

Test the Greek support for Babel

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

1 Language Switch

The declaration `\selectlanguage` switches between languages.

Τί φήις; Ιδών ἐνθέδε παῖδ' ἐλευθέρων τὰς πλησίον Νύμφας στεφανοῦσαν, Σώστρατε, ἐρῶν ἀπῆλθες εὐθύς;

The macro `\foreignlanguage` sets its second argument in the specified language. This is intended for short text parts or single words like Βιβλιοθήκη.

There should be no inserted space before or after the language switch (may happen if there are unescaped linebreaks in the font or language definitions):

Change script with `\ensuregreek`: |δοῦλος|. Change language with `\foreignlanguage`: |δοῦλος|.

2 Font Encoding

In Greek text parts, the font encoding is automatically set to LGR if an 8-bit TeX engine is used. (See `test-unicode-greek.tex` for usage of babel-greek with XeTeX or LuaTeX.)

LGR has Greek characters in the slots reserved in a TeX *standard text font encoding*. This means you need an explicit font encoding change for every Latin letter and some other symbols if the current font encoding is LGR.

Babel defines the declaration `\latintext` and the command `\textlatin` to switch to the T1 or OT1 font encoding or typeset the argument using this encoding.

Switching to a font encoding supporting the Greek script is possible without switching the Babel language using the declarations `\greekscript` (no switch if the current encoding supports Greek script (e.g. the Unicode font encoding TU)) or `\greektext` (always switch to LGR) and the corresponding macros `\ensuregreek` or `\textgreek`. These commands do not start a new paragraph:

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

`greek.ldf` has some workarounds, so that macros relying on Latin characters in standard positions keep working. We test, that these definitions do not overwrite the selection of pre-composed characters for “copyright” and “registered trademark” by `textcomp` (try copy and paste from the PDF output):

Latin: A & O, © ® ™

Greek (LGR): A & Ω, © ® ™ or input as macro A & Ω, © ® ™.

The ampersand should also work in mathematical mode: 1&2

To prevent Roman numerals being typeset in Greek letters we need to adopt the internal LaTeX commands. Note that this may cause errors when roman numerals are used in a situation where the macros need to be expanded:

Latin: i, ii, iii, iv, ..., mcmlxxv I, II, III, IV, ..., MCMLXXV

Greek: i, ii, iii, iv, ..., mcmlxxv I, II, III, IV, ..., MCMLXXV

3 MakeUppercase, MakeLowercase

Capital Greek letters have diacritics (except the dialytika and sub-iota) to the left (instead of above) and drop them in uppercase, e.g. μάϊστρος → ΜΑΪΣΤΡΟΣ.

Upcased letters with diacritics keep the dialytika. This is implemented for all input variants of diacritics with dialytika. (`greek.1df` has *composite command* definitions to ensure this also works for accent characters "upcased" to the character No 159.)

Tonos and dasia mark a *hiatus* (break-up of a diphthong) if placed on the first vowel of a diphthong (άι, áυ, éι, ē̄ι, áυ, é̄ι). A dialytika must be placed on the second vowel if they are dropped: (ΑΪ, ΑΎ, ΕΪ, ΑΪ, ΑΎ, ΕΪ).

άνωλος \mapsto ΑΓΓΛΟΣ, άνωλος \mapsto ΑΓΓΛΟΣ, μάινα \mapsto ΜΑΪΝΑ, κέικ, \mapsto ΚΕΪΚ άυπνία \mapsto ΑΓΓΗΝΙΑ

There are several alternative styles for the capitalized sub-iota.

In order to let the Up/Downcasing work also with the Latin transcription defined by the LGR font encoding, “babel-greek” also defines lc/uccodes for non-standard assignments:

100% \rightarrow 0%

The uppercase of the zero-width space at the place of “v” is kept to point to the glyph at the position of “V”, the Dasia-Oxia accent (՞):

greek-1.3i 2000/10/02: uc code of 'v' is switched to V so that mixed text appears correctly in headers

Use \textcompwordmark: not $\alpha_0 \mapsto A^{\circ}\Upsilon$ but $\alpha_0 \mapsto A\Upsilon$

The following subsections test `MakeUppercase` and `MakeLowercase` with all characters defined in `lgrenc.dfu`.

3.1 Greek and Coptic

Characters of the Greek and Coptic Unicode Block:

΅; ΉΑ·ΕΗΤΟΥΤΩΔΑΒΓΔΕΖΗΘΙΚΑΛΜΝΞΟΠΡΣΤΥΦΧΨΩΪΫΩΔΦλ
άέήίύαβγδεζηθικαλμνξοπρστυφχψωΪΫΩΔΦλ

MakeUppercase:

΅; ΉΑ·ΕΗΙΟΥΤΩΔΑΒΓΔΕΖΗΘΙΚΑΛΜΝΞΟΠΡΣΤΥΦΧΨΩΪΫΩΔΦλ
ΑΕΗΙΫΑΒΓΔΕΖΗΘΙΚΑΛΜΝΞΟΠΡΣΣΤΥΦΧΨΩΪΫΩΔΦλ