# The iflang package

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### Abstract

This package provides expandible checks for the current language based on macro  $\label{languagename}$  or hyphenation patterns.

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#### 1 Documentation

Package babel defines \iflanguagename. As first argument it takes a language name and executes the second or third argument depending on the current language. This language test is based on hypenation patterns. However, it is possible that different languages or dialects share the same patterns. In such cases \iflanguagename fails.

However, package babel and some other packages such as german or ngerman store the language name in the macro \languagename if \selectlanguage is called.

```
\IfLanguageName \{\langle lang \rangle\}\ \{\langle then \rangle\}\ \{\langle else \rangle\}
```

Makro \IfLanguageName compares language  $\langle lang \rangle$  with the current setting of macro \languagename. If both contains the same name then the  $\langle then \rangle$  part is called, otherwise the  $\langle else \rangle$  part.

The macro is expandable. Thus it can be safely used inside  $\ensuremath{\mbox{\mbox{\mbox{$\sim$}}}$  and undefined  $\ensuremath{\mbox{\mbox{$\sim$}}}$  part is executed.

Note: Macro  $\IfloamsungeName$  relies on the fact, that  $\label{languagename}$  is set correctly:

#### Package babel:

Full support of \languagename in its language switching commands.

### Format based on babel (language.dat):

If package babel is not used (or not yet loaded), then babel's hyphen.cfg has set \languagename to the last language in language.dat, but \language (current patterns) is zero and points to the first language. Thus the value of \languagename is basically garbage. Package iflang warns if \languagename and \language do not fit. This can be fixed by loading package babel previously.

#### Format based on $\varepsilon$ -TEX's etex.src (language.def):

Unhappily it does not support \languagename. Thus this package hooks into \uselanguage to get \languagename defined and updated there. At package loading time the changed \uselanguage has not been called yet. Thus package iflang tries USenglish. This is the definite default language of etex.src. If the current patterns suit this default language, an undefined \languagename is set to this language. Otherwise a \languagename remains undefined and a warning is given.

```
\IfLanguagePatterns \{\langle lang \rangle\}\ \{\langle then \rangle\}\ \{\langle else \rangle\}
```

This macro behaves similar to \IfLanguageName. But the language test is based on the current pattern in force (\language). Also this macro is expandable, in case of errors the  $\langle else \rangle$  part is called.

The following naming convention for the pattern are supported:

```
\begin{tabular}{ll} babel/language.dat : $$ \end{tabular} $$ (language)$ \\ etex.src/language.def : $$ \ang@(language)$ \\ \end{tabular}
```

Package iflang looks for  $\uselanguage$  (defined in etex.src) to find out the naming convention in use.

## 2 Implementation

1 (\*package)

### 2.1 Reload check and package identification

Reload check, especially if the package is not used with IATEX.

```
2 \begingroup
    \catcode44 12 % ,
     \catcode45 12 % -
 4
     \catcode46 12 % .
 5
    \catcode58 12 % :
 6
     \catcode64 11 % @
 7
    \catcode123 1 % {
 8
    \catcode125 2 % }
    \expandafter\let\expandafter\x\csname ver@iflang.sty\endcsname
10
     \ifx\x\relax % plain-TeX, first loading
11
12
     \else
13
       \def\empty{}%
       \ifx\x\empty % LaTeX, first loading,
14
         % variable is initialized, but \ProvidesPackage not yet seen
15
16
       \else
         \catcode35 6 % #
17
         \expandafter\ifx\csname PackageInfo\endcsname\relax
18
           \def\x#1#2{%}
19
             \immediate\write-1{Package #1 Info: #2.}%
20
21
           }%
22
         \else
           23
24
         \x{iflang}{The package is already loaded}%
25
         \aftergroup\endinput
26
27
       \fi
     \fi
28
29 \endgroup
Package identification:
30 \begingroup
     \catcode35 6 % #
31
     \catcode40 12 % (
32
    \catcode41 12 % )
33
    \catcode44 12 % ,
34
    \catcode45 12 % -
35
    \catcode46 12 % .
36
37
    \catcode47 12 % /
38
    \catcode58 12 % :
39
    \catcode64 11 % @
40
    \catcode91 12 % [
     \catcode93 12 % ]
41
     \catcode123 1 % {
42
     \catcode125 2 % }
43
     \expandafter\ifx\csname ProvidesPackage\endcsname\relax
44
       \def \x#1#2#3[#4] {\endgroup}
45
         \immediate\write-1{Package: #3 #4}%
46
47
         \xdef#1{#4}%
       }%
48
49
     \else
       \def \x#1#2[#3] {\endgroup}
50
         #2[{#3}]%
51
         \ifx#1\@undefined
52
           \xdef#1{#3}%
53
         \fi
54
         \int x#1\relax
55
           \xdef#1{#3}%
56
57
         \fi
       }%
58
59
    \fi
```

```
61 \ProvidesPackage{iflang}%
                        [2007/11/11 v1.5 Language checks (HO)]
                    62
                    63 \begingroup
                        \catcode123 1 % {
                    64
                        \catcode125 2 % }
                    65
                        \def\x{\endgroup
                    66
                          \expandafter\edef\csname IfLang@AtEnd\endcsname{%
                    67
                    68
                            \catcode35 \the\catcode35\relax
                            \catcode64 \the\catcode64\relax
                    69
                            \catcode123 \the\catcode123\relax
                    70
                    71
                            \catcode125 \the\catcode125\relax
                    72
                          }%
                    73
                       }%
                    74 \x
                    75 \catcode35 6 % #
                    76 \catcode64 11 % @
                    77 \catcode123 1 % {
                    78 \catcode125 2 % }
                    79 \def\TMP@EnsureCode#1#2{%
                        \edef\IfLang@AtEnd{%
                    80
                    81
                          \IfLang@AtEnd
                    82
                          \catcode#1 \the\catcode#1\relax
                    83
                        }%
                    84
                        \catcode#1 #2\relax
                    85 }
                    86 \TMP@EnsureCode{39}{12}%,
                    87 \TMP@EnsureCode{40}{12}% (
                    88 \TMP@EnsureCode{41}{12}%)
                    89 \TMP@EnsureCode{44}{12}\% ,
                    90 \TMP@EnsureCode{46}{12}% .
                    91 \TMP@EnsureCode{47}{12}% /
                    92 \TMP@EnsureCode{58}{12}% :
                    93 \TMP@EnsureCode{61}{12}% =
                   2.2
                         Tools
                   2.2.1 Provide some basic macros of LATEX
    \@firstoftwo
                    94 \expandafter\ifx\csname @firstoftwo\endcsname\relax
                    95 \long\def\@firstoftwo#1#2{#1}%
                    96 \fi
   \@secondoft.wo
                    97 \expandafter\ifx\csname @secondoftwo\endcsname\relax
                    98 \long\def\@secondoftwo#1#2{#2}%
                    99 \fi
                          Expandible existence check for macros
\IfLang@IfDefined
                   100 \begingroup\expandafter\expandafter\expandafter\endgroup
                   101 \expandafter\ifx\csname ifcsname\endcsname\relax
                       \expandafter\@firstoftwo
                   103 \else
                   104 \expandafter\@secondoftwo
                   105 \fi
                   106 {%
                       \def\IfLang@IfDefined#1{%
                   107
                          \expandafter\ifx\csname#1\endcsname\relax
                   108
```

60 \expandafter\x\csname ver@iflang.sty\endcsname

```
\expandafter\@secondoftwo
109
110
111
          \expandafter\@firstoftwo
        \fi
112
     }%
113
114 }{%
115
     \def\IfLang@IfDefined#1{%
116
        \ifnum\ifcsname#1\endcsname
                 \expandafter\ifx\csname#1\endcsname\relax
117
                   1%
118
                 \else
119
                   0%
120
                 \fi
121
               \else
122
                 1%
123
124
               \fi
125
              =0 %
          \expandafter\@firstoftwo
126
127
128
          \expandafter\@secondoftwo
129
        \fi
130
     }%
131 }
```

#### 2.2.3 Macros for messages

```
132 \begingroup\expandafter\expandafter\endgroup
133 \expandafter\ifx\csname RequirePackage\endcsname\relax
134 \input infwarerr.sty\relax
135 \input pdftexcmds.sty\relax
136 \else
137 \RequirePackage{infwarerr}[2007/09/09]%
138 \RequirePackage{pdftexcmds}[2007/11/11]%
139 \fi
```

#### 2.2.4 Support for etex.src

#### \IfLang@prefix

```
140 \begingroup\expandafter\expandafter\expandafter\endgroup
141 \expandafter\ifx\csname uselanguage\endcsname\relax
142
     \@PackageInfoNoLine{iflang}{%
       Naming convention for patterns: babel%
143
     ጉ%
144
     \def\IfLang@prefix{1@}%
145
146 \else
147
     \@PackageInfoNoLine{iflang}{%
       Naming convention for patterns: etex.src%
148
149
150
     \def\IfLang@prefix{lang@}%
151
     \let\IfLang@OrgUseLanguage\uselanguage
152
     \def\uselanguage#1{%
       \edef\languagename{#1}%
153
       \IfLang@OrgUseLanguage{#1}%
154
     }%
155
```

The first \uselanguage that is executed as last line in language.def cannot patched this way. However, language.def is very strict. It forces the first added and used language to be USenglish. Thus, if \languagename is not defined, we can quite safely assume USenglish. As additional safety precaution the actual used patterns are checked.

```
156 \qquad \verb|\begingroup\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandafter\expandaf
```

<sup>157 \</sup>expandafter\ifx\csname languagename\endcsname\relax

```
\expandafter\ifx\csname lang@USenglish\endcsname\relax
159
160
          \@PackageWarningNoLine{iflang}{%
           \string\lang@USenglish\space is missing%
161
         }%
162
163
164
         \ifnum\lang@USenglish=\language
165
           \def\languagename{USenglish}%
166
          \else
           \@PackageWarningNoLine{iflang}{%
167
              \string\languagename\space is not set,\MessageBreak
168
              current language is unknown%
169
           }%
170
171
         \fi
       \fi
172
     \fi
173
174\fi
175 \begingroup\expandafter\expandafter\expandafter\endgroup
176 \expandafter\ifx\csname languagename\endcsname\relax
     \@PackageInfoNoLine{iflang}{%
177
178
       \string\languagename\space is not set%
     }%
179
180 \fi
```

### 2.3 \IfLanguagePatterns

#### \IfLanguagePatterns

```
181 \def\IfLanguagePatterns#1{%
182
     \ifnum\IfLang@IfDefined{\IfLang@prefix#1}{%
183
              \ifnum\csname\IfLang@prefix#1\endcsname=\language
185
              \else
186
                1%
              \fi
187
            }{1}=0 %
188
       \expandafter\@firstoftwo
189
     \else
190
        \expandafter\@secondoftwo
191
192
     \fi
193 }
```

## 2.4 \IfLanguageName

```
194 \begingroup\expandafter\expandafter\endgroup
195 \expandafter\ifx\csname pdf@strcmp\endcsname\relax
196 \expandafter\@firstoftwo
197 \else
198 \expandafter\@secondoftwo
199 \fi
200 {%
```

We do not have \pdf@strcmp (and \pdfstrcmp). Thus we must define our own expandable string comparison. The following implementation is based on a TEX pearl from David Kastrup, presented at the conference BachoTEX 2005: http://www-stary.gust.org.pl/pearls/2005/david-kastrup/bachotex2005-david-kastrup-pearl1.pdf

The original code allows macros inside the second string. Because also \languagename might consists of further macros, we need a variant that allows macros in the first string, too.

```
201 \def\IfLang@StrNil{\relax}%
202 \def\IfLang@StrEqual#1{%
203 \number\IfLang@StrEqualStart{}{}#1\IfLang@StrNil
204 }%
```

```
\def\IfLang@StrEqualStart#1#2#3{%
                                               205
                                                                    \ifx#3\IfLang@StrNil
                                               206
                                                                         \IfLang@StrEqualStop
                                               207
                                               208
                                                209
                                                                    \ifcat\noexpand#3\relax
                                                                         \IfLang@StrExpand{#1}{#2}#3%
                                               210
                                               211
                                                                    \IfLang@StrEqualStart{\if#3#1}{#2\fi}%
                                               212
                                                              }%
                                               213
                                                              \def\IfLang@StrEqualStop\fi#1\IfLang@StrEqualStart#2#3#4{%
                                               214
                                               215
                                                                    #2#4\relax'#313 %
                                               216
                                               217
                                                              \def\IfLang@StrExpand#1#2#3\fi\IfLang@StrEqualStart#4#5{%
                                               218
                                               219
                                                                    \IfLang@@StrExpand{#1}{#2}#3%
                                               220
                                               221
                                                              \def\IfLang@@StrExpand#1#2#3\IfLang@StrNil{%
                                               222
                                                                    \expandafter\IfLang@@@StrExpand#3\IfLang@StrNil{#1}{#2}%
                                               223
                                               224
                                                              \def\IfLang@@@StrExpand#1\IfLang@StrNil#2#3{%
                                               225
                                               226
                                                                    \IfLang@StrEqualStart{#2}{#3}#1\IfLang@StrNil
                                               227
\IfLanguageName
                                               228
                                                              \def\IfLanguageName#1{%
                                               229
                                                                    \ifnum\IfLang@IfDefined{languagename}{%
                                               230
                                                                                          \if\expandafter\IfLang@StrEqual\expandafter%
                                                                                                                                    {\normalcolor{0.95\textwidth}{\normalcolor{0.95\textwidth}{\normalcolor{0.95\textwidth}{\normalcolor{0.95\textwidth}{\normalcolor{0.95\textwidth}{\normalcolor{0.95\textwidth}{\normalcolor{0.95\textwidth}{\normalcolor{0.95\textwidth}{\normalcolor{0.95\textwidth}{\normalcolor{0.95\textwidth}{\normalcolor{0.95\textwidth}{\normalcolor{0.95\textwidth}{\normalcolor{0.95\textwidth}{\normalcolor{0.95\textwidth}{\normalcolor{0.95\textwidth}{\normalcolor{0.95\textwidth}{\normalcolor{0.95\textwidth}{\normalcolor{0.95\textwidth}{\normalcolor{0.95\textwidth}{\normalcolor{0.95\textwidth}{\normalcolor{0.95\textwidth}{\normalcolor{0.95\textwidth}{\normalcolor{0.95\textwidth}{\normalcolor{0.95\textwidth}{\normalcolor{0.95\textwidth}{\normalcolor{0.95\textwidth}{\normalcolor{0.95\textwidth}{\normalcolor{0.95\textwidth}{\normalcolor{0.95\textwidth}{\normalcolor{0.95\textwidth}{\normalcolor{0.95\textwidth}{\normalcolor{0.95\textwidth}{\normalcolor{0.95\textwidth}{\normalcolor{0.95\textwidth}{\normalcolor{0.95\textwidth}{\normalcolor{0.95\textwidth}{\normalcolor{0.95\textwidth}{\normalcolor{0.95\textwidth}{\normalcolor{0.95\textwidth}{\normalcolor{0.95\textwidth}{\normalcolor{0.95\textwidth}{\normalcolor{0.95\textwidth}{\normalcolor{0.95\textwidth}{\normalcolor{0.95\textwidth}{\normalcolor{0.95\textwidth}{\normalcolor{0.95\textwidth}{\normalcolor{0.95\textwidth}{\normalcolor{0.95\textwidth}{\normalcolor{0.95\textwidth}{\normalcolor{0.95\textwidth}{\normalcolor{0.95\textwidth}{\normalcolor{0.95\textwidth}{\normalcolor{0.95\textwidth}{\normalcolor{0.95\textwidth}{\normalcolor{0.95\textwidth}{\normalcolor{0.95\textwidth}{\normalcolor{0.95\textwidth}{\normalcolor{0.95\textwidth}{\normalcolor{0.95\textwidth}{\normalcolor{0.95\textwidth}{\normalcolor{0.95\textwidth}{\normalcolor{0.95\textwidth}{\normalcolor{0.95\textwidth}{\normalcolor{0.95\textwidth}{\normalcolor{0.95\textwidth}{\normalcolor{0.95\textwidth}{\normalcolor{0.95\textwidth}{\normalcolor{0.95\textwidth}{\normalcolor{0.95\textwidth}{\normalcolor{0.95\textwidth}{\normalcolor{0.95\textwidth}{\normalcolor{0.95\textwidth}{\normalcolor{0.95\textwidth}{\normalcolor{0.95\textwidth}{\normalcolor{0.95\textwidth}{\normalcolor{0.95\textwidth}{\normalcolor{0.95\textwidth}{\normalcolor{0.95\textwidth}{\normalcolor{0.95\textwidth}{\normalcolor{0.95\textwidth}{\normalcolor{0.95\textwidth}{\normalcolor{0.95\text
                                               231
                                                                                               0%
                                               232
                                                                                          \else
                                               233
                                                                                               1%
                                               234
                                                                                           \fi
                                               235
                                                                                    }{1}=0 %
                                               236
                                               237
                                                                         \expandafter\@firstoftwo
                                               238
                                                                          \expandafter\@secondoftwo
                                               240
                                                                    \fi
                                                             }%
                                               241
                                               242 }{%
\IfLanguageName
                                                              \def\IfLanguageName#1{%
                                               243
                                                                    \ifnum\IfLang@IfDefined{languagename}{%
                                               244
                                                                                           \pdf@strcmp{#1}{\languagename}%
                                               245
                                                                                    }{1}=0 %
                                               246
                                                                         \expandafter\@firstoftwo
                                               247
                                               248
                                                                          \expandafter\@secondoftwo
                                               249
                                               250
                                                                    \fi
                                                              }%
                                               251
                                               252 }
                                                                  Check plausibility of \languagename
                                               2.5
                                               253 \begingroup\expandafter\expandafter\expandafter\endgroup
                                               254 \expandafter\ifx\csname languagename\endcsname\relax
                                               255 \setminus else
                                                              \IfLanguagePatterns{\languagename}{}{%
                                               257
                                                                    \@PackageWarningNoLine{iflang}{%
                                               258
                                                                         Mismatch between \string\language\space
```

```
259 (patterns)\MessageBreak
260 and setting of \string\languagename
261 }%
262 }%
263 \fi
264 \IfLang@AtEnd
265 \/package\
```

#### 3 Test

## 3.1 Catcode checks for loading

```
266 (*test1)
267 \catcode'\{=1 %
268 \catcode'\}=2 %
269 \catcode'\#=6 \%
270 \catcode'\@=11 %
271 \expandafter\ifx\csname count@\endcsname\relax
     \countdef\count@=255 %
272
273 \fi
274 \expandafter\ifx\csname @gobble\endcsname\relax
     \long\def\@gobble#1{}%
275
276 \fi
277 \expandafter\ifx\csname @firstofone\endcsname\relax
     \long\def\@firstofone#1{#1}%
279 \fi
280 \expandafter\ifx\csname loop\endcsname\relax
     \expandafter\@firstofone
282 \else
     \expandafter\@gobble
283
284 \fi
285 {%
286
     \def\loop#1\repeat{%
287
       \left( \frac{1}{\pi }\right) 
288
       \iterate
289
     }%
290
     \def\iterate{%
291
       \body
          \let\next\iterate
292
       \else
293
          \left| \cdot \right| 
294
       \fi
295
296
       \next
     }%
297
     \let\repeat=\fi
298
299 }%
300 \def\RestoreCatcodes{}
301 \count@=0 %
302 \loop
     \edef\RestoreCatcodes{%
303
        \RestoreCatcodes
304
       \catcode\the\count@=\the\catcode\count@\relax
305
     }%
306
307 \ifnum\count@<255 %
     \advance\count@ 1 %
308
309 \repeat
311 \def\RangeCatcodeInvalid#1#2{%
312
     \count@=#1\relax
313
     \loop
       \catcode\count@=15 %
314
     \ifnum\count@<#2\relax
315
```

```
\advance\count@ 1 %
316
317
318 }
319 \expandafter\ifx\csname LoadCommand\endcsname\relax
     \def\LoadCommand{\input iflang.sty\relax}%
321 \fi
322 \left\{ \text{Test} \right\}
     \RangeCatcodeInvalid{0}{47}%
323
     \RangeCatcodeInvalid{58}{64}%
324
     \RangeCatcodeInvalid{91}{96}%
325
     \RangeCatcodeInvalid{123}{255}%
326
     \catcode'\@=12 %
327
     \catcode'\\=0 %
328
    \catcode'\{=1 %
329
    \catcode'\}=2 %
330
331
    \catcode'\#=6 %
    \catcode'\[=12 %
332
    \catcode'\]=12 %
333
     \catcode'\%=14 %
334
     \catcode'\ =10 %
335
     \catcode13=5 %
336
337
     \LoadCommand
     \RestoreCatcodes
338
339 }
341 \csname @@end\endcsname
342 \end
343 (/test1)
       Test with LATEX
3.2
344 \langle *test2 \mid test3 \rangle
345 \NeedsTeXFormat{LaTeX2e}
346 \langle \text{test3} \rangle \text{let} pdfstrcmp relax
347 \setminus nofiles
348 \documentclass{minimal}
349 \usepackage{qstest}
350 \IncludeTests{*}
351 \LogTests\{log\}\{*\}\{*\}
352 \usepackage[english,naustrian,ngerman]{babel}
353 \usepackage{iflang}
354 \begin{document}
355 \begin{qstest}{IfLanguagePatterns}{language, pattern}
356
     \def\test#1#2{%
357
       \Expect*{\IfLanguagePatterns{#1}{true}{false}}{#2}%
358
359
     \test{ngerman}{true}%
360
     \test{naustrian}{true}%
361
     \test{english}{false}%
     \test{foobar}{false}%
362
363 \end{qstest}
364 \verb|\degin{qstest}{IfLanguageName}{language, name}|
365
     \def\test#1#2{%
        \Expect*{\IfLanguageName{#1}{true}{false}}{#2}%
366
367
368
     \test{ngerman}{true}%
369
     \test{naustrian}{false}%
370
     \selectlanguage{naustrian}%
371
     \test{ngerman}{false}%
     \test{naustrian}{true}%
372
     \test{foobar}{false}%
373
374
375
     \def\languagename{naustrian}%
```

```
\test{naustrian}{true}%
376
            \test{ngerman}{false}%
377
378
            \edef\languagename{\string naustrian}%
379
380
            \test{naustrian}{true}%
381
            \test{ngerman}{false}%
382
383
            \def\languagename{naustrian}%
384
            \makeatletter
            \@onelevel@sanitize\languagename
385
            \test{naustrian}{true}%
386
            \test{ngerman}{false}%
387
388
            \def\languagename{naustrian}%
389
            \def\xaustrian{naustrian}%
390
            \def\xgerman{ngerman}%
391
392
            \test{\xaustrian}{true}%
            \test{\xgerman}{false}%
393
394
395
            \def\languagename{\xaustrian}%
            \test{naustrian}{true}%
396
            \test{ngerman}{false}%
397
398
            \test{\xaustrian}{true}%
            \test{\xgerman}{false}%
399
            \test{\languagename}{true}%
400
401
            \test{\languagename\space}{false}%
402
            \def\languagename{\empty\xaustrian\empty}%
403
404
            \test{naustrian}{true}%
            \test{ngerman}{false}%
405
            \test{\empty\xaustrian\empty}{true}%
406
            \verb|\test{\empty}\german=\empty}{false}||
407
408 \end{qstest}
409 \begin{qstest}{IfDefined}{defined}
           \makeatletter
411
           \let\foobar\relax
412
           \Expect*{\IfLang@IfDefined{foobar}{true}{false}}{false}%
413
          \Expect*{\ifx\foobar\relax true\else false\fi}{true}%
414
           \let\foobar\UNDEFINED
           \Expect*{\IfLang@IfDefined{foobar}{true}{false}}{false}%
415
416
           \Expect*{\ifx\foobar\relax true\else false\fi}{false}%
            \Expect*{\ifx\foobar\UNDEFINED true\else false\fi}{true}%
417
418 \end{qstest}
419 \end{document}
420 (/test2 | test3)
               Test with plain-T<sub>F</sub>X and \varepsilon-T<sub>F</sub>X
3.3
421 (*test4)
422 %% Format 'etex' based on 'language.def'
423 \input iflang.sty
424 \catcode64=12
425
426 \det \text{TestGeneric#1#2#3{}%}
427
            \begingroup
428
                \ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ens
429
                \left( \frac{y}{\#3} \right)
430
                \inf x \in 
431
                \else
                      \errmessage{Failed test: \string#1{#2} <> #3}%
432
433
            \endgroup
434
435 }
```

```
436 \def\TestPatterns{\TestGeneric\IfLanguagePatterns}
437 \def\TestName{\TestGeneric\IfLanguageName}
439 \TestPatterns{USenglish}{true}
440 \TestPatterns{ngerman}{false}
441
442 \TestName{USenglish}{true}
443 \TestName{ngerman}{false}
444
445 \uselanguage{ngerman}
446
447 \TestPatterns{USenglish}{false}
448 \TestPatterns{ngerman}{true}
449
450 \TestName{USenglish}{false}
451 \TestName{ngerman}{true}
452
453 \csname @@end\endcsname
454 \end
455 (/test4)
       Test with plain-T<sub>E</sub>X and without \varepsilon-T<sub>E</sub>X/pdfT<sub>E</sub>X
456 (*test5)
457 %% Format 'tex' (vanilla plain-TeX)
458 \let\ifcsname\UNDEFINED
459 \let\pdfstrcmp\UNDEFINED
460 \input iflang.sty
461 \catcode64=11
462
463 \det TestDefined#1{%}
464
     \IfLang@IfDefined{foobar}{}{}%
465
     \ifx\foobar#1%
466
        \errmessage{Failed test: \string\foobar <> \string#1}%
467
468
469 }
470 \left| \text{dotphism} \right|
471 \TestDefined\relax
472 \let\foobar\UNDEFINED
473 \TestDefined\relax
474
475 \def\strip@prefix#1>{}
476 \def\@onelevel@sanitize#1{%
     \edef#1{\expandafter\strip@prefix\meaning#1}%
478 }
479 \def\TestCompare#1#2#3{%
480
     \begingroup
481
        \left( x_{x}\right) 
482
          \if\IfLang@StrEqual{#1}{#2}%
483
            true%
          \else
484
485
            false%
486
          \fi
        }%
487
488
        \def\expect{#3}%
489
        \ifx\x\expect
490
        \else
491
          \def\a{\#1}%
          \@onelevel@sanitize\a
492
          \left( \frac{42}{x} \right)
493
          \@onelevel@sanitize\b
494
          \errmessage{Failed test: '\a'='\b' <> \expect}%
495
```

```
\fi
496
497
      \endgroup
498 }
499 \TestCompare{junk}{junk}{true}
500 \TestCompare{}{}{true}
501 \TestCompare{a}{b}{false}
502 \TestCompare{aa}{bb}{false}
503 \def\a{ax}
504 \left( b\{bx\} \right)
505 \def\c{\a\b}
506 \left( \frac{\c\b}{\c}\right)
507 \def\exch#1#2{#2#1}
508 \def\gobble#1{}
509 \TestCompare{\gobble a}{}{true}
510 \TestCompare{}{\gobble a}{true}
511 \TestCompare{a\exch xyb}{ayxb}{true}
512 \TestCompare{\c}{\c}{true}
513 \TestCompare{\d}{\c\b}{true}
514
515 \csname @@end\endcsname
516 \end
517 (/test5)
```

## 4 Installation

#### 4.1 Download

**Package.** This package is available on CTAN<sup>1</sup>:

CTAN:macros/latex/contrib/oberdiek/iflang.dtx The source file.

CTAN:macros/latex/contrib/oberdiek/iflang.pdf Documentation.

**Bundle.** All the packages of the bundle 'oberdiek' are also available in a TDS compliant ZIP archive. There the packages are already unpacked and the documentation files are generated. The files and directories obey the TDS standard.

```
CTAN:install/macros/latex/contrib/oberdiek.tds.zip
```

TDS refers to the standard "A Directory Structure for TEX Files" (CTAN:tds/tds.pdf). Directories with texmf in their name are usually organized this way.

#### 4.2 Bundle installation

Unpacking. Unpack the oberdiek.tds.zip in the TDS tree (also known as texmf tree) of your choice. Example (linux):

```
unzip oberdiek.tds.zip -d ~/texmf
```

Script installation. Check the directory TDS:scripts/oberdiek/ for scripts that need further installation steps. Package attachfile2 comes with the Perl script pdfatfi.pl that should be installed in such a way that it can be called as pdfatfi. Example (linux):

```
chmod +x scripts/oberdiek/pdfatfi.pl
cp scripts/oberdiek/pdfatfi.pl /usr/local/bin/
```

<sup>1</sup>ftp://ftp.ctan.org/tex-archive/

#### 4.3 Package installation

Unpacking. The .dtx file is a self-extracting docstrip archive. The files are extracted by running the .dtx through plain-T<sub>F</sub>X:

```
tex iflang.dtx
```

**TDS.** Now the different files must be moved into the different directories in your installation TDS tree (also known as texmf tree):

```
 \begin{array}{lll} iflang.sty & \rightarrow tex/generic/oberdiek/iflang.sty \\ iflang.pdf & \rightarrow doc/latex/oberdiek/iflang.pdf \\ test/iflang-test1.tex & \rightarrow doc/latex/oberdiek/test/iflang-test1.tex \\ test/iflang-test2.tex & \rightarrow doc/latex/oberdiek/test/iflang-test2.tex \\ test/iflang-test3.tex & \rightarrow doc/latex/oberdiek/test/iflang-test3.tex \\ test/iflang-test4.tex & \rightarrow doc/latex/oberdiek/test/iflang-test4.tex \\ test/iflang-test5.tex & \rightarrow doc/latex/oberdiek/test/iflang-test5.tex \\ iflang.dtx & \rightarrow source/latex/oberdiek/iflang.dtx \\ \end{array}
```

If you have a docstrip.cfg that configures and enables docstrip's TDS installing feature, then some files can already be in the right place, see the documentation of docstrip.

#### 4.4 Refresh file name databases

If your  $T_EX$  distribution (te $T_EX$ , mik $T_EX$ , ...) relies on file name databases, you must refresh these. For example, te $T_FX$  users run texhash or mktexlsr.

#### 4.5 Some details for the interested

Attached source. The PDF documentation on CTAN also includes the .dtx source file. It can be extracted by AcrobatReader 6 or higher. Another option is pdftk, e.g. unpack the file into the current directory:

```
pdftk iflang.pdf unpack_files output .
```

Unpacking with LATEX. The .dtx chooses its action depending on the format:

**plain-T<sub>E</sub>X:** Run docstrip and extract the files.

LATEX: Generate the documentation.

If you insist on using LATEX for docstrip (really, docstrip does not need LATEX), then inform the autodetect routine about your intention:

```
latex \let\install=y\input{iflang.dtx}
```

Do not forget to quote the argument according to the demands of your shell.

Generating the documentation. You can use both the .dtx or the .drv to generate the documentation. The process can be configured by the configuration file ltxdoc.cfg. For instance, put this line into this file, if you want to have A4 as paper format:

```
\PassOptionsToClass{a4paper}{article}
```

An example follows how to generate the documentation with pdfLATFX:

```
pdflatex iflang.dtx
makeindex -s gind.ist iflang.idx
pdflatex iflang.dtx
makeindex -s gind.ist iflang.idx
pdflatex iflang.dtx
```

## 5 Acknowledgement

I wish to thank:

Markus Kohm Useful hints for version 1.2.

## 6 History

## [2007/04/10 v1.0]

• First public version.

## [2007/04/11 v1.1]

• Line ends sanitized.

## [2007/04/12 v1.2]

- Initialization of \languagename in case of etex.src.
- Some sanity tests added.
- Documentation improved.

## [2007/04/26 v1.3]

• Use of package infwarerr.

## [2007/09/09 v1.4]

- Bug fix:  $\Iflamg@StrEqual \rightarrow \IflamgStrEqual (Gabriele Balducci)$ .
- Catcode section rewritten.

## [2007/11/11 v1.5]

 $\bullet$  Use of package pdftexcmds for LuaTeX support.

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