

Test LGR font encoding definitions

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The file `lgrenc.def` provides a comprehensive set of macros to typeset Greek with LGR encoded fonts. It works for both, monotonic and polytonic Greek, independent of the *Babel* package.

The example from `usage.tex` in *babel-greek* input using the LICR macros:

Τί φήμις; Ίδων ἐνθέδε παιδ' ἐλευθέρων
τὰς πλησίον Νύμφας στεφανοῦσαν, Σώστρατε,
ἐρῶν ἀπῆλθες εὐθύς;

1 Symbols

See the source file [lgrenc-test.tex](#) for the macros used to access the symbols.

1.1 Generic text symbols

Latin: + - = < > — { [()] } \ | %₀₀ %₀₀₀ □

LGR: + - = < > — { [()] } \ | %₀₀ .. (Per-mille symbol is missing in LGR.)

Quotes:¹ «a» «α», ‘a’ ‘α’, “a” “α” (double quotes wrong with Kerkis fonts)

Single guillemots and base-quotes («a» „a”, ‘a’) are missing in LGR.

Ligature break up: AY fi ATY ī ↪ AY fi AT Y ī

Spacing accent chars: ^a ^α ^ī ~a ~α ~ī ~a ~α ~ī "a "α "ī "a "α "ī "a "α "ī "a "α "ī

Symbols for SI-units: 5 μm, 5 kΩ; 5 μm, 5 kΩ; but never italic: 5 μm

Letter schwa and Euro symbol: ο, €

Some symbol definitions expect a Latin font. *babel-greek* redefines them with `\latintext`, however this macro is not guaranteed to be defined, so it should not be used in a font encoding definition file. The `textcomp.sty` package provides copyright, registered, and trademark symbols for use with any font encodings.

¹Single quotes need special attention to prevent conversion to accents. Test the input conventions: ‘α’ ‘α’ ‘α’ ‘α’ but not ‘ά’ ‘έ’ ‘ī’

(Like any other Latin character, the “sharp s” (β) is not save to use when LGR is the active font encoding.)

Latin: © ® ™ SS (uppercase of β).

LGR (with textcomp): © ® ™ ΣΣ (uppercase of β).

1.2 Greek alphabet

Greek letters via Latin transcription and LICR macros:

A B Γ Δ E Z H Θ I K Λ M N Ξ O Π P Σ T Υ Φ X Ψ Ω

α β γ δ ε ζ η θ ι ς λ μ ν ξ ο π ρ σ τ υ φ χ ψ ω

A B Γ Δ E Z H Θ I K Λ M N Ξ O Π P Σ T Υ Φ X Ψ Ω

α β γ δ ε ζ η θ ι ς λ μ ν ξ ο π ρ σ τ υ φ χ ψ ω

The small sigma is set with a different glyph if it ends a word:

σ textsigma

ς textfinalsigma or textvarsigma

In the Latin transcription, the letter ‘s’ stands for `\textautosigma` which automatically chooses the glyph according to the position.

1.3 Additional Greek symbols

Ϙ textkoppa

Ϙ textqoppa (archaic koppa)

Ϙ textQoppa (archaic Koppa)

Ϛ textstigma

Ϛ textvarstigma

Ϛ textStigma (Sigma-Tau-Ligature in CB-fonts)²

Ϻ textsampi

Ϻ textSampi

Ϝ textdigamma

Ϝ textDigamma

՚ textdexiakeria | ՚ textnumeralsigngreek (Dexia keraia)

, textaristerikeraia | , textnumeralsignlowergreek (Aristeri keraia)

1.4 symbol variants

Mathematical notation distinguishes variant shapes for pi ($\pi|\varpi$), rho ($\rho|\varrho$), theta ($\theta|\vartheta$), beta, and kappa (characters for the latter two symbols are not included in TeX’s math fonts). These variations have no syntactic meaning in Greek text

²the name “stigma” originally applied to a medieval sigma-tau ligature, whose shape was confusingly similar to the cursive digamma

and are not given code-points in the LGR encoding. Greek text fonts use the shape variants interchangeably.

2 Diacritics

Capital Greek letters have Greek diacritics (except the dialytika and sub-iota) to the left (instead of above) and drop them if text is set in UPPERCASE. This is implemented for all combinations that are used in Greek texts (i.e. for which pre-composed Unicode character exist), but not for, e.g., $\tilde{\Omega}$.

Different conventions exist for the treatment of the sub-iota with uppercase letters. The CB-Fonts use a capital Iota “index” (A_I , H_I , Ω_I).

³ LaTeX standard accents (Latin, Greek, Greek Capitals → UPPERCASE)

Additional Greek diacritics (Greek, Greek Capitals⁴ ↪ UPPERCASE)

À È Ì Í Ë Ë Æ Ø Ø Ú Ú Ï Ï Ï H O O Y Ø A I

‘A ‘E ‘I ‘H “O ”O ”Y ”Ω A_I ↪ A E I H O O Y Ω A_I

Input variants and their conversion with MakeUppercase:

Ӯ Ӯ Ӯ, Ӱ Ӱ Ӱ Ӱ Ӱ, ӷ ӷ ӷ ӷ ӷ ӷ, Ӹ Ӹ Ӹ Ӹ Ӹ, ӹ ӹ ӹ ӹ ӹ, ӻ ӻ ӻ ӻ ӻ, Ӽ Ӽ Ӽ Ӽ Ӽ, ӽ ӽ ӽ ӽ ӽ, Ӿ Ӿ Ӿ Ӿ Ӿ, ӿ ӿ ӿ ӿ ӿ, ӿ ӿ ӿ ӿ ӿ

A A A, A A A A A, H H H H H_i, H H, I I, I I, I I
 Υ Υ, Υ Υ, Υ Υ, Ω Ω, Ω Ω, Ω Ω, Ω Ω, A_i A_j

Ἄξιος ἐστὶ οὐδὲν τὸ οὐδὲν, αὐτὸς δὲ πάντα τὰ οὐδένα.

$$\text{''A ''A ''A ''A} \rightarrow \text{A A A A}$$

Input variants and their conversion with MakeLowercase:

~Τ ~Τ, ~Ω, ~Ω, ~Ω ~Ω, ~Ω ~Ω, A_I A_I A_I
~~~~~ ω ω ω ω ω ω ω ω

“Λ “Λ “Λ “Λ ← ॥ ॥ ॥ ॥

<sup>3</sup>The ogonek (*little hook*) accent (‘) is not defined in LGB.

<sup>4</sup>The dialytika is not used on Initial letters.

The tilde character can be used in combined accents. However, in documents not defining the Babel language *greek* or *polotonikogreek*, better use the tilde-accent macro, as the tilde produces a no-break space if converted with \MakeUppercase or \MakeLowercase:

combined accent with tilde character:

```
˜ ˜ ˜ ˜ ˜ → “ I I ” Y Y Y  
˜ I ˜ Y ˜ Y ˜ → “ i i ” u u u ˜
```

combined accent with tilde-accent macro:

```
˜ ˜ → ˜ ˜  
˜ ˜ → ˜ ˜
```

Accents input via the Latin transliteration are not dropped with MakeUppercase, unless Babel is loaded and the current language is Greek (because the required local re-definitions of the `uccode` are done in `greek.1df` from the *babel-greek* package).

```
á ī á á á → ‘A ˜ ‘A ‘A ‘A A,
```

Accent macros can start with \a instead of \ when the short form is redefined, e.g. inside a *tapping* environment. This also works for the locally defined Dasia and Psili shortcuts \< and \>:

|       |       |      |      |
|-------|-------|------|------|
| COL1  | COL2  | COL3 | COL4 |
| COL1  |       | COL3 |      |
| Viele | Grüße | á    | ᷑    |

Combinations with named accents: á á á.

The dialytika must be kept in UPPERCASE, e.g.

```
μάστρος → MAΪΣΤΡΟΣ or εὐζωΐα → ΕΤΖΩΪΑ.
```

This is implemented for all input variants of diacritics with dialytika:

```
í í í ü û û → ˜ ˜ ˜ ˜ ˜ ˜,
```

Tonos and dasia mark a *hiatus* (break-up of a diphthong) if placed on the first vowel of a diphthong (á, áv, ét). A dialytika must be placed on the second vowel if they are dropped: (AΪ, AŶ, EΪ).

```
άλος → AŶΛΟΣ, ᾶλος → AŶΛΟΣ, μάνα → MAΪNA, κέικ, → KEΪK  
άπνία → AŶΠΝΙΑ
```

Test the auto-hiatus feature for side-effects:

A B (must keep space after A).

Kerning (see the input):

AO AΨ AI AΥ PA OA TA ΔΥ  
AO AΨ AI AΥ PA OA TA ΔΥ [  
AO AΨ AΪ AΪ PA OA TA ΔΥ [  
AO AΨ AΪ AΪ PA OA TA ΔΥ [  
AO AΨ AΪ AΪ PA OA TA ΔΥ [  
AO AΨ AΪ AΪ PA OA TA ΔΥ [  
AO AΨ AΪ AΪ PA OA TA ΔΥ [  
AO AΨ AΪ AΪ PA OA TA ΔΥ [  
AO AΨ AI AΥ PA OA TA ΔΥ [  
AO AΨ AI AΥ PA OA TA ΔΥ [  
AO AΨ AI AΥ PA OA TA ΔΥ [  
AO AΨ AI AΥ PA OA TA ΔΥ [  
AO AΨ AI AΫ PA OA ŸA ΔΥ [  
ÄO ÄΨ ÄI ÄΥ PÄ ÖA ŸA TÄ ΔÜ  
ÄO ÄΨ ÄI ÄΥ PÄ ÖA ŸA TÄ ΔÜ

Rows 3 . . . 7: Look-ahead (to check for a hiatus) breaks kerning before A with Tonos or Psili.

Rows 15 and 16: Like in any font encoding, there is no kerning for non-defined accent-letter-combinations (dialytica on A O Δ).

Downcasing should keep diacritics (of course, it cannot regenerate “manually” dropped ones): ‘A Ī Ÿ ”A → å ï ü ö