

# Greek diacritics with standard accent macros

Günter Milde

7th December 2015

The font encoding definition file `lgrenc.def` defines LICR macros for all non-ASCII characters in the LGR font encoding. Greek accent macros have names starting with `\acc` followed by the Greek accent name as used in the Unicode standard (e.g. `\acctonos`). The standard symbol accents `\' \' \~` behave according to Greek typography if used in the LGR font encoding.

The *textalpha* or *alphabetalpha* packages define the symbol macros `\<` and `\>` as alias for the breathings (Dasia and Psili).<sup>1</sup> With these packages, all Greek diacritics can be input as backslash followed by the LGR transliteration.<sup>2</sup>

The example in `greek-usage.pdf`:

Τί φῆμι; Ἰδὼν ἐνθ' ἔδε παῖδ' ἐλευθέραν τὰς πλησίον Νύμφας στεφανοῦσαν, Σώστρατε, ἐρῶν  
ἀπ' ἁλθες εὐθύς;

can be input as

```
T\`i f\`hic? \<Id\`wn \>enj\`ede pa\~id\`  
\>eleuj\`eran t\`ac plhs\`ion N\`umfac stefano\~usan,  
S\`wstrate, \>er\~wn \`ap\~hljec e\>uj\`uc?
```

Improvements over the ligature-based approach in LGR:

- Accents can be placed on any character:<sup>3</sup> ᾱ ῒ ΐ ῔ ῥ ῑ ῒ
  - Kerning is preserved
- |                  | roman | italic       | cbleipzig    |
|------------------|-------|--------------|--------------|
| accent macro:    | αὐτός | <i>αὐτός</i> | <i>aútós</i> |
| transliteration: | αὐτός | <i>aútós</i> | <i>aútós</i> |

Like in any font encoding, kerning only works with pre-composed glyphs:

ΑῖΑ ≠ ΑῖΑ, ΑῖΑ ≠ ΑῖΑ.

- Compatible with `hyperref` (see `greekhyperref.pdf`).
- Following Greek typesetting convention, diacritics (except the dialytika) are placed to the left of capital letters and dropped by `\MakeUppercase`:

άντροπος ↦ ANTPOΠOΣ, ἄντροπος ↦ ANTPOΠOΣ,  
Αχιλλέας ↦ AXIΛΛEΑΣ, Ἀχιλλεύς ↦ AXIΛΛEΥΣ.

The dialytika is printed even in cases where it's not needed in lowercase:

άλος ↦ ΑῖΛOΣ, ἄλος ↦ ΑῖΛOΣ, μάινα ↦ ΜΑῖΝΑ,  
κέικ ↦ ΚΕῖΚ, ἄπνια ↦ ΑῖΠΝΙΑ.

<sup>1</sup>The definition of the macros `\<` and `\>` was moved from the font definition file `greek-fontenc.def` to `textalpha.sty` in order to avoid clashes with local definitions of this macros in documents using the LGR font encoding via `fontenc` or `babel`.

<sup>2</sup>This makes it easy to follow the advice in *teubner-doc*: “typeset your paper with the regular accent vowel ligatures and [...] substitute them in the final revision with the accented vowel macros only in those instances where the lack of kerning is disturbing”.

<sup>3</sup>In `babel-greek` versions < 1.4, Babel's *polutonikogreek* option re-defined `\~` (even for Latin with `\textlatin`). This document reverted the `babel-greek` definition in the preamble to make the tilde/perispomeni-accent work as usual in both, English (νῖῶ νῖῶ) and Greek .

Composite diacritics can be specified as named macro, backslash + LGR transliteration, or combined accent macros, e.g.  $\tilde{\alpha}$  can be written as

`\accpsiliperispomeni{a}`, `\~>a`, `\>~a`, `\~\>{a}`, or `\~\>a`.

However, braces in composite accents (`\~{\>a}`, `\~{>a}`, or `\~{\>{a}}`) lead to errors.

`\MakeUppercase` works with most input variants but fails with a tilde in a document which does **not** define the `greek` or `polutonikogreek` language with Babel (which fixes the ucode for characters used in the LGR transliteration). Combining “symbol macros” (`\>\~`) or reversing the order (`\~>`) is safe.

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

Τί φής; Τί φής;  
Ἰδὼν ἐνθέδε παῖδ