

The `textgreek` package*

Leonard Michlmayr
leonard.michlmayr at gmail.com

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Abstract

The \LaTeX package `textgreek` provides NFSS text symbols for greek letters. This way the author can use greek letters in text without changing to math mode. The usual font selection commands—e.g. `\textbf`—apply to these greek letters as to usual text and the font is upright in an upright environment. Further, `hyperref` can use these symbols in PDF-strings such as PDF-bookmarks.

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*This document corresponds to `textgreek` v0.5, dated 2011/04/08.

1 Introduction

The usual way to print greek letters in L^AT_EX uses the math mode. E.g. `\beta` produces β . With the default math fonts, the greek letters produced this way are *italic*. Generally, this is ok, since they represent variables and variables are typeset italic with the default math font settings. In some circumstances, however, greek letters don't represent variables and should be typeset upright. E.g. in “ β -decay” or “ μ A”.

The package `upgreek` provides commands to set upright greek letters in math mode, but it does not provide text symbols. You could use them in text with `\upbeta`-decay, for example, which gives β -decay, but the font will always be the same and will not be adapted to the surrounding font.

The package `textgreek` provides text commands for greek letters in text that adapt to the surrounding font. For example in bold text, **the command `\textbeta` gives β while `\upbeta` gives β** .

As textsymbols, greek letters can also be used in unicode PDF-strings, for example in PDF-bookmarks provided by the `hyperref` package. See section 4.

2 Usage

The following list shows the commands provided by this package. You can use these commands in any context.

<code>\textalpha</code>	α	<code>\texttau</code>	τ	<code>\textXi</code>	Ξ
<code>\textbeta</code>	β	<code>\textupsilon</code>	υ	<code>\textOmicron</code>	O
<code>\textgamma</code>	γ	<code>\textphi</code>	φ	<code>\textPi</code>	Π
<code>\textdelta</code>	δ	<code>\textchi</code>	χ	<code>\textRho</code>	P
<code>\textepsilon</code>	ϵ	<code>\textpsi</code>	ψ	<code>\textSigma</code>	Σ
<code>\textzeta</code>	ζ	<code>\textomega</code>	ω	<code>\textTau</code>	T
<code>\texteta</code>	η	<code>\textAlpha</code>	A	<code>\textUpsilon</code>	Υ
<code>\texttheta</code>	θ	<code>\textBeta</code>	B	<code>\textPhi</code>	Φ
<code>\textiota</code>	ι	<code>\textGamma</code>	Γ	<code>\textChi</code>	X
<code>\textkappa</code>	κ	<code>\textDelta</code>	Δ	<code>\textPsi</code>	Ψ
<code>\textlambda</code>	λ	<code>\textEpsilon</code>	E	<code>\textOmega</code>	Ω
<code>\textmu</code>	μ	<code>\textZeta</code>	Z		
<code>\textmugreek</code>	μ	<code>\textEta</code>	H	<code>\textvarsigma</code>	ς
<code>\textnu</code>	ν	<code>\textTheta</code>	Θ	<code>\straightphi</code>	ϕ
<code>\textxi</code>	ξ	<code>\textIota</code>	I	<code>\scripttheta</code>	ϑ
<code>\textomikron</code>	o	<code>\textKappa</code>	K	<code>\straighttheta</code>	θ
<code>\textpi</code>	π	<code>\textLambda</code>	Λ	<code>\straightepsilon</code>	ϵ
<code>\textrho</code>	ρ	<code>\textMu</code>	M		
<code>\textsigma</code>	σ	<code>\textNu</code>	N		

2.1 Package Options

You can choose the greek fonts used.

`cbgreek` use the default fonts. This option is the default. Font sample: $\alpha\beta\gamma\delta\epsilon$
 $\zeta\eta\theta\iota\kappa\lambda\mu\nu\xi\omicron\pi\rho\sigma\tau\upsilon\varphi\chi\psi\omega$ ABΓΔΕ ΖΗΘΙΚ ΛΜΝΞΟ ΠΡΣΤΥ ΦΧΨΩ ςφθθε

euler use the Euler fonts as a companion for all fonts except Helvetica. Font sample: αβγδε ζηθικ λμνξο πρστυ φχψω ΑΒΓΔΕ ΖΗΘΙΚ ΛΜΝΞΟ ΠΡΣΤΥ ΦΧΨΩ ςφθθε

artemisia use Artemisia fonts as a companion for all fonts except Helvetica and Euler. Font sample: αβγδε ζηθικ λμνξο πρστυ φχψω ΑΒΓΔΕ ΖΗΘΙΚ ΛΜΝΞΟ ΠΡΣΤΥ ΦΧΨΩ ςφθθε

2.2 Advanced commands

`\textgreekfontmap` The package provides a number of options that allows to select a font that will be used. The list of font substitutions is written to the log file. If you need to customize the font substitutions, you can redefine `\textgreekfontmap`. For example, the font map for the option `euler` may also be set by:

```
\renewcommand*{\textgreekfontmap}{
  {phv/*/*}{U/psy/*/*}
  {*/bx/n}{U/eur/b/n}
  {*/b/n}{U/eur/b/n}
  {*/*/n}{U/eur/m/n}}
```

The list contains pairs of options: the font spec (without the encoding) of the font to be replaced and the font spec (with encoding) of the font to be used as companion. The wildcard `*` may be used to match any family, series, or shape respectively. The first match is effective. Fonts that do not matched at all will be substituted with the same font-family, font-series, and font-shape in the encoding LGR. Since the Euler font (`eur`) does not use the encoding LGR, it has to be replaced by `U/eur/m/n`.

3 Examples

Most users will use this package to get upright greek letters, but you can use it for italic letters too: for example `\textit{\textdelta}` δ.

When you are using Helvetica, the font “Symbol” is used for greek letters: αβγδε ζηθικ λμνξο πρστυ φχψω ΑΒΓΔΕ ΖΗΘΙΚ ΛΜΝΞΟ ΠΡΣΤΥ ΦΧΨΩ ςφθθε

3.1 Use “β-decay” in a heading

The command used for the heading was

```
\subsection{Use \textquotedblleft\textbeta
-decay\textquotedblright {} in a heading}
```

4 Compatibility

If you use the package `hyperref` I recommend to use the option `unicode`, i.e. `\usepackage[unicode]{hyperref}`. `Hyperref` will recognize the `textgreek` letters and replace them with unicode in PDF-strings.

You can use `upgreek` and `textgreek` in the same document. If you want to use a `textgreek` letter inside a math environment, you can place it into an `\mbox` or `\textnormal`, or use `\text` from the package `amstext`, e.g. `\lambda_{\text{\textbeta}}`: λ_{β} .

5 Limitations

The variants θ , ϕ , and ϵ are not included in the LGR font encoding and ϵ is not included in Symbol either. For the commands `\straighttheta`, `\straightphi`, and `\straightepsilon` the missing symbols are substituted from OML/*/*/it or Euler.

You may need to customize `\textgreekfontmap` if you use other fonts than Computer Modern and Latin Modern.

The version number of this package is still below 1.0. Many details may still change from version to version.

6 Copyright

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This work has the LPPL maintenance status ‘author-maintained’.

The Current Maintainer of this work is Leonard Michlmayr.

This work consists of the file `textgreek.dtx` and the derived files `textgreek.sty` and `textgreek.pdf`

7 Implementation

Load the LGR font encoding.

```
1 \InputIfFileExists{lgrenc.def}{%
2 \PackageInfo{textgreek}{Loading the definitions for the Greek font%
3 encoding.}}{%
4 \PackageError{textgreek}{Cannot find the file lgrenc.def}{%
5 lgrenc.def is a file that contains the definitions for the Greek
6 font encoding LGR. Maybe it comes with the babel package.}}
```

7.1 Package Options

```
7 \DeclareOption{cbgreek}{%
8 \renewcommand*{\textgreekfontmap}{%
9 {eur/*/*}{U/eur/*/*}
10 {phv/*/*}{U/psy/*/*}}}%
11 \DeclareOption{euler}{%
12 \renewcommand*{\textgreekfontmap}{%
13 {phv/*/*}{U/psy/*/*}
14 {*/bx/n}{U/eur/b/n}}
```

```

15 {*/b/n}{U/eur/b/n}
16 {*/*/n}{U/eur/m/n}}}%
17 \DeclareOption{artemisia}{%
18 \renewcommand*{\textgreekfontmap}{%
19   {eur/*/*}{U/eur/*/*}
20   {phv/*/*}{U/psy/*/*}
21   {*/b/n}{LGR/artemisia/b/n}
22   {*/bx/n}{LGR/artemisia/bx/n}
23   {*/*/n}{LGR/artemisia/m/n}
24   {*/b/it}{LGR/artemisia/b/it}
25   {*/bx/it}{LGR/artemisia/bx/it}
26   {*/*/it}{LGR/artemisia/m/it}
27   {*/b/sl}{LGR/artemisia/b/sl}
28   {*/bx/sl}{LGR/artemisia/bx/sl}
29   {*/*/sl}{LGR/artemisia/m/sl}
30   {*/*/sc}{LGR/artemisia/m/sc}
31   {*/*/sco}{LGR/artemisia/m/sco}}}%

```

`\textgreekfontmap` Initialize `\textgreekfontmap`, set the default option and process the options.

```

32 \newcommand*{\textgreekfontmap}{}%
33 \ExecuteOptions{cbgreek}
34 \ProcessOptions\relax%
35 \PackageInfo{textgreek}{Loaded fontmap: \textgreekfontmap.}

```

7.2 Font selection

`\textgreek@findfont` Chose a companion font.

```

36 \def\textgreek@setfont#1/#2/#3/#4\relax{%
37 \textgreek@ematch{#1}{*}{-}{\fontencoding{#1}}%
38 \textgreek@ematch{#2}{*}{-}{\fontfamily{#2}}%
39 \textgreek@ematch{#3}{*}{-}{\fontseries{#3}}%
40 \textgreek@ematch{#4}{*}{-}{\fontshape{#4}}}%

```

Process a list of font substitutions.

```

41 \def\textgreek@eof{}%
42 \def\textgreek@return#1#2\textgreek@eof{%
43 \fi#1}%
44 \def\textgreek@ematch#1#2#3#4{%
45 \begingroup%
46 \edef\tempa{#1}\edef\tempb{#2}\def\tempc{*}%
47 \def\return##1##2\endgroup{\fi\endgroup##1}%
48 \ifx\tempa\tempb\return{#3}\fi%
49 \ifx\tempa\tempc\return{#3}\fi%
50 \iftrue\return{#4}\fi%
51 \endgroup}%
52 \def\textgreek@matchfont#1/#2/#3\relax#4#5{%
53 \textgreek@ematch{#1}{\f@family}{-}%
54 \textgreek@ematch{#2}{\f@series}{-}%
55 \textgreek@ematch{#3}{\f@shape}{#4}{#5}}%
56 {#5}}%
57 {#5}}%
58 }%
59 \def\textgreek@findfont@#1#2#3\textgreek@eof{%
60 \textgreek@matchfont#1\relax%

```

```

61 {\textgreek@setfont#2\relax}%
62 {\textgreek@findfont#3\textgreek@eof}}%
63 \def\textgreek@findfont#1\textgreek@eof{%
64 \begingroup%
65 \def\temp{#1}%
66 \def\return##1##2\endgroup{\fi\endgroup##1}%
67 \ifx\temp\textgreek@eof\else%
68 \return{\textgreek@findfont@#1\textgreek@eof}%
69 \fi\endgroup}%

```

`\textgreekfont` Select the greek font encoding and apply font replacements.

```

70 \newcommand*{\textgreekfont}{%
71 \fontencoding{LGR}%
72 \edef\textgreek@fontmap{\textgreekfontmap}%
73 \expandafter\textgreek@findfont\textgreek@fontmap\textgreek@eof%
74 \selectfont%
75 }%

```

`\lgrtoeuler` Convert LGR encoded characters to Euler's U encoding.

```

76 \newcommand*{\lgrtoeuler}[1]{%
77 \if G#1\textgreek@return{\char0}\fi%
78 \if D#1\textgreek@return{\char1}\fi%
79 \if J#1\textgreek@return{\char2}\fi%
80 \if L#1\textgreek@return{\char3}\fi%
81 \if X#1\textgreek@return{\char4}\fi%
82 \if P#1\textgreek@return{\char5}\fi%
83 \if S#1\textgreek@return{\char6}\fi%
84 \if U#1\textgreek@return{\char7}\fi%
85 \if F#1\textgreek@return{\char8}\fi%
86 \if Y#1\textgreek@return{\char9}\fi%
87 \if W#1\textgreek@return{\char10}\fi%
88 \if a#1\textgreek@return{\char11}\fi%
89 \if b#1\textgreek@return{\char12}\fi%
90 \if g#1\textgreek@return{\char13}\fi%
91 \if d#1\textgreek@return{\char14}\fi%
92 \if 3#1\textgreek@return{\char15}\fi element-of style epsilon
93 \if z#1\textgreek@return{\char16}\fi%
94 \if h#1\textgreek@return{\char17}\fi%

```

Euler provides two variants of theta: θ and ϑ . Use θ by default.

```

95 \if j#1\textgreek@return{\char18}\fi temperature style theta
96 \if i#1\textgreek@return{\char19}\fi%
97 \if k#1\textgreek@return{\char20}\fi%
98 \if l#1\textgreek@return{\char21}\fi%
99 \if m#1\textgreek@return{\char22}\fi%
100 \if n#1\textgreek@return{\char23}\fi%
101 \if x#1\textgreek@return{\char24}\fi%
102 \if p#1\textgreek@return{\char25}\fi%
103 \if r#1\textgreek@return{\char26}\fi%
104 \if s#1\textgreek@return{\char27}\fi%
105 \if t#1\textgreek@return{\char28}\fi%
106 \if u#1\textgreek@return{\char29}\fi%
107 \if v#1\textgreek@return{\char30}\fi o-slash style phi
108 \if q#1\textgreek@return{\char31}\fi%

```

```
109 \if y#1\textgreek@return{\char32}\fi%
110 \if w#1\textgreek@return{\char33}\fi%
```

Euler provides two variants of epsilon: ϵ and ε . Use ε by default.

```
111 \if e#1\textgreek@return{\char34}\fi%
112 \if 0#1\textgreek@return{\char35}\fi%
```

Euler provides two variants of phi: ϕ and φ . Use φ by default.

```
113 \if f#1\textgreek@return{\char39}\fi%
```

Use the default font for the LGR encoding, if the character does not exist in Euler.

```
114 \fontencoding{LGR}\selectfont #1%
115 \textgreek@eof}%
```

`\lgrtosymbol` Convert LGR encoded characters to Symbol's U encoding.

```
116 \newcommand*\lgrtosymbol}[1]{%
117 \if A#1\textgreek@return{A}\fi%
118 \if B#1\textgreek@return{B}\fi%
119 \if Q#1\textgreek@return{C}\fi%
120 \if D#1\textgreek@return{D}\fi%
121 \if E#1\textgreek@return{E}\fi%
122 \if F#1\textgreek@return{F}\fi%
123 \if G#1\textgreek@return{G}\fi%
124 \if H#1\textgreek@return{H}\fi%
125 \if I#1\textgreek@return{I}\fi%
126 \if O#1\textgreek@return{J}\fi%
127 \if K#1\textgreek@return{K}\fi%
128 \if L#1\textgreek@return{L}\fi%
129 \if M#1\textgreek@return{M}\fi%
130 \if N#1\textgreek@return{N}\fi%
131 \if 0#1\textgreek@return{O}\fi%
132 \if P#1\textgreek@return{P}\fi%
133 \if J#1\textgreek@return{Q}\fi%
134 \if R#1\textgreek@return{R}\fi%
135 \if S#1\textgreek@return{S}\fi%
136 \if T#1\textgreek@return{T}\fi%
137 \if U#1\textgreek@return{U}\fi%
138 \if c#1\textgreek@return{V}\fi%
139 \if W#1\textgreek@return{W}\fi%
140 \if X#1\textgreek@return{X}\fi%
141 \if Y#1\textgreek@return{Y}\fi%
142 \if Z#1\textgreek@return{Z}\fi%
143 \if a#1\textgreek@return{a}\fi%
144 \if b#1\textgreek@return{b}\fi%
145 \if q#1\textgreek@return{c}\fi%
146 \if d#1\textgreek@return{d}\fi%
147 \if e#1\textgreek@return{e}\fi%
148 \if v#1\textgreek@return{f}\fi%
149 \if g#1\textgreek@return{g}\fi%
150 \if h#1\textgreek@return{h}\fi%
151 \if i#1\textgreek@return{i}\fi%
152 \if f#1\textgreek@return{j}\fi%
153 \if k#1\textgreek@return{k}\fi%
154 \if l#1\textgreek@return{l}\fi%
155 \if m#1\textgreek@return{m}\fi%
```

```

156 \if n#1\textgreek@return{n}\fi%
157 \if o#1\textgreek@return{o}\fi%
158 \if p#1\textgreek@return{p}\fi%
159 \if j#1\textgreek@return{q}\fi%
160 \if r#1\textgreek@return{r}\fi%
161 \if s#1\textgreek@return{s}\fi%
162 \if t#1\textgreek@return{t}\fi%
163 \if u#1\textgreek@return{u}\fi%
164 \if w#1\textgreek@return{w}\fi%
165 \if x#1\textgreek@return{x}\fi%
166 \if y#1\textgreek@return{y}\fi%
167 \if z#1\textgreek@return{z}\fi%

```

Use the default font for the LGR encoding, if the character does not exist in Symbol.

```

168 \fontencoding{LGR}\selectfont #1%
169 \textgreek@eof}%

```

\TextGreek Produce a greek letter using the correct font. If the font is Euler or Symbol, convert to the appropriate font encoding.

```

170 \DeclareRobustCommand*\TextGreek}[1]{%
171 \begingroup%
172 \textgreekfont%
173 \edef\tempa{\f@family}%
174 \def\tempb{eur}\def\tempc{psy}%
175 \ifx\tempa\tempb\textgreek@return{\lgrtoeuler#1}\fi%
176 \ifx\tempa\tempc\textgreek@return{\lgrtosymbol#1}\fi%
177 #1%
178 \textgreek@eof%
179 \endgroup}%

```

7.3 List of greek letters

\DeclareTextGreekSymbol Define the symbol name with `\DeclareTextCommandDefault`.

```

180 \newcommand*\DeclareTextGreekSymbol}[2]{%
181 \expandafter\DeclareTextCommandDefault\csname text#1\endcsname%
182 {\TextGreek{#2}}}%

183 \DeclareTextGreekSymbol{alpha}{a}
184 \DeclareTextGreekSymbol{beta}{b}
185 \DeclareTextGreekSymbol{gamma}{g}
186 \DeclareTextGreekSymbol{delta}{d}
187 \DeclareTextGreekSymbol{epsilon}{e}
188 \DeclareTextGreekSymbol{zeta}{z}
189 \DeclareTextGreekSymbol{eta}{h}
190 \DeclareTextGreekSymbol{theta}{j}
191 \DeclareTextGreekSymbol{iota}{i}
192 \DeclareTextGreekSymbol{kappa}{k}
193 \DeclareTextGreekSymbol{lambda}{l}

```

\textmu Don't redefine `\textmu` if it is also provided by another package. Use `\textmugreek` if you mean the greek letter rather than the micro symbol of the `textcomp` package.

```

194 \expandafter\ifx\csname?\string\textmu\endcsname\relax%
195 \DeclareTextGreekSymbol{mu}{m}\fi

```



```

196 \DeclareTextGreekSymbol{\mugreek}{m}

197 \DeclareTextGreekSymbol{\nu}{n}
198 \DeclareTextGreekSymbol{\xi}{x}
199 \DeclareTextGreekSymbol{\omikron}{o}
200 \DeclareTextGreekSymbol{\pi}{p}
201 \DeclareTextGreekSymbol{\rho}{r}

\textsigma
202 \DeclareTextGreekSymbol{\sigma}{s\noboundary}

\textvarsigma
203 \DeclareTextGreekSymbol{\varsigma}{c}

204 \DeclareTextGreekSymbol{\tau}{t}
205 \DeclareTextGreekSymbol{\upsilon}{u}
206 \DeclareTextGreekSymbol{\phi}{f}
207 \DeclareTextGreekSymbol{\chi}{q}
208 \DeclareTextGreekSymbol{\psi}{y}
209 \DeclareTextGreekSymbol{\omega}{w}
210 \DeclareTextGreekSymbol{\Alpha}{A}
211 \DeclareTextGreekSymbol{\Beta}{B}
212 \DeclareTextGreekSymbol{\Gamma}{G}
213 \DeclareTextGreekSymbol{\Delta}{D}
214 \DeclareTextGreekSymbol{\Epsilon}{E}
215 \DeclareTextGreekSymbol{\Zeta}{Z}
216 \DeclareTextGreekSymbol{\Eta}{H}
217 \DeclareTextGreekSymbol{\Theta}{J}
218 \DeclareTextGreekSymbol{\Iota}{I}
219 \DeclareTextGreekSymbol{\Kappa}{K}
220 \DeclareTextGreekSymbol{\Lambda}{L}
221 \DeclareTextGreekSymbol{\Mu}{M}
222 \DeclareTextGreekSymbol{\Nu}{N}
223 \DeclareTextGreekSymbol{\Xi}{X}
224 \DeclareTextGreekSymbol{\Omikron}{O}
225 \DeclareTextGreekSymbol{\Pi}{P}
226 \DeclareTextGreekSymbol{\Rho}{R}
227 \DeclareTextGreekSymbol{\Sigma}{S}
228 \DeclareTextGreekSymbol{\Tau}{T}
229 \DeclareTextGreekSymbol{\Upsilon}{U}
230 \DeclareTextGreekSymbol{\Phi}{F}
231 \DeclareTextGreekSymbol{\Chi}{Q}
232 \DeclareTextGreekSymbol{\Psi}{Y}
233 \DeclareTextGreekSymbol{\Omega}{W}

```

7.4 Variants

`\straightphi` The phi symbol ϕ is a variant of phi φ . Sometimes this variant is used specifically, e.g. in quantum field theory. The Unicode code point is U+03D5.

```

234 \DeclareTextCommand{\straightphi}{PU}%
235 {\83\325} % U+03D5 GREEK PHI SYMBOL

```

The greek fonts aim at greek text therefore the phi symbol is not included. I use the math symbol for italic fonts and euler else.

```

236 \DeclareTextCommandDefault{\straightphi}{%
237 \begingroup\textgreekfont%
238 \edef\tempa{\f@family}%
239 \edef\tempb{\f@shape}%
240 \def\tempc{eur}\def\tempd{psy}%
241 \def\tempe{it}%
242 \ifx\tempa\tempc\textgreek@return{\lgrtoeuler{v}}\fi%
243 \ifx\tempa\tempd\textgreek@return{\lgrtosymbol{v}}\fi%
244 \ifx\tempb\tempe\textgreek@return{%
245   \fontencoding{OML}\selectfont\char30}\fi%
246 \fontencoding{U}\fontfamily{eur}\selectfont\lgrtoeuler{v}%
247 \textgreek@eof%
248 \endgroup}%

```

`\scripttheta` The theta symbol ϑ is a variant of theta θ . The Unicode code point is U+03D1. It is available as `\scripttheta`.

```

249 \DeclareTextCommand{\scripttheta}{PU}%
250   {\83\321}% U+03D1 GREEK THETA SYMBOL
251 \DeclareTextCommandDefault{\scripttheta}{%
252 \begingroup\textgreekfont%
253 \edef\tempa{\f@family}%
254 \edef\tempb{\f@shape}%
255 \def\tempc{eur}\def\tempd{psy}%
256 \def\tempe{it}%
257 \ifx\tempa\tempc\textgreek@return{\lgrtoeuler{0}}\fi%
258 \ifx\tempa\tempd\textgreek@return{\lgrtosymbol{0}}\fi%
259 j% default theta in cbgreek and artemisia
260 \textgreek@eof%
261 \endgroup}%

```

`\straighttheta` The theta θ is presumably the common variant of theta ϑ . The cbgreek fonts and artemisia use the script variant.

```

262 \DeclareTextCommand{\straighttheta}{PU}%
263   {\83\270} % U+03B8 GREEK THETA SYMBOL
264 \DeclareTextCommandDefault{\straighttheta}{%
265 \begingroup\textgreekfont%
266 \edef\tempa{\f@family}%
267 \edef\tempb{\f@shape}%
268 \def\tempc{eur}\def\tempd{psy}%
269 \def\tempe{it}%
270 \ifx\tempa\tempc\textgreek@return{\lgrtoeuler{j}}\fi%
271 \ifx\tempa\tempd\textgreek@return{\lgrtosymbol{j}}\fi%
272 \ifx\tempb\tempe\textgreek@return{%
273   \fontencoding{OML}\selectfont\char18}\fi%
274 \fontencoding{U}\fontfamily{eur}\selectfont\lgrtoeuler{j}%
275 \textgreek@eof%
276 \endgroup}%

```

`\straightepsilon` The epsilon ϵ is a variant of epsilon ε .

```

277 \iffalse\fi % U+03F5 GREEK LUNATE EPSILON SYMBOL
278 \DeclareTextCommand{\straightepsilon}{PU}{\83\365}%

```

```

279 \DeclareTextCommandDefault{\straightepsilon}{%
280 \begingroup\textgreekfont%
281 \edef\tempa{\f@family}%
282 \edef\tempb{\f@shape}%
283 \def\tempc{eur}\def\tempd{psy}%
284 \def\tempe{it}%
285 \ifx\tempa\tempc\textgreek@return{\lgrtoeuler{3}}\fi%
286 \ifx\tempa\tempd\textgreek@return{%
287 \fontfamily{eur}\fontseries{b}\selectfont\lgrtoeuler{3}}\fi%
288 \ifx\tempb\tempe\textgreek@return{%
289 \fontencoding{OML}\selectfont\char15}\fi%
290 \fontencoding{U}\fontfamily{eur}\selectfont\lgrtoeuler{3}}%
291 \textgreek@eof%
292 \endgroup}%

```

8 Change History

v0.1	fontmap.	4
General: Initial Version	<code>\lgrtoeuler</code> : Change the default variant for theta to θ	1 6
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v0.3	<code>\lgrtosymbol</code> : recognize that the U-font-encoding of Symbol differs from LGR in some points	7
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v0.4	<code>\straightepsilon</code> : New symbol ϵ	10
<code>\TextGreek</code> : Avoid the ligature that changes sigma to a word-final sigma with the help of <code>\noboundary</code>	<code>\straightphi</code> : New symbol ϕ	8 9
<code>\textmu</code> : Don't override <code>textcomp</code> 's <code>\textmu</code>	<code>\straighttheta</code> : New symbol θ	8 10
Don't provide <code>\textmicro</code> anymore.	<code>\textgreek@findfont</code> : Allow wildcards in fontsspecs.	8 5
v0.5	<code>\textgreekfontmap</code> : The new font matching macros support the wildcard <code>*</code>	5
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