

# Greek support for Babel

Günter Milde

2020/11/10

The babel option `<greek>` activates the support for the Greek language defined in the file `<greek.ldf>` (source `<greek.dtx>`).

Typesetting Greek texts requires a font containing Greek letters. With the XeTeX or LuaTeX engines, the user must ensure that the selected font contains the required glyphs (the default Latin Modern fonts miss most of them).

## 1 Language Switch

The declaration `\selectlanguage` switches between languages.

Τί φής; Ἴδὼν ἐνθ' ἔδε παῖδ' ἐλευθέραν τὰς πλησίον Νύμφας στεφανοῦσαν, Σώστρατε, ἔρῳ ἀπῆλθες εὐθύς;

The command `\foreignlanguage` sets its second argument in the language specified as first argument. This is intended for short text parts like Βιβλιοθήκη.

## 2 Font Encoding

Every language switch to `greek` calls the `\extrasgreek` command which in turn calls `\greekscript` to ensure a Greek-supporting font encoding (LGR or TU). At this point, the `<greekfontencoding>` is LGR.

LGR has Greek characters in the slots reserved in a TeX *standard text font encoding*. Therefore, the Babel core defines the declaration `\latintext` and the command `\textlatin` to switch to the TU, T1 or OT1 font encoding or typeset the argument using this encoding. At this point, the `<latinencoding>` is OT1.

With the Unicode font encoding TU, Latin characters can be used in Greek text parts and input via the `<LGR Latin transcription>` is not possible.

The following quote mixes Latin transcription and Greek literal characters:

Φίλων τοῦ TeX (EΦT) – Friends (Φίλων) of TeX.

### 3 LICR Macros

Babel defines macros for several autogenerated strings so that they may appear in the chosen language. *babel-greek* uses LICR<sup>1</sup> macros in order to let the string macros work independent of the font encoding.

If `\greekfontencoding` is TU, *babel-greek* loads Greek LICR definitions from the file `tuenc-greek.def` provided by `greek-fontenc` since version 0.14 (2020-02-28).

With this setup, it is also possible to use accent macros instead of pre-composed Unicode characters for letters with diacritics.

#### 3.1 Captions

Πρόλογος, Αναφορές, Περίληψη, Βιβλιογραφία, Κεφάλαιο, Παράρτημα, Περιεχόμενα, Κατάλογος Σχημάτων, Κατάλογος Πινάκων, Ευρετήριο, Σχήμα, Πίνακας, Μέρος, Συνημμένα, Κοινοποίηση, Προς, Σελίδα, βλέπε, βλέπε επίσης, Απόδειξη, Γλωσσάρι

Test correct upcasing (dropping of accents):

ΠΡΟΛΟΓΟΣ, ΑΝΑΦΟΡΕΣ, ΠΕΡΙΛΗΨΗ, ΒΙΒΛΙΟΓΡΑΦΙΑ, ΚΕΦΑΛΑΙΟ, ΠΑΡΑΡΤΗΜΑ, ΠΕΡΙΕΧΟΜΕΝΑ, ΚΑΤΑΛΟΓΟΣ ΣΧΗΜΑΤΩΝ, ΚΑΤΑΛΟΓΟΣ ΠΙΝΑΚΩΝ, ΕΥΡΕΤΗΡΙΟ, ΣΧΗΜΑ, ΠΙΝΑΚΑΣ, ΜΕΡΟΣ, ΣΥΝΗΜΜΕΝΑ, ΚΟΙΝΟΠΟΙΗΣΗ, ΠΡΟΣ, ΣΕΛΙΔΑ, ΒΛΕΠΕ, ΒΛΕΠΕ ΕΠΙΣΗΣ, ΑΠΟΔΕΙΞΗ, ΓΛΩΣΣΑΡΙ

#### 3.2 Months

10 Ιανουαρίου 2020  
10 Φεβρουαρίου 2020  
10 Μαρτίου 2020  
10 Απριλίου 2020  
10 Μαΐου 2020  
10 Ιουνίου 2020  
10 Ιουλίου 2020  
10 Αυγούστου 2020  
10 Σεπτεμβρίου 2020  
10 Οκτωβρίου 2020  
10 Νοεμβρίου 2020  
10 Δεκεμβρίου 2020

### 4 Greek Numerals (α' to ,λ,ι,θλιθ')

See `greek.pdf` for the formation rules of Greek numerals. Some examples:

α', β', γ', δ', ε', ς', ζ', η', θ', ι', ια', ιβ', κ', τμε', φ', ,αλιζ', ,βιγ'

A', B', Γ', Δ', E', Γ', Z', H', Θ', I', IA', IB', K', TME', Φ', ,ΑλιΖ', ,ΒιΓ'

<sup>1</sup>LaTeX internal character representation

Enumerated lists use Greek characters/numerals in the second and fourth level:

1. ιτεμ 1
  - (α) ιτεμ 1.1
    - i. ιτεμ 1.1.1
      - A'. ιτεμ 1.1.1.1
      - B'. ιτεμ 1.1.1.2
    - ii. ιτεμ 1.1.2

This may be problematic with fonts that only partially support Greek and miss the numeral signs (dexiakeraia and aristerikeraia).

You may redefine the commands `\textdexiakeraia` and `\textaristerikeraia` to some substitute characters. Or, if you prefer the “normal” enumeration, write in the preamble after loading babel:

```
\makeatletter
\addto\extrasgreek{\let\@alph\latin@alph
\let\@Alph\latin@Alph}
\makeatother
```