

Using Greek Fonts with L^AT_EX

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modified for L^AT_EX2 ϵ by

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January 16, 2004

Abstract

In this document I hope to show that typesetting Greek in L^AT_EX using the `lgreek` package (and the `gr` fonts) can be as easy as typesetting English text, and leads to equally good results. This is meant to be a tutorial, not an exhaustive discussion; some T_EXnical remarks that should be useful after the reader has acquired some familiarity with the fonts are printed in fine print.

1 The Alphabet

In order to typeset Greek text, you need to go into “Greek mode.” This is achieved by typing `\begin{greek}` anywhere in your document; Greek mode will remain in effect until you type a matching `\end{greek}`. While in Greek mode, the letters ‘a’ to ‘z’ and ‘A’ to ‘Z’ come out as Greek letters, according to the following code:

α	β	γ	δ	ϵ	ζ	η	θ	ι	κ	λ	μ	ν	ξ	\omicron	π	ρ	ς	τ	υ	ϕ	χ	ψ	ω
a	b	g	d	e	z	h	j	i	k	l	m	n	x	o	p	r	s	t	u	f	q	y	w

There is no digamma yet. The same character ‘s’ will print as ‘ σ ’ or ‘ ς ’, depending on its position in a word.

The system does this by accessing a ligature of ‘s’ with any other letter that follows it. If, for some reason, you want to print an initial/medial sigma by itself (as in the table above), or at the end of a word, you should type ‘c’.

Try to typeset some simple text now. Create a file containing the following lines:

```

\documentclass{article}
\usepackage{lgreek}
\begin{document}
This is English text.
\begin{greek}
This is Greek text.
\end{greek}
\end{document}

```

When you \TeX this file, you get the following gibberish:

This is English text. Της ις Γρεεκ τεξτ.

If you give the `delims` option for the package then the character `$` can be used in place of both `\begin{greek}` and `\end{greek}`, as eg

```

This is English text.
$This is Greek text.$

```

The control sequences `\(...\)` are still available for in-text math.

2 Accents and Breathings

To get an acute, grave or circumflex accent over a vowel, type `'`, ``` or `~`, respectively, before the vowel. To get a rough or smooth breathing, type `<` or `>` before the vowel (or rho) and any accent that it may have. To get an iota subscript, type `|` *after* the vowel. A diaeresis is represented by `"`, and if accompanied by an accent it can come before or after the accent.

For example, `>en >arq\~h| >\~hn <o l'ogon` gives ἐν ἀρχῇ ἦν ὁ λόγος. Neat, ain't it?

Accents and breathings, too, are typeset by means of ligatures: a vowel with a breathing, an accent and iota subscript, for example, is realized as a four-character ligature. The only exception is when a breathing is followed by a grave accent, in which case the breathing + accent combination is typeset as a \TeX `\accent` over the vowel. This means that words containing such combinations cannot be hyphenated in (standard) \TeX ; but this is not a problem because, with the exception of very rare cases of crasis, all such words are monosyllables.

3 Punctuation

Here's the table of correspondences for punctuation:

.	,	·	:	!	;	'	«	»
.	,	;	:	!	?	''	(())

The last three entries represent the apostrophe and quotations marks. The other available non-letters are the ten digits, parentheses, brackets, hyphen, em- and en-dashes, slash, percent sign, asterisk, plus and equal signs. All of these are accessible in the usual way. In a future release there will be tick marks for numbers ($\alpha' = 1$, $\alpha = 1000$).

