

Documentation for the `betababel.sty` package

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Abstract

The `betababel.sty` package extends the `polutonikogreek` option of the `babel` package. It provides the possibility to directly type or paste in ancient greek texts with diacritical characters coded by the common Beta Code convention.

This file documents version 0.2 of `betababel.sty`.

1 Introduction

Although the \LaTeX typesetting system is often used especially for its capabilities of displaying fancy formulas in scientific texts, there are plenty of other possible uses. Whoever wants a smooth layout made (almost) by itself freeing time to care for the content, but for its form, would use \LaTeX , *if* other specific needs are satisfied as well. One (maybe very) specific, but nevertheless requested need is the possibility to type ancient greek texts. These texts use not only the greek alphabet, but special diacritics. As those are usually not supported as input characters, there exist some transliteration codes to describe the greek characters and diacritics represented by latin characters and ASCII signs. One very common code has been defined by the `THESAURUS LINGVAE GRAECAE`; its called Beta Code. (For the full documentation of the code, see <http://www.tlg.uci.edu/>)

The Beta Code assigns to every greek letter one latin letter, diacritical characters are coded by braces, slashes and other signs (see table below). All latin input letters, uppercase or lowercase, are handled as lowercase; greek uppercase letters are coded by an asterisk prefix. Ex.: `*w` = Ω (uppercase omega). To place one or more special characters over (or in case of the iota subscript under) a greek letter, they have to directly follow the letter to be placed on. There is an order to be respected in placing the diacritics: First comes (if there is) the spiritus or the diaeresis, then the accent and, finally, a iota subscriptum, eventually. Caution: For some reason (unknown to me), if the letter to whom the diacritics belong is an uppercase letter, the diacritical signs have to be placed between the asterisk and the letter, i.e. *before* the letter! Ex.: `*/a` = \AA (uppercase

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alpha with smooth breathing and acute accent); a)/ = $\check{\alpha}$ (lowercase alpha with smooth breathing and acute accent).

Code table

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

Though, for example, the semicolon ';' has another meaning in greek than in latin, it is still the same sign and thus the punctuation remains almost unchanged in Beta Code with the exception of the ':' that becomes '·'.

Code for the diacritics

smooth breathing (spiritus lenis))
rough breathing (spiritus asper)	(
diaeresis	+
acute accent	/
grave accent	\
circumflex accent	=
iota subscriptum	

In section 2.2 you can find some examples for Beta Code text and the usage of betababel.

2 Betababel

2.1 Loading the package

The `betababel.sty` package is an extension to the widely used `babel` package that, therefore, has to be correctly installed. To use betababel the `betababel.sty` file has to be in a directory searched by your L^AT_EX-system and your document must contain the line `\usepackage[language option(s)]{betababel}` in its preamble. The possible language options are exactly the same as those of the `babel` package. By default betababel uses the `polutonikogreek` option of the `babel` package. If your text is written in another language, you should give the right option; for example for a mostly english text that contains some ancient greek passages, type: `\usepackage[english]{betababel}`.

Since betababel internally loads the `babel` package by itself, there *must not* be a `\usepackage[...]{babel}` command in your document preamble. If, for example, you had a `\usepackage[english,german]{babel}` in your document, just replace it by `\usepackage[english,german]{betababel}`.

2.2 Usage and examples

The `betabel.sty` package provides two slightly different ways to insert Beta Code input into your L^AT_EX-Document. You can enclose the Beta Code in an environment using `\begin{betacode}` and `\end{betacode}` or you can pass the Beta Code through the argument of the `\bcode{}` command.

2.3 The betacode environment

The `betacode` environment inserts some vertical space before and after the Beta Code input. The amount of this space can be set through the length `\betaskip`. All paragraphs within the `betacode` environment will be indented as normal.

The text used for the following example has been taken from the THESAURUS LINGVAE GRAECAE. URL: <http://www.tlg.uci.edu/>

ἄνδρα μοι ἔννεπε, Μοῦσα, πολύτροπον, ὃς μάλα πολλὰ
πλάγχθη, ἐπεὶ Τροίης ἱερὸν πτολίεθρον ἔπερσε·

These lines have been produced by

```
\begin{betacode}
*)/ANDRA MOI E)/NNEPE, *MOU=SA, POLU/TROPON, O(\S MA/LA POLLA\
PLA/GXQH, E)PEI\ *TROI/HS I(ERO\N PTOLI/EQRON E)/PERSE:
\end{betacode}
```

2.4 The bcode command

The argument of the `\bcode` command will be inserted in the output exactly where the command appears, i. e. without any extra space before or after it. Paragraphs in the Beta Code (= blank line) are converted to line breaks and aren't indented.

The text used for the following example has been taken from the PERSEUS Project. URL: <http://www.perseus.tufts.edu/>

Here starts the odyssee: ἄνδρα μοι ἔννεπε, μοῦσα, πολύτροπον, ὃς μάλα πολλὰ
πλάγχθη, ἐπεὶ Τροίης ἱερὸν πτολίεθρον ἔπερσεν· To be continued...

These lines have been produced by

```
Here starts the odyssee: \bcode{
a)/ndra moi e)/nnepe, mou=sa, polu/tropon, o(\s ma/la polla\
pla/gxqh, e)pei\ *troi/hs i(ero\n ptoli/eqron e)/persen:}
To be continued\dots
```

2.5 Features

Placing of the diacritics As mentioned before, there is a difference in placing the diacritics on an uppercase or on a lowercase letter. But as there are some sources that don't respect this rule, betababel doesn't handle this strictly. It allows you to place the diacritics before or after an uppercase letter (if they are placed before *and* after the letter, the after ones are omitted).

Inner-word and final sigma As defined in Beta Code, there is only one latin representation for both the inner-word and final sigma characters. Betababel therefore recognizes by itself which one's to be used. Beta Code, however, provides a way to determine explicitly the sigma by a suffix number: `s1` represents the inner-word sigma and `s2` the final sigma. For example: `\bcode{*}ana/basis s1 s2}` gives 'Ανάβασις σ ζ .

Note: Sometimes it's found that the letter `j` is used to represent the final sigma. This, however, is not conform to the Beta Code convention. Therefore you shouldn't use it in your Beta Code texts. Since betababel handles the sigma automatically, you don't need an extra representation like `j`. If betababel finds a `j`, it displays a warning, but you can continue the typesetting by typing the return key; then, in most of the cases, the `j` will just be omitted.

Hyphenation Betababel simply converts the Beta Code to the input code for the `polutonikogreek` option of the `babel` package. Thus, it benefits from the hyphenation capabilities of `babel`.