmr}{m}{n}
703     {<->ssub * cmm/m/it}{}
704 \DeclareFontShape{OML}{cmr}{m}{it}
705     {<->ssub * cmm/m/it}{}
706 \DeclareFontShape{OML}{cmr}{m}{sl}
707     {<->ssub * cmm/m/it}{}
708 \DeclareFontShape{OML}{cmr}{m}{sc}
709     {<->ssub * cmm/m/it}{}
710 \DeclareFontShape{OML}{cmr}{bx}{n}
711     {<->ssub * cmm/b/it}{}
712 \DeclareFontShape{OML}{cmr}{bx}{it}
713     {<->ssub * cmm/b/it}{}
714 \DeclareFontShape{OML}{cmr}{bx}{sl}
715     {<->ssub * cmm/b/it}{}
716 \DeclareFontShape{OML}{cmr}{bx}{sc}
717     {<->ssub * cmm/b/it}{}
718
719 \DeclareFontFamily{OT1}{cmrm}{\hyphenchar\font=45}
720
721 \DeclareFontShape@TPSF[\mathscale@TPSF]{OT1}{cmrm}{m}{n}{cmr}{5,6,7,8,9,10,12,17}
722
723 \DeclareFontShape@TPSF[\mathscale@TPSF]{OT1}{cmrm}{m}{it}{cmti}{7,8,9,10,12}
724
725 \DeclareFontShape@TPSF[\mathscale@TPSF]{OT1}{cmrm}{bx}{n}{cmbx}{5,6,7,8,9,10,12}
726
727 \DeclareFontShape@TPSF[\mathscale@TPSF]{OT1}{cmrm}{bx}{it}{cmbxti}{10}
728
729 {%
730 \let\ecscale@TPSF\mathscale@TPSF
731
732 \DeclareFontFamily{T1}{cmrm}{}
733
734 \EC@family{T1}{cmrm}{m}{n}{ecrm}
735
736 \EC@family{T1}{cmrm}{m}{it}{ecti}
737
738 \EC@family{T1}{cmrm}{bx}{n}{ecbx}
739

```

```

740 \EC@family{T1}{cmrm}{bx}{it}{ecbi}
741 }
742
743 \DeclareFontFamily{OMS}{cmsy}{\skewchar\font48}
744
745 \DeclareFontShape@TPSF[\mathscale@TPSF]{OMS}{cmsy}{m}{n}{cmsy}{5,6,7,8,9,10}
746
747 \DeclareFontShape@TPSF[\mathscale@TPSF]{OMS}{cmsy}{b}{n}{cmbsy}{5,7,10}
748
749 \DeclareFontShape@TPSF[\mathscale@TPSF]{OMS}{cmsy}{m}{In}{icmsy}{8}
750
751 \DeclareFontFamily{OMS}{cmr}{\skewchar\font48 }
752 \DeclareFontShape{OMS}{cmr}{m}{n}
753     {<-> ssub * cmsy/m/n}{ }
754 \DeclareFontShape{OMS}{cmr}{m}{it}
755     {<-> ssub * cmsy/m/n}{ }
756 \DeclareFontShape{OMS}{cmr}{m}{sl}
757     {<-> ssub * cmsy/m/n}{ }
758 \DeclareFontShape{OMS}{cmr}{m}{sc}
759     {<-> ssub * cmsy/m/n}{ }
760 \DeclareFontShape{OMS}{cmr}{bx}{n}
761     {<-> ssub * cmsy/b/n}{ }
762 \DeclareFontShape{OMS}{cmr}{bx}{it}
763     {<-> ssub * cmsy/b/n}{ }
764 \DeclareFontShape{OMS}{cmr}{bx}{sl}
765     {<-> ssub * cmsy/b/n}{ }
766 \DeclareFontShape{OMS}{cmr}{bx}{sc}
767     {<-> ssub * cmsy/b/n}{ }
768
769 \DeclareFontFamily{OMX}{cmex}{ }
770
771 \DeclareFontShape@TPSF[\mathscale@TPSF]{OMX}{cmex}{m}{n}{cmex}{7,10}
    Euler fonts (eulervm style).
772 \DeclareFontFamily{U}{zeur}{\skewchar \font =127}
773
774 \DeclareFontShape@TPSF[\eulerscale@TPSF]{U}{zeur}{m}{n}{zeurm}{5,7,10}
775
776 \DeclareFontShape@TPSF[\eulerscale@TPSF]{U}{zeur}{b}{n}{zeurb}{5,7,10}
777
778 \DeclareFontShape{U}{zeur}{bx}{n}{<->ssub * zeur/b/n}{ }
779
780 \DeclareFontFamily{U}{zeus}{\skewchar \font =176}
781
782 \DeclareFontShape@TPSF[\eulerscale@TPSF]{U}{zeus}{m}{n}{zeusm}{5,7,10}
783
784 \DeclareFontShape@TPSF[\eulerscale@TPSF]{U}{zeus}{b}{n}{zeusb}{5,7,10}
785
786 \DeclareFontShape{U}{zeus}{bx}{n}{<->ssub * zeus/b/n}{ }
787

```

```

788 \DeclareFontFamily{U}{zeuex}{}
789
790 \DeclareFontShape{U}{zeuex}{m}{n}{
791   <->s* \eulerscale@TPSF zeuex10
792 }{}

computer modern bright math slanted.
793 \DeclareFontFamily{OML}{cmbrm}{\skewchar\font 127}
794
795 \DeclareFontShape@TPSF[\cmbrscale@TPSF]{OML}{cmbrm}{m}{it}{cmbrmi}{8,9,10}
796
797 \DeclareFontShape@TPSF[\cmbrscale@TPSF]{OML}{cmbrm}{b}{it}{cmbrmb}{10}
798
799 \DeclareFontFamily{OML}{cmbr}{\skewchar\font 127}
800
801 \DeclareFontShape{OML}{cmbr}{m}{it}{<->ssub*cmbrm/m/it}{}
802
803 \DeclareFontShape{OML}{cmbr}{sb}{it}{<->ssub*cmbrm/b/it}{}
804
805 \DeclareFontShape{OML}{cmbr}{bx}{it}{<->ssub*cmbrm/b/it}{}
806
807 \DeclareFontFamily{OT1}{cmbrmt}{\hyphenchar\font45}
808
809 \DeclareFontShape@TPSF[\cmbrscale@TPSF]{OT1}{cmbrmt}{m}{n}{cmbr}{8,9,10,17}
810
811 \DeclareFontShape@TPSF[\cmbrscale@TPSF]{OT1}{cmbrmt}{m}{sl}{cmbrsl}{8,9,10,17}
812
813 \DeclareFontShape{OT1}{cmbrmt}{m}{it}{%
814   <->ssub*cmbrmt/m/sl%
815 }{}
816
817 \DeclareFontShape@TPSF[\cmbrscale@TPSF]{OT1}{cmbrmt}{bx}{n}{cmbrbx}{10}
818
819 \DeclareFontFamily{T1}{cmbrmt}{}
820
821 \DeclareFontShape@TPSF[\cmbrscale@TPSF]{T1}{cmbrmt}{m}{n}{ebmr}{8,9,10,17}
822
823 \DeclareFontShape@TPSF[\cmbrscale@TPSF]{T1}{cmbrmt}{m}{sl}{ebmo}{8,9,10,17}
824
825 \DeclareFontShape{T1}{cmbrmt}{m}{it}{%
826   <->ssub*cmbrmt/m/sl%
827 }{}
828
829 \DeclareFontShape@TPSF[\cmbrscale@TPSF]{T1}{cmbrmt}{sb}{n}{ebsr}{8,9,10,17}
830
831 \DeclareFontShape@TPSF[\cmbrscale@TPSF]{T1}{cmbrmt}{sb}{sl}{ebso}{8,9,10,17}
832
833 \DeclareFontShape{T1}{cmbrmt}{sb}{it}{%
834   <->ssub*cmbrmt/sb/sl%
835 }{}

```

```

836
837 \DeclareFontShape{T1}{cmbrmt}{bx}{n}{%
838 <->sub*cmbrmt/sb/n%
839 }{}
840
841 \DeclareFontShape{T1}{cmbrmt}{bx}{it}{%
842 <->sub*cmbrmt/sb/it%
843 }{}
844
845 \DeclareFontFamily{OMS}{cmbrs}{\skewchar\font 48}
846
847 \DeclareFontShape@TPSF[\cmbrscale@TPSF]{OMS}{cmbrs}{m}{n}{cmbrsy}{8,9,10}
848
849 \DeclareFontShape{OMS}{cmbrs}{m}{b}{<->ssub*cmbrs/m/n}{}
850
851 \DeclareFontFamily{OMS}{cmbr}{\skewchar\font 48}
852
853 \DeclareFontShape{OMS}{cmbr}{m}{n}{<->ssub*cmbrs/m/n}{}
854
855 \DeclareFontShape{OMS}{cmbr}{m}{b}{<->ssub*cmbrs/m/n}{}
856
857 Concrete Math Italic
858 \DeclareFontFamily{OML}{ccm}{\skewchar\font127 }
859
860 \DeclareFontShape@TPSF[\mathscale@TPSF]{OML}{ccm}{m}{it}{xccmi}{5,6,7,8,9,10}
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862 \DeclareFontShape{OML}{ccm}{b}{it}{<->ssub * cmm/b/it}{}
863
864 \DeclareFontFamily{OML}{ccr}{\skewchar\font127 }
865
866 \DeclareFontShape{OML}{ccr}{m}{it}{<->ssub * ccm/m/it}{}
867
868 \DeclareFontShape{OML}{ccr}{bx}{it}{<->ssub * ccm/b/it}{}
869
870 \DeclareFontShape{OML}{ccr}{sbc}{it}{<->ssub * ccm/m/it}{}
871
872 \DeclareFontFamily{OMS}{ccsy}{\skewchar\font48 }
873
874 \DeclareFontShape@TPSF[\mathscale@TPSF]{OMS}{ccsy}{m}{n}{xccsy}{5,6,7,8,9,10}
875
876 \DeclareFontShape{OMS}{ccsy}{b}{n}{<->ssub * cmsy/b/n}{}
877
878 \DeclareFontFamily{OMS}{ccr}{\skewchar\font48 }
879
880 \DeclareFontShape{OMS}{ccr}{m}{n}{<->ssub * ccsy/m/n}{}
881
882 \DeclareFontShape{OMS}{ccr}{bx}{n}{<->ssub * ccsy/b/n}{}
883

```



```

884 \DeclareFontShape{OMS}{ccr}{sbc}{n}{<->ssub * ccsy/m/n}{}
885
886 \DeclareFontFamily{OMX}{ccex}{}
887
888 \DeclareFontShape{OMX}{ccex}{m}{n}{<->s*\mathscale@TPSF xccex10}{}

```

LaTeX symbols

```

889 \DeclareFontFamily{U}{lasy}{}
890
891 \DeclareFontShape@TPSF[\mathscale@TPSF]{U}{lasy}{m}{n}{lasy}{5,6,7,8,9,10}
892
893 \DeclareFontShape{U}{lasy}{b}{n}{
894     <->s* \mathscale@TPSF lasyb10
895 }{}

```

AMS fonts

```

896 \DeclareFontFamily{U}{msa}{}
897
898 \DeclareFontFamily{U}{msb}{}
899
900 \ifthenelse{\equal{\TPSFMathfont}{cmbrm}}
901 {%

```

AMS fonts should be available immediately, so they can be used in say panels.

```

902 \DeclareFontShape@TPSF[\cmbrscale@TPSF]{U}{msa}{m}{n}{cmbras}{8,9,10}%
903 \DeclareFontShape@TPSF[\cmbrscale@TPSF]{U}{msb}{m}{n}{cmbrbs}{8,9,10}%

```

On the other hand, the cmbright package redeclares them `\AtBeginDocument`, so we need to overwrite that change as well.

```

904 \AtBeginDocument
905 {%
906     \DeclareFontShape@TPSF[\cmbrscale@TPSF]{U}{msa}{m}{n}{cmbras}{8,9,10}%
907     \DeclareFontShape@TPSF[\cmbrscale@TPSF]{U}{msb}{m}{n}{cmbrbs}{8,9,10}%
908 }%
909 }
910 {%
911 \DeclareFontShape@TPSF[\mathscale@TPSF]{U}{msa}{m}{n}{msam}{5,7,10}
912
913 \DeclareFontShape@TPSF[\mathscale@TPSF]{U}{msb}{m}{n}{msbm}{5,7,10}
914 }
915
916 \DeclareFontFamily{U}{euex}{}
917
918 \DeclareFontShape{U}{euex}{m}{n}{
919     <->s* \eulerscale@TPSF euex10
920 }{}
921
922 \DeclareFontFamily{U}{euf}{}
923
924 \DeclareFontShape@TPSF[\eulerscale@TPSF]{U}{euf}{m}{n}{eufm}{5,7,10}
925

```

```

926 \DeclareFontShape@TPSF[\eulerscale@TPSF]{U}{euf}{b}{n}{eufb}{5,7,10}
927
928 \DeclareFontFamily{U}{eur}{\skewchar\font'177}
929
930 \DeclareFontShape@TPSF[\eulerscale@TPSF]{U}{eur}{m}{n}{eurm}{5,7,10}
931
932 \DeclareFontShape@TPSF[\eulerscale@TPSF]{U}{eur}{b}{n}{eurb}{5,7,10}
933
934 \DeclareFontFamily{U}{eus}{\skewchar\font'60}
935
936 \DeclareFontShape@TPSF[\eulerscale@TPSF]{U}{eus}{m}{n}{eusm}{5,7,10}
937
938 \DeclareFontShape@TPSF[\eulerscale@TPSF]{U}{eus}{b}{n}{eusb}{5,7,10}
    St Mary's Road symbol font.
939 \DeclareFontFamily{U}{stmry}{\}
940
941 \DeclareFontShape@TPSF[\mathscale@TPSF]{U}{stmry}{m}{n}{stmary}{5,6,7,8,9,10}
    Wasy symbol font.
942 \DeclareFontFamily{U}{wasy}{\}
943
944 \DeclareFontShape@TPSF[\mathscale@TPSF]{U}{wasy}{m}{n}{wasy}{5,6,7,8,9,10}
945
946 \DeclareFontShape{U}{wasy}{b}{n}
947 { <->s*\mathscale@TPSF wasyb10
948 }{\}
    formal script math symbols
949 \DeclareFontFamily{U}{rsfs}{\skewchar\font127 }
950
951 \DeclareFontShape@TPSF[\mathscale@TPSF]{U}{rsfs}{m}{n}{rsfs}{5,7,10}
    double stroke computer modern
952 \DeclareFontFamily{U}{dsrom}{\}
953
954 \DeclareFontShape@TPSF[\mathscale@TPSF]{U}{dsrom}{m}{n}{dsrom}{8,10,12}
955
956 \DeclareFontFamily{U}{dsss}{\}
957
958 \DeclareFontShape@TPSF[\mathscale@TPSF]{U}{dsss}{m}{n}{dsss}{8,10,12}
959
960 \endgroup
    Just to make sure in case these have been defined before...
961 \expandafter\let\csname OT1/cmr/m/n/10\endcsname\relax
962 \expandafter\let\csname OT1/cmr/m/n/10.95\endcsname\relax
963 \expandafter\let\csname OT1/cmr/m/n/12\endcsname\relax
964 \expandafter\let\csname T1/cmr/m/n/10\endcsname\relax
965 \expandafter\let\csname T1/cmr/m/n/10.95\endcsname\relax
966 \expandafter\let\csname T1/cmr/m/n/12\endcsname\relax

```

4.8 Font shape selection

4.8.1 Set text fonts

```
967 \newcommand{\setlcmssTextFonts@TPSF}  
968 {%  
969   \renewcommand{\familydefault}{\sfdefault}% Main text font is sans serif.  
970   \renewcommand{\sfdefault}{\lcmss}%          Choose lcmss as sans serif font.  
971   \renewcommand{\ttdefault}{\lcmstt}%          Typewriter font lcmstt.  
972 }  
973  
974 \newcommand{\setcmrTextFonts@TPSF}  
975 {%  
976   \renewcommand{\familydefault}{\rmdefault}% Main text font is roman.  
977   \renewcommand{\rmdefault}{\cmr}%            Choose cmr as roman font.  
978   \renewcommand{\ttdefault}{\cmstt}%          Typewriter font.  
979 }  
980  
981 \newcommand{\setcmfibTextFonts@TPSF}  
982 {%  
983   \renewcommand{\familydefault}{\rmdefault}% Main text font is roman.  
984   \renewcommand{\rmdefault}{\cmfib}%          Choose cmfib as roman font.  
985   \renewcommand{\ttdefault}{\cmstt}%          Typewriter font.  
986 }  
987  
988 \newcommand{\setcmssTextFonts@TPSF}  
989 {%  
990   \renewcommand{\familydefault}{\sfdefault}% Main text font is sans serif.  
991   \renewcommand{\sfdefault}{\cmss}%          Choose cmss as sans serif font.  
992   \renewcommand{\ttdefault}{\cmstt}%          Typewriter font.  
993 }  
994  
995 \newcommand{\setcmbrTextFonts@TPSF}  
996 {%  
997   \renewcommand{\familydefault}{\sfdefault}% Main text font is sans serif.  
998   \renewcommand{\sfdefault}{\cmbr}%          Choose cmss as sans serif font.  
999   \renewcommand{\ttdefault}{\cmstl}%          Light Typewriter font.  
1000 }  
1001  
1002 \newcommand{\setccrTextFonts@TPSF}  
1003 {%  
1004   \renewcommand{\familydefault}{\rmdefault}% Main text font is roman.  
1005   \renewcommand{\rmdefault}{\ccr}%          Choose ccr as roman font.  
1006   \renewcommand{\ttdefault}{\cmstt}%          Typewriter font.  
1007 }  
1008  
1009 \csname set\TPSFTextfont TextFonts@TPSF\endcsname
```

4.8.2 Configure Math fonts

```
1010 \newcommand{\setcmmMathFonts@TPSF}
```

```

1011 {%
1012   \SetSymbolFont{letters}      {normal}{OML}{cmm} {m}{it}
1013   \SetSymbolFont{symbols}      {normal}{OMS}{cmsy}{m}{n}
1014   \SetSymbolFont{largesymbols}{normal}{OMX}{cmex}{m}{n}
1015   \SetSymbolFont{letters}      {bold} {OML}{cmm} {b}{it}
1016   \SetSymbolFont{symbols}      {bold} {OMS}{cmsy}{b}{n}
1017 }
1018
1019 \newcommand{\setccmMathFonts@TPSF}
1020 {%
1021   \SetSymbolFont{letters}      {normal}{OML}{ccm} {m}{it}
1022   \SetSymbolFont{symbols}      {normal}{OMS}{ccsy}{m}{n}
1023   \SetSymbolFont{largesymbols}{normal}{OMX}{ccex}{m}{n}
1024   \SetSymbolFont{letters}      {bold} {OML}{ccm} {b}{it}
1025   \SetSymbolFont{symbols}      {bold} {OMS}{ccsy}{b}{n}
1026 }
1027
1028 \newcommand{\seteulerMathFonts@TPSF}
1029 {%
1030   \RequirePackage{eulervm}
1031   \def\tpc@ncel##1##2{\m@th\oalign{$\hfil##1/\hfil$\crcr$##1##2$}}
1032   \def\neq{\mathrel{\m@th\mathpalette\tpc@ncel=}}
1033   \DeclareSymbolFont{auxletters}{OML}{cmm}{m}{it}
1034   \SetSymbolFont{auxletters}{bold}{OML}{cmm}{b}{it}
1035   \DeclareMathSymbol{<}{\mathrel}{auxletters}{"3C}
1036   \DeclareMathSymbol{>}{\mathrel}{auxletters}{"3E}
1037 }
1038
1039 \newcommand{\setcmbrmMathFonts@TPSF}
1040 {%
1041   \SetSymbolFont{letters}      {normal}{OML}{cmbrm} {m}{it}
1042   \SetSymbolFont{symbols}      {normal}{OMS}{cmbrs}{m}{n}
1043   \SetSymbolFont{largesymbols}{normal}{OMX}{cmex}{m}{n}
1044   \SetSymbolFont{letters}      {bold} {OML}{cmbrm} {b}{it}
1045   \SetSymbolFont{symbols}      {bold}{OMS}{cmbrs}{b}{n}
1046 }
1047
1048 \csname set\TPSFMathfont MathFonts@TPSF\endcsname

```

4.8.3 Configure Operator fonts

```

1049 \ifthenelse{\equal{\TPSFMathfont}{euler}}
1050 {%
1051   \SetSymbolFont{operators}{normal}{\encodingdefault}{\TPSFOperatorfont}{m}{n}%
1052   \SetSymbolFont{operators}{bold}{\encodingdefault}{\TPSFOperatorfont}{bx}{n}%
1053 }
1054 {%
1055   \SetSymbolFont{operators}{normal}{OT1}{\TPSFOperatorfont}{m}{n}%
1056   \SetSymbolFont{operators}{bold}{OT1}{\TPSFOperatorfont}{bx}{n}%
1057 }

```

4.8.4 Alphabets for “text inside math”

```

1058 \DeclareMathAlphabet      {\mathbf}{\encodingdefault}{\TPSF0operatorfont}{bx}{n}
1059 \DeclareMathAlphabet      {\mathsf}{\encodingdefault}{\sfdefault}{m}{n}
1060 \DeclareMathAlphabet      {\mathit}{\encodingdefault}{\TPSF0operatorfont}{m}{it}
1061 \DeclareMathAlphabet      {\mathtt}{\encodingdefault}{\ttdefault}{m}{n}
1062 \SetMathAlphabet\mathsf{bold}{\encodingdefault}{\sfdefault}{bx}{n}
1063 \SetMathAlphabet\mathit{bold}{\encodingdefault}{\TPSF0operatorfont}{bx}{it}
1064 \SetMathAlphabet\mathtt{bold}{\encodingdefault}{\ttdefault}{bx}{n}

```

`\oldstylenums` follow in style the math font setting.

```

1065 \def\oldstylenums#1{%
1066   \begingroup
1067   \spaceskip\fontdimen\tw@\font
1068   \usefont{OML}{\TPSFMathfont}{\f@series}{it}%
1069   \mathgroup\symletters #1%
1070   \endgroup
1071 }

```

4.8.5 Configure doublestroke fonts

```

1072 \@ifpackageloaded{dsfont}
1073 {%
1074   \ifthenelse{\equal{\TPSF0operatorfont}{cmr}\or\equal{\TPSF0operatorfont}{cmrm}}
1075   {%
1076     \DeclareMathAlphabet{\mathds}{U}{dsrom}{m}{n}
1077   }
1078   {%
1079     \DeclareMathAlphabet{\mathds}{U}{dsss}{m}{n}
1080   }
1081 }{}%

```

Change History

v0.1	General: First version for the pre-alpha release of texpower. 4	v0.5	General: Added support for T1 encoding. 4
v0.2	General: Added support for stmaryrd fonts. 4	v0.6	General: Change of attitude: I found out how desolate the situation of most presentation packages is wrt fonts. Hence, instead of trying to be as minimally invasive as possible, tpslifonts will try to hijack every single font which might possibly be used in a presentation and replace it by something sensible. No ‘private’ ‘lcmr’ to replace “cmr”
v0.3	General: Rewritten to go without .fd files. Euler package dependence changed to eulervm. Added support for ams, lasy, wasysym, rsfs, dstroke fonts. . . 4		
v0.4	General: Added support for cm-bright math. 4		

any more - cmr is redefined no matter what. Now configures (almost) all fonts type1cm and type1ec do, plus concrete, cm-bright, and euler fonts. Added options “scale5pt”, “scale6pt”, “scale7pt” to bound the design sizes of fonts used. Added options “cmr”, “cmss”, “cm-bright” and “concrete” to choose text fonts different from lcmss. Improved handling of option incompatibilities.	4
v0.6a	
General: Removed some font warnings by selecting ‘silent’ forms of declaration.	4
v0.6b	
General: A small change making ‘cmbright’ AMS fonts useable before <code>\begin{document}</code>	4
v0.6c	
General: Added the option “cm-fib”.	4
v0.6d	
General: Moved to dtx format. No other code changes.	4

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