1 The Finnish language

The file `finnish.dtx`[1] defines all the language definition macros for the Finnish language.

For this language the character " is made active. In table 1 an overview is given of its purpose.

`"|`	disable ligature at this position.
`"-`	an explicit hyphen sign, allowing hyphenation in the rest of the word.
`"=`	an explicit hyphen sign for expressions such as "pakastekaapit ja -arkut".
`""`	like `"-`, but producing no hyphen sign (for words that should break at some sign such as "entrada/salida."
`"‘`	lowered double left quotes (looks like ,,)
`"’`	normal double right quotes
`"<`	for French left double quotes (similar to <<).
`">`	for French right double quotes (similar to >>).
`\-`	like the old `\-`, but allowing hyphenation in the rest of the word.

Table 1: The extra definitions made by `finnish.ldf`

The macro `\LdfInit` takes care of preventing that this file is loaded more than once, checking the category code of the @ sign, etc.

```
1 ⟨∗code⟩
2 \LdfInit{finnish}\captionsfinnish
```

When this file is read as an option, i.e. by the `\usepackage` command, `finnish` will be an 'unknown' language in which case we have to make it known. So we check for the existence of `\l@finnish` to see whether we have to do something here.

```
3 \ifx\l@finnish\@undefined
4     \@nopatterns{Finnish}
5     \adddialect\l@finnish0\fi
```

The next step consists of defining commands to switch to the Finnish language. The reason for this is that a user might want to switch back and forth between languages.

`\captionsfinnish` The macro `\captionsfinnish` defines all strings used in the four standard documentclasses provided with LaTeX.

```
6 \addto\captionsfinnish{%
7     \def\prefacename{Esipuhe}%
8     \def\refname{Viitteet}%
```

---

[1] The file described in this section has version number v1.3q and was last revised on 2007/10/20. A contribution was made by Mikko KANERVA (`KANERVA@CERNVM`) and Keranen Reino (`KERANEN@CERNVM`).

```
 9   \def\abstractname{Tiivistelm\"a}
10   \def\bibname{Kirjallisuutta}%
11   \def\chaptername{Luku}%
12   \def\appendixname{Liite}%
13   \def\contentsname{Sis\"alt\"o}%    /* Could be "Sis\"allys" as well */
14   \def\listfigurename{Kuvat}%
15   \def\listtablename{Taulukot}%
16   \def\indexname{Hakemisto}%
17   \def\figurename{Kuva}%
18   \def\tablename{Taulukko}%
19   \def\partname{Osa}%
20   \def\enclname{Liitteet}%
21   \def\ccname{Jakelu}%
22   \def\headtoname{Vastaanottaja}%
23   \def\pagename{Sivu}%
24   \def\seename{katso}%
25   \def\alsoname{katso my\"os}%
26   \def\proofname{Todistus}%
27   \def\glossaryname{Sanasto}%
28   }%
```

`\datefinnish` The macro `\datefinnish` redefines the command `\today` to produce Finnish dates.

```
29 \def\datefinnish{%
30   \def\today{\number\day.~\ifcase\month\or
31     tammikuuta\or helmikuuta\or maaliskuuta\or huhtikuuta\or
32     toukokuuta\or kes\"akuuta\or hein\"akuuta\or elokuuta\or
33     syyskuuta\or lokakuuta\or marraskuuta\or joulukuuta\fi
34     \space\number\year}}
```

`\extrasfinnish`
`\noextrasfinnish`
Finnish has many long words (some of them compound, some not). For this reason hyphenation is very often the only solution in line breaking. For this reason the values of `\hyphenpenalty`, `\exhyphenpenalty` and `\doublehyphendemerits` should be decreased. (In one of the manuals of style Matti Rintala noticed a paragraph with ten lines, eight of which ended in a hyphen!)

Matti Rintala noticed that with these changes TeX handles Finnish very well, although sometimes the values of `\tolerance` and `\emergencystretch` must be increased. However, I don't think changing these values in `finnish.ldf` is appropriate, as the looseness of the font (and the line width) affect the correct choice of these parameters.

```
35 \addto\extrasfinnish{%
36   \babel@savevariable\hyphenpenalty\hyphenpenalty=30%
37   \babel@savevariable\exhyphenpenalty\exhyphenpenalty=30%
38   \babel@savevariable\doublehyphendemerits\doublehyphendemerits=5000%
39   \babel@savevariable\finalhyphendemerits\finalhyphendemerits=5000%
40   }
41 \addto\noextrasfinnish{}
```

Another thing `\extrasfinnish` needs to do is to ensure that `\frenchspacing`

is in effect. If this is not the case the execution of `\noextrasfinnish` will switch it of again.

```
42 \addto\extrasfinnish{\bbl@frenchspacing}
43 \addto\noextrasfinnish{\bbl@nonfrenchspacing}
```

For Finnish the `"` character is made active. This is done once, later on its definition may vary. Other languages in the same document may also use the `"` character for shorthands; we specify that the finnish group of shorthands should be used.

```
44 \initiate@active@char{"}
45 \addto\extrasfinnish{\languageshorthands{finnish}}
```

Don't forget to turn the shorthands off again.

```
46 \addto\extrasfinnish{\bbl@activate{"}}
47 \addto\noextrasfinnish{\bbl@deactivate{"}}
```

The 'umlaut' character should be positioned lower on *all* vowels in Finnish texts.

```
48 \addto\extrasfinnish{\umlautlow\umlautelow}
49 \addto\noextrasfinnish{\umlauthigh}
```

First we define access to the low opening double quote and guillemets for quotations,

```
50 \declare@shorthand{finnish}{"`}{%
51   \textormath{\quotedblbase}{\mbox{\quotedblbase}}}
52 \declare@shorthand{finnish}{"'}{%
53   \textormath{\textquotedblright}{\mbox{\textquotedblright}}}
54 \declare@shorthand{finnish}{"<}{%
55   \textormath{\guillemotleft}{\mbox{\guillemotleft}}}
56 \declare@shorthand{finnish}{">}{%
57   \textormath{\guillemotright}{\mbox{\guillemotright}}}
```

then we define two shorthands to be able to specify hyphenation breakpoints that behave a little different from `\-`.

```
58 \declare@shorthand{finnish}{"-}{\nobreak-\bbl@allowhyphens}
59 \declare@shorthand{finnish}{""}{\hskip\z@skip}
60 \declare@shorthand{finnish}{"=}{\hbox{-}\bbl@allowhyphens}
```

And we want to have a shorthand for disabling a ligature.

```
61 \declare@shorthand{finnish}{"|}{%
62   \textormath{\discretionary{-}{}{\kern.03em}}{}}
```

`\-` All that is left now is the redefinition of `\-`. The new version of `\-` should indicate an extra hyphenation position, while allowing other hyphenation positions to be generated automatically. The standard behaviour of TeX in this respect is very unfortunate for languages such as Dutch, Finnish and German, where long compound words are quite normal and all one needs is a means to indicate an extra hyphenation position on top of the ones that TeX can generate from the hyphenation patterns.

```
63 \addto\extrasfinnish{\babel@save\-}
64 \addto\extrasfinnish{\def\-{\bbl@allowhyphens
```

```
                              \discretionary{-}{}{}\bbl@allowhyphens}}
```

\finishhyphenmins The finnish hyphenation patterns can be used with \lefthyphenmin set to 2 and \righthyphenmin set to 2.

```
66 \providehyphenmins{\CurrentOption}{\tw@\tw@}
```

The macro \ldf@finish takes care of looking for a configuration file, setting the main language to be switched on at \begin{document} and resetting the category code of @ to its original value.

```
67 \ldf@finish{finnish}
68 ⟨/code⟩
```