

Greek diacritics with standard accent macros

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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).¹ With these packages, all Greek diacritics can be input as backslash followed by the LGR transliteration.²

The example in `babel/contrib/greek/usage.pdf`:

Τί φῆμι; Ἰδὼν ἐνθῆδε παῖδ' ἐλευθέραν τὰς πλησίον Νύμφας στεφανοῦσαν, Σώστρατε, ἐρῶν
ἀπῆλθες 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:³ ᾗ ᾘ ᾙ ᾚ ᾛ ᾜ ᾝ ᾞ ᾟ
 - Kerning is preserved
- | | roman | italic | cbleipzig |
|------------------|-------|---------------|---------------|
| accent macro: | αὐτός | <i>αὐτός</i> | <i>au̇tós</i> |
| transliteration: | αὐτός | <i>au̇tós</i> | <i>au̇tós</i> |

Like in any font encoding, kerning only works with pre-composed glyphs:
 $\text{A}\tilde{\text{Y}}\text{A} \neq \text{A}\tilde{\text{Y}}\text{A}$, $\text{A}\text{V}\text{A} \neq \text{A}\text{V}\text{A}$.

- 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 \mapsto ANTPOΠOΣ, ἄντροπος \mapsto ANTPOΠOΣ,
Αχιλλέας \mapsto AXIΛΛEΑΣ, Ἀχιλλεύς \mapsto AXIΛΛEΥΣ.

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

άλος \mapsto AṲΛOΣ, ἄλος \mapsto AṲΛOΣ, μάινα \mapsto MAṲNA,
κέικ \mapsto KEṲK, ἄπνία \mapsto AṲΠNIA.

¹The 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`.

²This 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”.

³In `babel-greek` versions < 1.4 , Babel's `polutonikogreek` option re-defined `\~` (even for Latin with `\textlatin`). This document reverted the `babel` 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