

German Module for the datetime2 Package

<https://github.com/SFr682k/datetime2-german>

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Abstract

This is the German language module for the datetime2 package. If you want to use the settings in this module you must install it in addition to installing datetime2. If you use babel or polyglossia, you will need this module to prevent them from redefining `\today`. The datetime2 `useregional` setting must be set to `text` or `numeric` for the language styles to be set. Alternatively, you can set the style in the document using `\DTMsetstyle`, but this may be changed by `\date<language>` depending on the value of the `useregional` setting.

Currently there is only a regionless style.

Actually, I think that it is not necessary to define variant styles (e. g. `de-DE/de-DE-numeric` and `de-AT/de-AT-numeric`) since there are — as far as I know — no differences in the *format* of the date.

However, I'm only capable of standard German. If there *are* differences in format and/or spelling, please create a feature request on GitHub or send me an e-mail. I would be very grateful, if some examples and/or a list of the weekdays' and months' spelling is/are also provided.

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1 Installation

Extract the language definition files first:

1. Run \TeX over the file `datetime2-german.ins`:
`latex datetime2-german.ins`
2. Move all `*.ldf` files to `TEXMF/tex/latex/datetime2-contrib/datetime2-german/`

Then, you can compile the documentation yourself by executing

```
pdflatex datetime2-german.dtx
makeindex -s gind.ist datetime2-german.idx
makeindex -s gglo.ist -o datetime2-german.gls datetime2-german.glo
pdflatex datetime2-german.dtx
pdflatex datetime2-german.dtx
```

or just use the precompiled documentation shipped with the source files.

In both cases, copy the files `datetime2-german.pdf` and `README.md` to `TEXMF/doc/latex/datetime2-contrib/datetime2-german/`

2 Usage

See the `datetime2` documentation for further details

Loading the German module by passing the `german` option to the `datetime2` package:

```
\documentclass{article}
\usepackage[german]{datetime2}
\begin{document}
\today
\end{document}
```

Loading the German module via `babel` and passing the `german` option to the `\documentclass` command (or to `babel` directly):

```
\documentclass[german]{article}
\usepackage{babel}
\usepackage[userregional]{datetime2}
\begin{document}
\today
\end{document}
```

Loading the German module when using `polyglossia` by passing the `german` option to the `datetime2` package:

```
\documentclass{article}
\usepackage{polyglossia}
\setmainlanguage{german}
\usepackage[german]{datetime2}
\begin{document}
\today
\end{document}
```

showdown-option Pass the `showdown` option to the `datetime2` package to show the weekday

Abbreviated weekday and month names Use the `\DTMLangsetup[german]{abbr}` command to switch to abbreviated weekday and month names.

Switch back to the non-abbreviated version with `\DTMLangsetup[german]{abbr=false}`

3 Style examples

- Non-numeric style:
5. September 2017, 12:51:04 MESZ
5. Sep. '17, 12:51:04 MESZ *abbreviated version*
Dienstag, 5. September 2017, 12:51:04 MESZ *with showdow option*
Di., 5. Sep. '17, 12:51:04 MESZ *abbreviated version with showdow option*
- Numeric style:
05.09.2017, 12:51:04 MESZ
05.09.17, 12:51:04 MESZ *abbreviated version*
Dienstag, 05.09.2017, 12:51:04 MESZ *with showdow option*
Di., 05.09.17, 12:51:04 MESZ *abbreviated version with showdow option*

4 License

This material is subject to the \LaTeX Project Public License, Version 1.3c or later.
See the copyright headers of the single files for further details.

5 The Code

5.1 UTF-8

This file contains the settings that use UTF-8 characters. This file is loaded if \XeLaTeX or \LuaLaTeX are used. Please make sure your text editor is set to UTF-8 if you want to view this code.

Identify module

```
1 \ProvidesDateTimeModule{german-utf8}[2017/09/10 v1.2]
```

\backslash DTMgermanordinal

```
2 \newcommand*{\DTMgermanordinal}[1]{%  
3   \number#1  
4 }
```

\backslash DTMgermanmonthname German month names.

```
5 \newcommand*{\DTMgermanmonthname}[1]{%  
6   \ifcase#1  
7   \or  
8   Januar%  
9   \or  
10  Februar%  
11  \or  
12  März%  
13  \or  
14  April%  
15  \or  
16  Mai%  
17  \or  
18  Juni%  
19  \or  
20  Juli%  
21  \or  
22  August%  
23  \or
```

```

24 September%
25 \or
26 Oktober%
27 \or
28 November%
29 \or
30 Dezember%
31 \fi
32 }

```

`\DTMgermanshortmonthname` Abbreviated German month names.

```

33 \newcommand*{\DTMgermanshortmonthname}[1]{%
34 \ifcase#1
35 \or
36 Jan.%
37 \or
38 Feb.%
39 \or
40 März%
41 \or
42 Apr.%
43 \or
44 Mai%
45 \or
46 Juni%
47 \or
48 Juli%
49 \or
50 Aug.%
51 \or
52 Sep.%
53 \or
54 Okt.%
55 \or
56 Nov.%
57 \or
58 Dez.%
59 \fi
60 }

```

`\DTMgermanweekdayname` Provides weekday names

```

61 \newcommand*{\DTMgermanweekdayname}[1]{%
62 \ifcase#1
63 Montag%
64 \or
65 Dienstag%
66 \or
67 Mittwoch%
68 \or
69 Donnerstag%
70 \or
71 Freitag%
72 \or
73 Samstag%
74 \or
75 Sonntag%

```

```
76 \fi
77 }
```

`\DTMgermanshortweekdayname` Provides abbreviated weekday names

```
78 \newcommand*{\DTMgermanshortweekdayname}[1]{%
79 \ifcase#1
80 Mo.%
81 \or
82 Di.%
83 \or
84 Mi.%
85 \or
86 Do.%
87 \or
88 Fr.%
89 \or
90 Sa.%
91 \or
92 So.%
93 \fi
94 }
```

5.2 ASCII

This file contains the settings that use \TeX commands for non-ASCII characters. This should be input if neither $X_{\text{e}}\TeX$ nor $\text{Lua}\TeX$ are used. Even if the user has loaded `inputenc` with `utf8`, this file should still be used not the `datetime2-german-utf8.lfd` file as the non-ASCII characters are made active in that situation and would need protecting against expansion.

Identify module

```
95 \ProvidesDateTimeModule{german-ascii}[2017/09/10 v1.2]
```

`\DTMgermanordinal`

```
96 \newcommand*{\DTMgermanordinal}[1]{%
97 \number#1
98 }
```

`\DTMgermanmonthname` German month names.

```
99 \newcommand*{\DTMgermanmonthname}[1]{%
100 \ifcase#1
101 \or
102 Januar%
103 \or
104 Februar%
105 \or
106 M\protect\"arz%
107 \or
108 April%
109 \or
110 Mai%
111 \or
112 Juni%
113 \or
114 Juli%
115 \or
116 August%
```

```

117 \or
118 September%
119 \or
120 Oktober%
121 \or
122 November%
123 \or
124 Dezember%
125 \fi
126 }

```

`\DTMgermanshortmonthname` Abbreviated German month names.

```

127 \newcommand*{\DTMgermanshortmonthname}[1]{%
128 \ifcase#1
129 \or
130 Jan.%
131 \or
132 Feb.%
133 \or
134 M\protect\"arz%
135 \or
136 Apr.%
137 \or
138 Mai%
139 \or
140 Juni%
141 \or
142 Juli%
143 \or
144 Aug.%
145 \or
146 Sep.%
147 \or
148 Okt.%
149 \or
150 Nov.%
151 \or
152 Dez.%
153 \fi
154 }

```

`\DTMgermanweekdayname` Provides weekday names

```

155 \newcommand*{\DTMgermanweekdayname}[1]{%
156 \ifcase#1
157 Montag%
158 \or
159 Dienstag%
160 \or
161 Mittwoch%
162 \or
163 Donnerstag%
164 \or
165 Freitag%
166 \or
167 Samstag%
168 \or

```

```

169 Sonntag%
170 \fi
171 }

```

`\DTMgermanshortweekdayname` Provides abbreviated weekday names

```

172 \newcommand*{\DTMgermanshortweekdayname}[1]{%
173   \ifcase#1
174   Mo.%
175   \or
176   Di.%
177   \or
178   Mi.%
179   \or
180   Do.%
181   \or
182   Fr.%
183   \or
184   Sa.%
185   \or
186   So.%
187   \fi
188 }

```

5.3 Main German Module (`datetime2-german.1df`)

Identify Module

```
189 \ProvidesDateTimeModule{german}[2017/09/10 v1.2]
```

Need to find out if $X_{\text{T}}\text{E}_{\text{X}}$ or $\text{L}u\text{A}_{\text{T}}\text{E}_{\text{X}}$ are being used.

```
190 \RequirePackage{ifxetex,ifluatex}
```

$X_{\text{T}}\text{E}_{\text{X}}$ and $\text{L}u\text{A}_{\text{T}}\text{E}_{\text{X}}$ natively support UTF-8, so load `german-utf8` if either of those engines are used otherwise load `german-ascii`.

```

191 \ifxetex
192   \RequireDateTimeModule{german-utf8}
193 \else
194   \ifluatex
195     \RequireDateTimeModule{german-utf8}
196   \else
197     \RequireDateTimeModule{german-ascii}
198   \fi
199 \fi

```

Define the german style.

Allow the user a way of configuring the german and `german-numeric` styles. This doesn't use the package wide separators such as `\dtm@datetimesep` in case other date formats are also required.

`\DTMgermandowdaysep` The separator between weekday and day

```
200 \newcommand*{\DTMgermandowdaysep}{, \space}
```

`\DTMgermandaymonthsep` The separator between the day and month for the text format.

```
201 \newcommand*{\DTMgermandaymonthsep}{.\DTMtexpdfstring{\protect~}{\space}}
```

`\DTMgermanmonthyearsep` The separator between the month and year for the text format.

```
202 \newcommand*{\DTMgermanmonthyearsep}{\space}
```

`\DTMgermandatetimesep` The separator between the date and time blocks in the full format (either text or numeric).
 203 `\newcommand*{\DTMgermandatetimesep}{, \space}`

`\DTMgermantimezonesep` The separator between the time and zone blocks in the full format (either text or numeric).
 204 `\newcommand*{\DTMgermantimezonesep}{\space}`

`\DTMgermandatesep` The separator for the numeric date format.
 205 `\newcommand*{\DTMgermandatesep}{.}`

`\DTMgermantimesep` The separator for the numeric time format.
 206 `\newcommand*{\DTMgermantimesep}{:}`

Provide keys that can be used in `\DTMlangsetup` to set these separators.

207 `\DTMdefkey{german}{daymonthsep}{\renewcommand*{\DTMgermandaymonthsep}{#1}}`
 208 `\DTMdefkey{german}{monthyearsep}{\renewcommand*{\DTMgermanmonthyearsep}{#1}}`
 209 `\DTMdefkey{german}{datetimesep}{\renewcommand*{\DTMgermandatetimesep}{#1}}`
 210 `\DTMdefkey{german}{timezonesep}{\renewcommand*{\DTMgermantimezonesep}{#1}}`
 211 `\DTMdefkey{german}{datesep}{\renewcommand*{\DTMgermandatesep}{#1}}`
 212 `\DTMdefkey{german}{timesep}{\renewcommand*{\DTMgermantimesep}{#1}}`

Define a boolean key that can switch between full and abbreviated formats for the month and day of week names in the text format.

213 `\DTMdefboolkey{german}{abbr}[true]{}`

The default is full name

214 `\DTMsetbool{german}{abbr}{false}`

Define a boolean key that determines if the time zone mappings should be used.

215 `\DTMdefboolkey{german}{mapzone}[true]{}`

The default is to use mappings.

216 `\DTMsetbool{german}{mapzone}{true}`

Define a boolean key that determines if the day of month should be displayed.

217 `\DTMdefboolkey{german}{showdayofmonth}[true]{}`

The default is to show the day of month.

218 `\DTMsetbool{german}{showdayofmonth}{true}`

Define a boolean key that determines if the year should be displayed.

219 `\DTMdefboolkey{german}{showyear}[true]{}`

The default is to show the year.

220 `\DTMsetbool{german}{showyear}{true}`

Define the german style.

221 `\DTMnewstyle`
 222 `{german}% label`
 223 `{% date style`
 224 `\renewcommand*{\DTMdisplaydate[4]{%`
 225 `\ifDTMshowdow`
 226 `\ifnum##4>-1`
 227 `\DTMifbool{german}{abbr}%`
 228 `{\DTMgermanshortweekdayname{##4}}%`
 229 `{\DTMgermanweekdayname{##4}}%`
 230 `\DTMgermandowdaysep`
 231 `\fi`
 232 `\fi`
 233 `%`


```

234 \DTMifbool{german}{showdayofmonth}%
235 {\DTMgermanordinal{##3}\DTMgermandaymonthsep}%
236 {}%
237 %
238 \DTMifbool{german}{abbr}%
239 {\DTMgermanshortmonthname{##2}}%
240 {\DTMgermanmonthname{##2}}%
241 %
242 \DTMifbool{german}{showyear}%
243 {%
244 \DTMgermanmonthyearsep%
245 \DTMifbool{german}{abbr}%
246 {'\DTMtwodigits{##1}}%
247 {\number##1 }% space intended
248 }%
249 {}%
250 }%
251 \renewcommand*\DTMdisplaydate[4]{%
252 \ifDTMshowdown
253 \ifnum##4>-1
254 \DTMifbool{german}{abbr}%
255 {\DTMgermanshortweekdayname{##4}}%
256 {\DTMgermanweekdayname{##4}}%
257 \DTMgermandowdaysep
258 \fi
259 \fi
260 %
261 \DTMifbool{german}{showdayofmonth}%
262 {\DTMgermanordinal{##3}\DTMgermandaymonthsep}%
263 {}%
264 %
265 \DTMifbool{german}{abbr}%
266 {\DTMgermanshortmonthname{##2}}%
267 {\DTMgermanmonthname{##2}}%
268 %
269 \DTMifbool{german}{showyear}%
270 {%
271 \DTMgermanmonthyearsep%
272 \DTMifbool{german}{abbr}%
273 {'\DTMtwodigits{##1}}%
274 {\number##1 }% space intended
275 }%
276 {}%
277 }
278 }%
279 {% time style (use default)
280 \renewcommand*\DTMdisplaytime[3]{%
281 \DTMtwodigits{##1}%
282 \DTMgermantimesep\DTMtwodigits{##2}%
283 \ifDTMshowseconds\DTMgermantimesep\DTMtwodigits{##3}\fi
284 }%
285 }%
286 {% zone style
287 \DTMresetzones
288 \DTMgermanzonemaps
289 \renewcommand*\DTMdisplayzone[2]{%

```

```

290 \DTMifbool{german}{mapzone}%
291 {\DTMusedonemapordefault{##1}{##2}}%
292 {%
293 \ifnum##1<0\else+fi\DTMtwdigits{##1}%
294 \ifDTMshowzoneminutes\DTMgermantimesep\DTMtwdigits{##2}\fi
295 }%
296 }%
297 }%
298 {% full style
299 \renewcommand*\DTMdisplay}[9]{%
300 \ifDTMshowdate
301 \DTMdisplaydate{##1}{##2}{##3}{##4}%
302 \DTMgermandatetimesep
303 \fi
304 \DTMdisplaytime{##5}{##6}{##7}%
305 \ifDTMshowzone
306 \DTMgermantimezonesep
307 \DTMdisplayzone{##8}{##9}%
308 \fi
309 }%
310 \renewcommand*\DTMDisplay}[9]{%
311 \ifDTMshowdate
312 \DTMdisplaydate{##1}{##2}{##3}{##4}%
313 \DTMgermandatetimesep
314 \fi
315 \DTMdisplaytime{##5}{##6}{##7}%
316 \ifDTMshowzone
317 \DTMgermantimezonesep
318 \DTMdisplayzone{##8}{##9}%
319 \fi
320 }%
321 }%

```

Define numeric style.

```

322 \DTMnewstyle
323 {german-numeric}% label
324 {% date style
325 \renewcommand*\DTMdisplaydate[4]{%
326 \ifDTMshowdow
327 \ifnum##4>-1
328 \DTMifbool{german}{abbr}%
329 {\DTMgermanshortweekdayname{##4}}%
330 {\DTMgermanweekdayname{##4}}%
331 \DTMgermandowdaysep
332 \fi
333 \fi
334 %
335 \DTMifbool{german}{showdayofmonth}%
336 {%
337 \DTMtwdigits{##3}%
338 \DTMgermandatesep
339 }%
340 }%
341 \DTMtwdigits{##2}%
342 \DTMifbool{german}{showyear}%
343 {%
344 \DTMgermandatesep%

```

```

345     \DTMifbool{german}{abbr}%
346     {\DTMtwdigits{##1}}%
347     {\number##1 }% space intended
348     }%
349     {}%
350   }%
351   \renewcommand*\DTMdisplaydate[4]{\DTMdisplaydate{##1}{##2}{##3}{##4}}%
352 }%
353 {% time style
354   \renewcommand*\DTMdisplaytime[3]{%
355     \DTMtwdigits{##1}%
356     \DTMgermantimesep\DTMtwdigits{##2}%
357     \ifDTMshowseconds\DTMgermantimesep\DTMtwdigits{##3}\fi
358   }%
359 }%
360 {% zone style
361   \DTMresetzones
362   \DTMgermanzonemaps
363   \renewcommand*\DTMdisplayzone[2]{%
364     \DTMifbool{german}{mapzone}%
365     {\DTMusezonemapordefault{##1}{##2}}%
366     {%
367       \ifnum##1<0\else\fi\DTMtwdigits{##1}%
368       \ifDTMshowzoneminutes\DTMgermantimesep\DTMtwdigits{##2}\fi
369     }%
370   }%
371 }%
372 {% full style
373   \renewcommand*\DTMdisplay}[9]{%
374     \ifDTMshowdate
375       \DTMdisplaydate{##1}{##2}{##3}{##4}%
376       \DTMgermandatetimesep
377       \fi
378       \DTMdisplaytime{##5}{##6}{##7}%
379       \ifDTMshowzone
380         \DTMgermantimezonesep
381         \DTMdisplayzone{##8}{##9}%
382       \fi
383     }%
384   \renewcommand*\DTMdisplay}{\DTMdisplay}%
385 }

```

`\DTMgermanzonemaps` The time zone mappings are set through this command, which can be redefined if extra mappings are required or mappings need to be removed.

```

386 \newcommand*\DTMgermanzonemaps{%
387   \DTMdefzonemap{01}{00}{MEZ}%
388   \DTMdefzonemap{02}{00}{MESZ}%
389 }

```

Switch style according to the `useregional` setting.

```

390 \DTMifcaseregional
391 {}% do nothing
392 {\DTMsetstyle{german}}
393 {\DTMsetstyle{german-numeric}}

```

Redefine `\dategerman` (or `\date<dialect>`) to prevent babel from resetting `\today`. (For this to work, babel must already have been loaded if it's required.)

```
394 \ifcsundef{date\CurrentTrackedDialect}
395 {%
396   \ifundef\dategerman
397   {% do nothing
398   }%
399   {%
400     \def\dategerman{%
401       \DTMifcaseregional
402       {}% do nothing
403       {\DTMsetstyle{german}}%
404       {\DTMsetstyle{german-numeric}}%
405     }%
406   }%
407 }%
408 {%
409   \csdef{date\CurrentTrackedDialect}{%
410     \DTMifcaseregional
411     {}% do nothing
412     {\DTMsetstyle{german}}%
413     {\DTMsetstyle{german-numeric}}
414   }%
415 }%
```

Change History

1.0	General: Initial release	3, 5, 7	\DTMgermanshortweekdayname: Short weekday names implemented	5, 7
1.1	General: fixed bug in \DTMDisplaydate . . .	8	\DTMgermanzonemaps: German time zone names (ME[S]Z)	11
1.2	\DTMgermanshortmonthname: Short month names implemented	4, 6	General: Day of week implemented	8, 10
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