

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 φής; Ἰδὼν ἐνθ' ἔδε παῖδ' ἐλευθέρων τὰς πλησίον Νύμφας στεφανοῦσαν, Σώστρατε, ἔρῳ 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.

The Babel core 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 encodings EU1, EU2)) 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 (LGR): Α & Ω, © ® ™, © ® ™
 Latin: A & O.

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

Capital Greek letters have diacritics (except the dialytika and sub-iota) to the left (instead of above) and drop them in uppercase, e.g. $\mu\alpha\acute{\iota}\sigma\tau\rho\omicron\varsigma \mapsto \text{ΜΑΪΣΤΡΟΣ}$.

[illegible]

ἄνυλος \mapsto AŲΛOΣ, ἄυλος \mapsto AŲΛOΣ, μάϊνα \mapsto MAĬNA, κείκ, \mapsto KEĬK ἄυπνία \mapsto AŲPINIA

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:

$$\begin{array}{ccccccc} / & .. & \backslash & \circ & \circ & & \\ , & , & , & , & , & \mapsto & , \\ & & & & & & , \\ & & & & & & , \\ & & & & & & , \\ & & & & & & , \\ & & & & & & , \end{array}$$

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

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:

' , ; ' " A · E ' H T O ' Y Ω A B Γ Δ E Z H Θ I K Λ M N Ξ O Π P Σ T Y Φ X Ψ Ω Ĩ Ÿ ϑ τ ϕ λ
 á é ĭ ú á β γ δ ε ζ η θ ι κ λ μ ν ξ ο π ρ σ τ υ φ χ ψ ω ð ö ö ú ý ϑ ϕ τ ϕ λ

MakeUppercase:

ὧς· Ἄ·Ε·Η·Ι·Ο·Υ·Ω·Ἰ·Α·Β·Γ·Δ·Ε·Ζ·Η·Θ·Ι·Κ·Λ·Μ·Ν·Ξ·Ο·Π·Ρ·Σ·Τ·Υ·Φ·Χ·Ψ·Ω·Ἰ·Υ·Ρ·Τ·Φ·Λ·
 Α·Ε·Η·Ι·Υ·Α·Β·Γ·Δ·Ε·Ζ·Η·Θ·Ι·Κ·Λ·Μ·Ν·Ξ·Ο·Π·Ρ·Σ·Σ·Τ·Υ·Φ·Χ·Ψ·Ω·Ἰ·Υ·Ο·Υ·Ρ·Τ·Φ·Λ·

Letters and sub-iota upcased, other diacritics except dialytika dropped.

There is no capital Koppa in LGR, therefore \mathfrak{k} is left unchanged with MakeUppercase.

MakeLowercase:

‘,; ‘ά-έήίούώϊαβγδεζηθικλμνξοπρστυφχψωϊϋφϕλ
άέήίύαβγδεζηθικλμνξοπρςστυφχψωϊϋόύφϕλ

The lowercase of Σ is the «auto-sigma» (`\textautosigma`): $\Sigma\Sigma \mapsto \sigma\varsigma$. Add a ZWNJ or use the `\noboundary` macro to prevent conversion to final sigma: $\sigma\sigma$. The lowercase of GREEK LETTER STIGMA Υ is ς not `\textvarsigma` (ζ).

3.2 Greek extended

Characters of the Greek extended Unicode block:

[illegible]

MakeUppercase:

A A A A A A A A A A A A A A A
E E E E E E E E E E
H H H H H H H H H H H H H H H
I I I I I I I I I I I I I I I
O O O O O O O O O O O O
Y Y Y Y Y Y Y Y Y Y Y Y
Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q

A A E E H H I I O O T T Ω Ω
 A₁ A₁ A₁ A₁ A₁ A₁ A₁ A₁ A₁ A₁ A₁ A₁ A₁ A₁ A₁ A₁
 H₁ H₁ H₁ H₁ H₁ H₁ H₁ H₁ H₁ H₁ H₁ H₁ H₁ H₁ H₁ H₁
 Ω₁ Ω₁ Ω₁ Ω₁ Ω₁ Ω₁ Ω₁ Ω₁ Ω₁ Ω₁ Ω₁ Ω₁ Ω₁ Ω₁ Ω₁ Ω₁
 Ā Ā A₁ A₁ A₁ A₁ A₁ Ā Ā A₁ A₁ ,
 ¨ H₁ H₁ H₁ H H₁ E E H H H₁
 İ İ İ İ İ İ İ İ İ İ
 Ÿ Ÿ Ÿ Ÿ P P T T Ÿ Ÿ T T T P ...
 Ω₁ Ω₁ Ω₁ Ω Ω₁ O O Ω Ω Ω₁

MakeLowercase:

ǎ ǎ ǎ ǎ ǎ ǎ ǎ ǎ ǎ ǎ ǎ ǎ ǎ ǎ ǎ ǎ
 è è è è è è è è è è
 ħ ħ ħ ħ ħ ħ ħ ħ ħ ħ ħ ħ ħ ħ
 ï ï ï ï ï ï ï ï ï ï ï ï ï ï
 ó ó ò ò ò ó ó ò ò ò
 ù ù ù ù ù ù ù ù ù ù ù ù
 ǎ ǎ ǎ ǎ ǎ ǎ ǎ ǎ ǎ ǎ ǎ ǎ ǎ ǎ ǎ ǎ
 ǎ ǎ ǎ ǎ ǎ ǎ ǎ ǎ ǎ ǎ ǎ ǎ ǎ ǎ ǎ ǎ
 ħ ħ ħ ħ ħ ħ ħ ħ ħ ħ ħ ħ ħ ħ
 ǎ ǎ ǎ ǎ ǎ ǎ ǎ ǎ ǎ ǎ ǎ ǎ ǎ ǎ ǎ ǎ
 ǎ ǎ ǎ ǎ ǎ ǎ ǎ ǎ ǎ ǎ ǎ ǎ ǎ ǎ ǎ ǎ
 ~ ˘ ħ ħ ħ ħ è é ħ ħ ˘ ˘
 ï ï ï ï ï ï ï ï ï ï ï ï ï ï
 ı ı ı ı ı ı ı ı ı ı ı ı ı ı
 ò ɸ ɸ ɸ ò ó ò ɸ ɸ

4 Babel Strings

Babel defines macros for several autogenerated strings so that they may appear in the choosen language. babel-greek uses LICRs in order to let the string macros work independent of the font encoding, in both 8-bit and Unicode-aware TeX.

4.1 Captions

Προοίμιον, Αναφοραί, Περίληψις, Βιβλιογραφία, Κεφάλαιον, Παράρτημα, Περιεχόμενα, Κατάλογος σχημάτων, Κατάλογος πινάκων, Εύρετήριον, Σχῆμα, Πίναξ, Μέρος, Συνημμένως, Κοινοποίησις, Πρὸς, Σελίς, ὅρα, ὅρα ὡσαύτως, Ἀπόδειξις, Γλωσσάριον,

4.2 Months

28 Ἰανουαρίου 2020
 28 Φεβρουαρίου 2020
 28 Μαρτίου 2020
 28 Ἀπριλίου 2020
 28 Μαΐου 2020

28 Ιουνίου 2020
28 Ιουλίου 2020
28 Αυγούστου 2020
28 Σεπτεμβρίου 2020
28 Οκτωβρίου 2020
28 Νοεμβρίου 2020
28 Δεκεμβρίου 2020

5 Greek Numerals

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

$\alpha', \beta', \gamma', \delta', \epsilon', \zeta', \eta', \theta', \iota', \kappa', \lambda', \mu', \nu', \xi', \omicron', \pi', \rho', \sigma', \tau', \upsilon', \phi', \chi', \psi', \omega'$

$A', B', \Gamma', \Delta', E', \Sigma', Z', H', \Theta', I', IA', IB', K', TME', \Phi', \Lambda\Lambda\Omega Z', \beta\iota\gamma'$

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

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