

## Macros

### The bag of tricks

Victor Eijkhout

Yo! Home boys and girls.

Another installment of the bag of tricks, this time with some stuff about hyphenation.

Sometimes you want to prevent hyphenation at a hyphen. Inserting a `\nobreak` doesn't work. Reader Sonja Maus alerted me to this, and gave as a solution `\hbox{-}`.

The New York Times uses a typesetting system that produces with disturbing regularity the hyphenation "do-n't". (Question for wizards: why doesn't  $\TeX$  produce this hyphenation?) The following macro provides a solution to this problem: with

```
\def\nt'\{\discretionary{}{not}{n't}}
typing
do\nt'
gets hyphenated as if it were written "do not". Try
for instance the following input:
\spaceskip=3.3pt plus 1.2pt
\setbox0\hbox{I'm perturbed seeing
  words that do}
\hsize\wd0 \parindent0pt
I'm perturbed seeing words
that do\nt' hyphenate correctly\par

\setbox0\hbox{I'm perturbed seeing
  words that don't}
\hsize\wd0
I'm perturbed seeing words
that do\nt' hyphenate correctly\par
```

The third item in this Bag of Tricks is a homework project.  $\TeX$ 's hyphenation has been giving people trouble for ages, and clever solutions have been known for some time. Here's a way of dealing with problems that was used in German [3] and Dutch [1] extensions to  $\LaTeX$ , and that can be adapted for many more applications.

If  $\TeX$  finds discretionary hyphens `\-` or explicit hyphens `-` in a word, no other hyphenation positions will be considered. This can be awkward. People have solved this by redefining the double quote as an active character, so that you write

the Zielknijper"-Plrwtskofsky theory

and either of the long names will still be considered for hyphenation. By defining combination of the

double quote with other characters you can achieve other effects. Here are some possibilities, but all of this is subject to taste and to particular applications.

"a (or with any other vowel) gives a disappearing syllable break, which occurs in Dutch and German and older English texts: co"ordinate hyphenates as co-ordinate. (Even more cute, in Dutch be"inken looks like 'beinken' and hyphenates as be-inken.)

"" gives a break position that will hyphenate without a hyphen. I use this in bibliographies to enable a break in expressions such as '123(1988)'.

"! will give a double quote when you need that character, for instance in  $\TeX$ 's hexadecimal notation.

"' ... '" can be implemented as language-specific opening and closing quotes. The implementation below is for old-style English.

Here are the macros.

```
\gdef\allowhyphens
{\penalty\@M \hskip\z@\relax}
{\catcode'\ "=12 \gdef\hex{"}}
\catcode'\ "=13
\def "#1{\ifx#1%
\discretionary{-}{i}{\accent'177 \i}}%
\else\ifx#1-%
\allowhyphens-\penalty\z@\allowhyphens
\else\ifx#1'""%
\else\ifx#1''''%
\else\ifx#1"\hskip\z@\relax
\else\ifx#1!\hex
\else\ifx#1|\allowhyphens
\else \discretionary{-}{#1}%
{\accent'177 #1}%
\fi\fi\fi\fi\fi\fi\fi\fi
```

More strange phenomena with hyphenation can be found in [2].

Until next time. See you backstage at the next TUG meeting!

### References

- [1] Johannes Braams. Babel, a language option for  $\LaTeX$ . *TUGboat*, 12:291-301, 1991.
- [2] Michael J. Downes. Line breaking in `\unhboxed` text. *TUGboat*, 11:605-612.
- [3] Hubert Partl. German  $\TeX$ . *TUGboat*, 9:70-72, 1988.

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