The ginpenc package*

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File Date 2003/09/29, Printed July 7, 2007

${\bf Abstract}$

If the package inputenc is used and German Umlauts are input directly, they are converted to \"a etc. This breaks the sort algorithm of makeindex, for instance. This package converts Umlauts and the Sharp s to the short forms, defined by the babel package, e.g. "a, instead, if the text is typeset in German.

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^{*}This file has version 1.0 last revised 2003/09/29, documentation dated 2003/09/29.

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1 The user interface

To use this package place

\usepackage{ginpenc}

in the preamble of your document. No options are necessary.

If you also use the babel package, the German Umlauts and the Sharp S are written to outputfiles, e.g. the idx files, as "A, "O, "U, "a, "o, "u, and "s instead of \"A, \"O, \"U, \"a, \"o, \"u, and \ss if one of the German dialects (german, ngerman, austrian, naustrian) is active. If another language is active, this package does not do anything.

This should not change anything in the document itself. But output to auxiliary files as the index file with the extension .idx are written with these short-hand forms instead of the long forms. This helps makeindex to sort the entries correctly, if the command-line switch -g is given.

2 New commands

\inputenc

This package defines the command \inputenc which returns the active encoding. If no encoding is active, it does not return anything.

Acknowledgements

Most Code parts are by Heiko Oberdiek (oberdiek@uni-freiburg.de) (see news-message.txt).

3 The implementation

Heading of the package:

- 1 \ProvidesPackage{ginpenc}
- 2 [\giefiledate\space v\giefileversion\space
- 3 Replace \string\"a by "a with babel for German texts]

\ifginpenc@babel

Stores if babel has been loaded.

4 \newif\ifginpenc@babel

Everything has to be done at \begin{document} in order to ensure that the packages inputenc and babel are loaded before the code is executed.

 $5 \texttt{ \AtBeginDocument\{\%\}}$

\inputenc Default value for \inputenc:

6 \let\inputenc\empty

\inputencoding Redefinition of \inputencoding to store the input encoding name.

First, copy the original command.

- 7 \newcommand*\gie@inputencoding{}%
- 8 \let\gie@inputencoding\inputencoding

Redefine \inputencoding

9 \def\inputencoding#1{%

\inputenc

Define \inputenc to the current value.

10 \def\inputenc{#1}%

Call the original \inputencoding command.

11 \gie@inputencoding{#1}%

If babel is loaded, load the corresponding definition file that redefines the \T to "A etc.

```
12
      \ifginpenc@babel
13
         \IfFileExists{\inputenc.gie}{%
           \input{\inputenc.gie}%
14
15
           }{%
           \PackageWarning{ginpenc}{Encoding file \inputenc.gie not
16
             found}%
17
           }%
18
       \fi
19
20
      }%
```

\inputenc

Since the package inputenc calls \inputencoding the first time before it is redefined the encoding has to be found out by a different way.

```
\begingroup
21
    \expandafter\ifx\csname @inpenc@undefined\endcsname\relax
22
      \edef\x{\endgroup}%
23
    \else
24
       \def\@inpenc@undefined@#1{\def\noexpand\inputenc{#1}}%
25
       \edef\x{\endgroup
26
         \@inpenc@undefined
27
      }%
28
29
    \fi
30
    ١x
```

If babel is loaded, load the corresponding definition file that redefines the "A to "A etc.

```
31 \@ifpackageloaded{babel}{%
32 \ginpenc@babeltrue
33 \ifx\inputenc\empty
34 \else
35 \IffileExists{\inputenc.gie}{%
36 \input{\inputenc.gie}%
```

Add the new commands to the extras section of all German languages.

```
37 \addto\extrasgerman{\umlautgerman}%
38 \addto\extrasgerman{\umlautgerman}%
```

```
\addto\extrasaustrian{\umlautgerman}%
39
          \addto\extrasnaustrian{\umlautgerman}%
40
          \addto\noextrasgerman{\umlautnotgerman}%
41
          \addto\noextrasngerman{\umlautnotgerman}%
42
          \addto\noextrasaustrian{\umlautnotgerman}%
43
          \addto\noextrasnaustrian{\umlautnotgerman}%
44
Select active language to let take effect the \extras commands.
45
          \expandafter\selectlanguage\expandafter{\languagename}%
46
          }{%
          \PackageWarning{ginpenc}{Encoding file \inputenc.gie not
47
            found}%
48
49
          }%
50
      \fi
51
      }{}%
    }
52
```

4 Encoding files

Only the file ansinew.gie is described since the other files work the same.

4.1 ansinew.gie

```
53 \ProvidesFile{ansinew.gie}[\giefiledate\space v\giefileversion\space <math display="inline">54 Input encoding file]%
```

The work is done in a group in order to avoid a change of the **shorthand** state. To reach a global definition of the commands they are defined with **\gdef**.

55 \begingroup

Switch on the German shorthands.

56 \shorthandon{"}%

\umlautgerman

Redefine the character codes in order to use the short versions of the Umlaut commands.

```
57 \gdef\umlautgerman{%
58 \DeclareInputText{196}{"A}%
59 \DeclareInputText{214}{"0}}%
60 \DeclareInputText{220}{"U}%
61 \DeclareInputText{223}{"s}%
62 \DeclareInputText{228}{"a}%
63 \DeclareInputText{246}{"o}%
64 \DeclareInputText{252}{"u}%
65 }%
```

Switch off the German shorthands.

66 \shorthandoff{"}%

\umlautnotgerman

Redefine the character codes in order to use the long versions of the Umlaut commands outside German text.

```
67 \gdef\umlautnotgerman{\% 68 \DeclareInputText{196}{\"A}\% 69 \DeclareInputText{214}\\"0}\% 70 \DeclareInputText{220}{\"U}\%
```

```
\DeclareInputText{223}{\ss}%
71
   \DeclareInputText{228}{\"a}%
72
   \DeclareInputText{246}{\"o}%
73
   \DeclareInputText{252}{\"u}%
75 }%
76 \endgroup
     applemac.gie
```

4.2

```
77 \ProvidesFile{applemac.gie}[\giefiledate\space v\giefileversion\space
     Input encoding file]%
79 \begingroup
80 \shorthandon{"}%
81 \gdef\umlautgerman{%
    \DeclareInputText{128}{"A}%
82
    \DeclareInputText{133}{"0}%
83
   \DeclareInputText{134}{"U}%
84
    \DeclareInputText{138}{"a}%
85
86
    \DeclareInputText{154}{"o}%
87
    \DeclareInputText{159}{"u}%
    \DeclareInputText{167}{"s}%
88
89 }%
90 \shorthandoff{"}%
91 \gdef\umlautnotgerman{%
    \DeclareInputText{128}{\"A}%
92
    \DeclareInputText{133}{\"0}%
93
    \DeclareInputText{134}{\"U}%
94
    \DeclareInputText{138}{\"a}%
95
    \DeclareInputText{154}{\"o}%
96
     \DeclareInputText{159}{\"u}%
98
    \DeclareInputText{167}{\ss}%
99 }%
100 \endgroup
```

4.3ascii.gie

```
101 \ensuremath{\mbox{\sc holds}} 
102 Input encoding file]%
103 \begingroup
104 \gdef\umlautgerman{}%
105 \gdef\umlautnotgerman{}%
106 \endgroup
```

4.4 cp1250.gie

```
107 \ProvidesFile{cp1250.gie}[\giefiledate\space v\giefileversion\space
108 Input encoding file]%
109 \begingroup
110 \shorthandon{"}%
111 \gdef\umlautgerman{%
112 \DeclareInputText{196}{"A}%
113 \DeclareInputText{214}{"0}%
114 \DeclareInputText{220}{"U}%
115
    \DeclareInputText{223}{"s}%
    \DeclareInputText{228}{"a}%
116
```

```
117
            \DeclareInputText{246}{"o}%
            \DeclareInputText{252}{"u}%
118
119 }%
120 \gshorthandoff{"}%
121 \def\umlautnotgerman{%
           \DeclareInputText{196}{\"A}%
            \DeclareInputText{214}{\"0}%
124
            \DeclareInputText{220}{\"U}%
125
            \DeclareInputText{223}{\ss}%
            \DeclareInputText{228}{\"a}%
126
127
             \DeclareInputText{246}{\"o}%
128
            \DeclareInputText{252}{\"u}%
129 }%
130 \endgroup
 4.5
               cp1252.gie
131 \ensuremath{\mbox{\sc ProvidesFile} \{cp1252.gie\}[\giefiledate\space \ v\giefileversion\space \ v\giefileversion\spa
            Input encoding file]%
133 \begingroup
134 \shorthandon{"}%
135 \gdef\umlautgerman{%
            \DeclareInputText{196}{"A}%
136
             \DeclareInputText{214}{"0}%
137
138
            \DeclareInputText{220}{"U}%
             \DeclareInputText{223}{"s}%
139
             \DeclareInputText{228}{"a}%
             \DeclareInputText{246}{"o}%
141
142
             \DeclareInputText{252}{"u}%
143 }%
144 \shorthandoff{"}%
145 \gdef\umlautnotgerman{%
146
            \DeclareInputText{196}{\"A}%
            \DeclareInputText{214}{\"0}%
147
            \DeclareInputText{220}{\"U}%
148
149
            \DeclareInputText{223}{\ss}%
            \DeclareInputText{228}{\"a}%
150
151
            \DeclareInputText{246}{\"o}%
152
            \DeclareInputText{252}{\"u}%
153 }%
154 \endgroup
              cp437.gie
155 \ProvidesFile{cp437.gie}[\giefiledate\space v\giefileversion\space
            Input encoding file]%
157 \begingroup
158 \shorthandon{"}%
159 \gdef\umlautgerman{%
            \DeclareInputText{142}{"A}%
160
            \DeclareInputText{153}{"0}%
161
162
           \DeclareInputText{154}{"U}%
            \DeclareInputText{132}{"a}%
163
164
            \DeclareInputText{148}{"o}%
165
            \DeclareInputText{129}{"u}%
```

166 }%

```
167 \shorthandoff{"}%
168 \gdef\umlautnotgerman{%
    \DeclareInputText{142}{\"A}%
    \DeclareInputText{153}{\"0}%
170
     \DeclareInputText{154}{\"U}%
171
     \DeclareInputText{132}{\"a}%
173
     \DeclareInputText{148}{\"o}%
174
     \DeclareInputText{129}{\"u}%
175 }%
176 \endgroup
      cp437de.gie
4.7
177 \ProvidesFile{cp437de.gie}[\giefiledate\space v\giefileversion\space
    Input encoding file]%
179 \begingroup
180 \shorthandon{"}%
181 \gdef\umlautgerman{%
     \DeclareInputText{142}{"A}%
183
    \DeclareInputText{153}{"0}%
    \DeclareInputText{154}{"U}%
184
     \DeclareInputText{225}{"s}%
185
     \DeclareInputText{132}{"a}%
186
     \DeclareInputText{148}{"o}%
187
188
     \DeclareInputText{129}{"u}%
189 }%
190 \shorthandoff{"}%
191 \gdef\umlautnotgerman{%
192
     \DeclareInputText{142}{\"A}%
193
     \DeclareInputText{153}{\"0}%
     \DeclareInputText{154}{\"U}%
194
     \DeclareInputText{225}{\ss}%
195
196
     \DeclareInputText{132}{\"a}%
     \DeclareInputText{148}{\"o}%
197
198
     \DeclareInputText{129}{\"u}%
199 }%
200 \endgroup
      cp850.gie
201 \ProvidesFile{cp850.gie}[\giefiledate\space v\giefileversion\space
202 Input encoding file]%
203 \begingroup
204 \shorthandon{"}%
205 \gdef\umlautgerman{%
    \DeclareInputText{142}{"A}%
    \DeclareInputText{153}{"0}%
207
   \DeclareInputText{154}{"U}%
208
209
    \DeclareInputText{225}{"s}%
210 \DeclareInputText{132}{"a}%
    \DeclareInputText{148}{"o}%
211
212
    \DeclareInputText{129}{"u}%
213 }%
214 \shorthandoff{"}%
215 \gdef\umlautnotgerman{%
```

216 \DeclareInputText{142}{\"A}%

```
\DeclareInputText{153}{\"0}%
217
     \DeclareInputText{154}{\"U}%
218
     \DeclareInputText{225}{\ss}%
219
     \DeclareInputText{132}{\"a}%
220
     \DeclareInputText{148}{\"o}%
222
     \DeclareInputText{129}{\"u}%
223 }%
224 \endgroup
4.9
       cp852.gie
225 \ProvidesFile{cp852.gie}[\giefiledate\space v\giefileversion\space
    Input encoding file]%
227 \begingroup
228 \shorthandon{"}%
229 \gdef\umlautgerman{%
    \DeclareInputText{142}{"A}%
231
     \DeclareInputText{153}{"0}%
232
    \DeclareInputText{154}{"U}%
233
     \DeclareInputText{225}{"s}%
234
     \DeclareInputText{132}{"a}%
235
     \DeclareInputText{148}{"o}%
     \DeclareInputText{129}{"u}%
236
237 }%
238 \shorthandoff{"}%
239 \gdef\umlautnotgerman{%
     \DeclareInputText{142}{\"A}%
     \DeclareInputText{153}{\"0}%
242
     \DeclareInputText{154}{\"U}%
243
     \DeclareInputText{225}{\ss}%
     244
245
     \DeclareInputText{148}{\"o}%
246
     \DeclareInputText{129}{\"u}%
247 }%
```

4.10 cp865.gie

248 \endgroup

```
249 \ProvidesFile{cp865.gie}[\giefiledate\space v\giefileversion\space
250 Input encoding file]%
251 \begingroup
252 \shorthandon{"}%
253 \gdef\umlautgerman{%
     \DeclareInputText{142}{"A}%
254
255
     \DeclareInputText{153}{"0}%
    \DeclareInputText{154}{"U}%
256
    \DeclareInputText{225}{"s}%
257
    \DeclareInputText{132}{"a}%
259
     \DeclareInputText{148}{"o}%
260
     \DeclareInputText{129}{"u}%
261 }%
262 \shorthandoff{"}%
263 \gdef\umlautnotgerman{%
264
     \DeclareInputText{142}{\"A}%
265
     \DeclareInputText{153}{\"0}%
266
     \DeclareInputText{154}{\"U}%
```

```
267 \DeclareInputText{225}\ss}%
268 \DeclareInputText{132}\\"a}%
269 \DeclareInputText{148}\\"o}%
270 \DeclareInputText{129}\\"u}%
271 }%
272 \endgroup
```

4.11 decmulti.gie

```
274 Input encoding file]%
275 \begingroup
276 \shorthandon{"}%
277 \gdef\umlautgerman{%
    \DeclareInputText{196}{"A}%
    \DeclareInputText{214}{"0}%
    \DeclareInputText{220}{"U}%
280
281
    \DeclareInputText{223}{"s}%
282
    \DeclareInputText{228}{"a}%
283
    \DeclareInputText{246}{"o}%
284
    \DeclareInputText{252}{"u}%
285 }%
287 \gdef\umlautnotgerman{%
    \DeclareInputText{196}{\"A}%
288
    \DeclareInputText{214}{\"0}%
289
    \DeclareInputText{220}{\"U}%
290
    \DeclareInputText{223}{\ss}%
291
292
    \DeclareInputText{228}{\"a}%
293
    \DeclareInputText{246}{\"o}%
    \DeclareInputText{252}{\"u}%
294
295 }%
296 \endgroup
```

4.12 latin1.gie

```
297 \ProvidesFile{latin1.gie}[\giefiledate\space v\giefileversion\space
     Input encoding file]%
299 \begingroup
300 \shorthandon{"}%
301 \gdef\umlautgerman{%
     \DeclareInputText{196}{"A}%
302
303
     \DeclareInputText{214}{"0}%
     \DeclareInputText{220}{"U}%
304
     \DeclareInputText{223}{"s}%
305
     \DeclareInputText{228}{"a}%
306
     \DeclareInputText{246}{"o}%
307
     \DeclareInputText{252}{"u}%
308
309 }%
310 \shorthandoff{"}%
311 \gdef\umlautnotgerman{%
    \DeclareInputText{196}{\"A}%
312
     \DeclareInputText{214}{\"0}%
313
     \DeclareInputText{220}{\"U}%
314
315
     \DeclareInputText{223}{\ss}%
316
    \DeclareInputText{228}{\"a}%
```

```
\DeclareInputText{246}{\"o}%
317
            \DeclareInputText{252}{\"u}%
318
319 }%
320 \setminus endgroup
                      latin2.gie
  4.13
321 \ensuremath{\mbox{\sc v\giefileversion\sc pace}} \ensuremath{\mbox{\sc v\giefile
322 Input encoding file]%
323 \begingroup
324 \shorthandon{"}%
325 \gdef\umlautgerman{%
            \DeclareInputText{196}{"A}%
327
             \DeclareInputText{214}{"0}%
328
             \DeclareInputText{220}{"U}%
             \DeclareInputText{223}{"s}%
             \DeclareInputText{228}{"a}%
331
             \DeclareInputText{246}{"o}%
332
             \DeclareInputText{252}{"u}%
333 }%
334 \shorthandoff{"}%
335 \gdef\umlautnotgerman{%
             \DeclareInputText{196}{\"A}%
336
             \DeclareInputText{214}{\"0}%
337
338
             \DeclareInputText{220}{\"U}%
             \DeclareInputText{223}{\ss}%
339
             \DeclareInputText{228}{\"a}%
341
             \DeclareInputText{246}{\"o}%
342
             \DeclareInputText{252}{\"u}%
343 }%
344 \endgroup
                     latin3.gie
  4.14
345 \ProvidesFile{latin3.gie}[\giefiledate\space v\giefileversion\space
           Input encoding file]%
347 \begingroup
348 \shorthandon{"}%
349 \gdef\umlautgerman{%
             \DeclareInputText{196}{"A}%
350
             \DeclareInputText{214}{"0}%
351
352
             \DeclareInputText{220}{"U}%
353
             \DeclareInputText{223}{"s}%
             \DeclareInputText{228}{"a}%
354
355
             \DeclareInputText{246}{"o}%
             \DeclareInputText{252}{"u}%
356
357 }%
358 \shorthandoff{"}%
359 \gdef\umlautnotgerman{%
360
             \DeclareInputText{196}{\"A}%
            \DeclareInputText{214}{\"0}%
361
            \DeclareInputText{220}{\"U}%
362
            \DeclareInputText{223}{\ss}%
363
            \DeclareInputText{228}{\"a}%
364
```

365

366

\DeclareInputText{246}{\"o}%

\DeclareInputText{252}{\"u}%

```
367 }%
368 \endgroup
```

4.15 latin5.gie

```
369 \ProvidesFile{latin5.gie}[\giefiledate\space v\giefileversion\space
   Input encoding file]%
371 \begingroup
373 \gdef\umlautgerman{%
    \DeclareInputText{196}{"A}%
    \DeclareInputText{214}{"0}%
375
    \DeclareInputText{220}{"U}%
376
377
    \DeclareInputText{223}{"s}%
    \DeclareInputText{228}{"a}%
378
    \DeclareInputText{246}{"o}%
    \DeclareInputText{252}{"u}%
381 }%
382 \shorthandoff{"}%
383 \gdef\umlautnotgerman{%
    384
    385
    \DeclareInputText{220}{\"U}%
386
     \DeclareInputText{223}{\ss}%
387
388
     \DeclareInputText{228}{\"a}%
     \DeclareInputText{246}{\"o}%
389
390
    \DeclareInputText{252}{\"u}%
391 }%
392 \endgroup
```

4.16 latin9.gie

```
393 \ProvidesFile{latin9.gie}[\giefiledate\space v\giefileversion\space
    Input encoding file]%
395 \begingroup
396 \shorthandon{"}%
397 \gdef\umlautgerman{%
398
     \DeclareInputText{196}{"A}%
399
     \DeclareInputText{214}{"0}%
400
     \DeclareInputText{220}{"U}%
     \DeclareInputText{223}{"s}%
401
     \DeclareInputText{228}{"a}%
402
403
     \DeclareInputText{246}{"o}%
     \DeclareInputText{252}{"u}%
404
405 }%
406 \shorthandoff{"}%
407 \gdef\umlautnotgerman{%
     \DeclareInputText{196}{\"A}%
409
     \DeclareInputText{214}{\"0}%
410
     \DeclareInputText{220}{\"U}%
     \DeclareInputText{223}{\ss}%
411
     \DeclareInputText{228}{\"a}%
412
     \DeclareInputText{246}{\"o}%
413
414
     \DeclareInputText{252}{\"u}%
415 }%
416 \endgroup
```

4.17 next.gie

```
417 \ProvidesFile{next.gie}[\giefiledate\space v\giefileversion\space]
    Input encoding file]%
419 \begingroup
420 \shorthandon{"}%
421 \gdef\umlautgerman{%
    \DeclareInputText{133}{"A}%
422
    \DeclareInputText{150}{"0}%
423
    \DeclareInputText{154}{"U}%
425
    \DeclareInputText{217}{"a}%
    \DeclareInputText{240}{"o}%
426
     \DeclareInputText{246}{"u}%
427
     \DeclareInputText{251}{"s}%
428
429 }%
430 \shorthandoff{"}%
431 \gdef\umlautnotgerman{%
432
     \DeclareInputText{133}{\"A}%
433
     \DeclareInputText{150}{\"0}%
434
     \DeclareInputText{154}{\"U}%
435
     \DeclareInputText{217}{\"a}%
436
     \DeclareInputText{240}{\"o}%
437
     \DeclareInputText{246}{\"u}%
     \DeclareInputText{251}{\"s}%
438
439 }%
440 \endgroup
```

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