

datetime2-en-fulltext.sty: English Full Text Date and Time Styles

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Abstract

This is a supplementary package that provides English full text date and time styles for the `datetime2.sty` package. These styles are analogous to the styles provided by the old `datetime`'s `\textdate` and `\oclock`. **These styles are not expandable styles.** This means that you can't use them in PDF bookmarks nor can you use them in case-changing commands such as `\MakeUppercase`.

1 Introduction

This package loads the `datetime2` package and the `english-base` language module, if not already loaded, and provides the date styles:

en-fulltext Produces the date in the style: first of April, two thousand and fifteen. (Lower case ordinal and number words.) Commands such as `\Today` will start with a capital. For example: First of April, two thousand and fifteen.

en-FullText Produces the date in the style: First of April, Two Thousand and Fifteen. (Title Case.)

en-FULLTEXT Produces the date in the style: FIRST OF APRIL, TWO THOUSAND AND FIFTEEN. (All caps.)

These styles honour the `showdow` setting. Example:

```
\documentclass{article}
\usepackage[showdow]{datetime2-en-fulltext}
\begin{document}
Date: \today.
\end{document}
```

The separator between the month and year is given by `\DTMenfulltextmonthyearsep` which may be redefined using `\renewcommand`.

The `datetime2-en-fulltext` package automatically switches on the `en-fulltext` date style. You can switch the style using `\DTMsetdatestyle`. For example:

```
\DTMsetdatestyle{en-FullText}
```

This package also provides the time styles:

en-fulltext Produces the time in the style: thirteen minutes past five in the afternoon. (Lower case.)

en-Fulltext Produces the time in the style: Thirteen minutes past five in the afternoon. (Initial capital.)

en-FullText Produces the time in the style: Thirteen Minutes Past Five in the Afternoon. (Title Case.)

en-FULLTEXT Produces the time in the style: THIRTEEN MINUTES PAST FIVE IN THE AFTERNOON. (All caps.)

The `datetime2-en-fulltext` package automatically switches on the `en-fulltext` time style. You can switch the style using `\DTMsettimestyle`. For example:

```
\DTMsettimestyle{en-FullText}
```

Note that if you use `polyglossia` or `babel` and you don't have `datetime2's` `useregional` setting set to `false`, then the regional styles will override the styles provided here.

2 The Code

Identify package

```
1 \NeedsTeXFormat{LaTeX2e}
2 \ProvidesPackage{datetime2-en-fulltext}[2015/04/01 v1.0]
```

Pass all options to `datetime2`:

```
3 \DeclareOption*{\PassOptionsToPackage{\CurrentOption}{datetime2}}
4 \ProcessOptions
```

Requires `datetime2`:

```
5 \RequirePackage{datetime2}
```

Also requires `fmtcount`:

```
6 \RequirePackage{fmtcount}
```

If the `english-base` language module hasn't been loaded, load it now.

```
7 \def\CurrentTrackedDialect{english}
8 \RequireDateTimeModule{english-base}
9 \undef\CurrentTrackedDialect
```

Define the `en-fulltext` date style:

```
10 \DTMnewdatestyle{en-fulltext}{%
11   \renewcommand*{\DTMdisplaydate[4]}{%
12     \ifDTMshowdow
13       \ifnum##4>-1
14         \DTMenglishweekdayname{##4} the\space
15       \fi
```

```

16 \fi
17 \protect\ordinalstringnum{##3} of \DTMenglishmonthname{##2}%
18 \DTMenfulltextmonthyearsep
19 \protect\numberstringnum{##1}%
20 }%
21 \renewcommand*\DTMdisplaydate[4]{%
22 \ifDTMshowdow
23 \ifnum##4>-1
24 \DTMenglishweekdayname{##4} the\space
25 \else
26 \protect\Ordinalstringnum{##3}
27 \fi
28 \else
29 \protect\Ordinalstringnum{##3}
30 \fi
31 of \DTMenglishmonthname{##2}%
32 \DTMenfulltextmonthyearsep
33 \protect\numberstringnum{##1}%
34 }%
35 }

```

Define the en-FullText date style:

```

36 \DTMnewdatestyle{en-FullText}{%
37 \renewcommand*\DTMdisplaydate[4]{%
38 \ifDTMshowdow
39 \ifnum##4>-1
40 \DTMenglishweekdayname{##4} the\space
41 \fi
42 \fi
43 \protect\Ordinalstringnum{##3} of \DTMenglishmonthname{##2}%
44 \DTMenfulltextmonthyearsep
45 \protect\Numberstringnum{##1}%
46 }%
47 \renewcommand*\DTMdisplaydate{\DTMdisplaydate}%
48 }

```

Define the en-FULLTEXT date style:

```

49 \DTMnewdatestyle{en-FULLTEXT}{%
50 \renewcommand*\DTMdisplaydate[4]{%
51 \ifDTMshowdow
52 \ifnum##4>-1
53 \MakeUppercase{\DTMenglishweekdayname{##4}} THE\space
54 \fi
55 \fi
56 \protect\ORDINALstringnum{##3} OF
57 \MakeUppercase{\DTMenglishmonthname{##2}%
58 \DTMenfulltextmonthyearsep}%
59 \protect\NUMBERstringnum{##1}%
60 }%
61 \renewcommand*\DTMdisplaydate{\DTMdisplaydate}%
62 }

```

```

\DTMenfulltextmonthyearsep Separator between month and year.
63 \newcommand*\DTMenfulltextmonthyearsep{,\space}

Set the en-fulltext date style:
64 \DTMsetdatestyle{en-fulltext}
    Define the en-fulltext time style. Seconds are ignored.
65 \DTMnewtimestyle{en-fulltext}{%
66 \renewcommand*\DTMdisplaytime[3]{%
67 \ifboolexpr
68 { test {\ifnumequal{##2}{0}} and
69 (
70 test {\ifnumequal{##1}{0}}
71 or test {\ifnumequal{##1}{12}}
72 or test {\ifnumequal{##1}{24}}
73 )
74 }%
75 {%

Either midnight or midday.
76 \ifnum##1=12
77 \DTMenglishnoon
78 \else
79 \DTMenglishmidnight
80 \fi
81 }%
82 {%

Neither midnight nor midday.
83 \ifnum##2=0

On the hour.
84 \protect\numberstringnum{##1} \DTMoclockstring
85 \else

Not on the hour.
86 \ifnum##2<31

Past the hour.
87 \ifnum##2=15

Quarter past the hour.
88 \DTMquarterpaststring\space
89 \else
90 \ifnum##2=30

Half past the hour.
91 \DTMhalfpaststring\space
92 \else
93 \protect\numberstringnum{##2}
94 \ifnum##2=1 \DTMminutepaststring\else \DTMminutespaststring\fi
95 \space

```

```

96         \fi
97     \fi
98     \ifnum##1>12
99         \ifnum##1=24
100             \DTMenglishmidnight
101         \else
102             \protect\numberstringnum{\numexpr##1-12}%
103         \fi
104     \else
105         \ifnum##1=0
106             \DTMenglishmidnight
107         \else
108             \protect\numberstringnum{##1}%
109         \fi
110     \fi
111 \else
    To the hour.
112     \ifnum##2=45
113         \DTMquartertostring\space
114     \else
115         \protect\numberstringnum{\numexpr60-##2}
116         \ifnum##2=59 \DTMminutetostring\else \DTMminutestostring\fi
117         \space
118     \fi
119     \ifnum##1>12
120         \ifnum##1=24
121             \protect\numberstringnum{1}%
122         \else
123             \ifnum##1=23
124                 \DTMenglishmidnight
125             \else
126                 \protect\numberstringnum{\numexpr##1-11}%
127             \fi
128         \fi
129     \else
130         \ifnum##1=12
131             \protect\numberstringnum{1}%
132         \else
133             \protect\numberstringnum{\numexpr##1+1}%
134         \fi
135     \fi
136 \fi
137 \fi
138 \ifnum##1>11
139     \ifnum##1=23
140         \ifnum##2<31
141             \space\DTMafternoonstring
142         \fi
143     \else

```

```

144     \ifnum##1=24
145     \ifnum##2>30
146         \space\DTMmorningstring
147     \fi
148     \else
149         \space\DTMafternoonstring
150     \fi
151 \fi
152 \else
153     \ifnum##1>0
154         \space\DTMmorningstring
155     \else
156         \ifnum##2>30
157             \space\DTMmorningstring
158         \fi
159     \fi
160 \fi
161 }%
162 }%
163 }

```

Define the en-Fulltext time style. Seconds are ignored.

```

164 \DTMnewtimestyle{en-Fulltext}{%
165 \renewcommand*\DTMdisplaytime[3]{%
166 \ifboolexpr
167 { test {\ifnumequal{##2}{0}} and
168 (
169     test {\ifnumequal{##1}{0}}
170     or test {\ifnumequal{##1}{12}}
171     or test {\ifnumequal{##1}{24}}
172 )
173 }%
174 {%

```

Either midnight or midday.

```

175     \ifnum##1=12
176         \expandafter\MakeUppercase\DTMenglishnoon
177     \else
178         \expandafter\MakeUppercase\DTMenglishmidnight
179     \fi
180 }%
181 {%

```

Neither midnight nor midday.

```

182     \ifnum##2=0
183         \protect\Numberstringnum{##1} \DTMoclockstring
184     \else
185         \ifnum##2<31

```

Past the hour.

```
186         \ifnum##2=15
```

Quarter past the hour.

```
187         \expandafter\MakeUppercase\DTMquarterpaststring\space
```

```
188         \else
```

```
189         \ifnum##2=30
```

Half past the hour.

```
190         \expandafter\MakeUppercase\DTMhalfpaststring\space
```

```
191         \else
```

```
192         \protect\Numberstringnum{##2}
```

```
193         \ifnum##2=1 \DTMminutepaststring\else \DTMminutespaststring\fi
```

```
194         \space
```

```
195         \fi
```

```
196         \fi
```

```
197         \ifnum##1>12
```

```
198         \ifnum##1=24
```

```
199         \DTMenglishmidnight
```

```
200         \else
```

```
201         \protect\numberstringnum{\numexpr##1-12}%
```

```
202         \fi
```

```
203         \else
```

```
204         \ifnum##1=0
```

```
205         \DTMenglishmidnight
```

```
206         \else
```

```
207         \protect\numberstringnum{##1}%
```

```
208         \fi
```

```
209         \fi
```

```
210         \else
```

To the hour.

```
211         \ifnum##2=45
```

```
212         \expandafter\MakeUppercase\DTMquartermtostring\space
```

```
213         \else
```

```
214         \protect\Numberstringnum{\numexpr60-##2}
```

```
215         \ifnum##2=59 \DTMminutetosting\else \DTMminutestosting\fi
```

```
216         \space
```

```
217         \fi
```

```
218         \ifnum##1>12
```

```
219         \ifnum##1=24
```

```
220         \protect\numberstringnum{1}%
```

```
221         \else
```

```
222         \ifnum##1=23
```

```
223         \DTMenglishmidnight
```

```
224         \else
```

```
225         \protect\numberstringnum{\numexpr##1-11}%
```

```
226         \fi
```

```
227         \fi
```

```
228         \else
```

```
229         \ifnum##1=12
```

```

230         \protect\numberstringnum{1}%
231     \else
232         \protect\numberstringnum{\numexpr##1+1}%
233     \fi
234 \fi
235 \fi
236 \fi
237 \ifnum##1>11
238     \ifnum##1=23
239         \ifnum##2<31
240             \space\DTMafternoonstring
241         \fi
242     \else
243         \ifnum##1=24
244             \ifnum##2>30
245                 \space\DTMmorningstring
246             \fi
247         \else
248             \space\DTMafternoonstring
249         \fi
250     \fi
251 \else
252     \ifnum##1>0
253         \space\DTMmorningstring
254     \else
255         \ifnum##2>30
256             \space\DTMmorningstring
257         \fi
258     \fi
259 \fi
260 }%
261 }%
262 }

```

Define the en-FULLTEXT time style. Seconds are ignored.

```

263 \DTMnewtimestyle{en-FULLTEXT}{%
264 \renewcommand*\DTMdisplaytime[3]{%
265 \ifboolexpr
266 { test {\ifnumequal{##2}{0}} and
267 (
268     test {\ifnumequal{##1}{0}}
269     or test {\ifnumequal{##1}{12}}
270     or test {\ifnumequal{##1}{24}}
271 )
272 }%
273 {%

```

Either midnight or midday.

```

274 \ifnum##1=12
275     \MakeUppercase\DTMenglishnoon
276 \else

```



```

277     \MakeUppercase\DTMenglishmidnight
278     \fi
279     }%
280     {%

Neither midnight nor midday.
281     \ifnum##2=0

On the hour.
282     \protect\NUMBERstringnum{##1} \MakeUppercase\DTMoclockstring
283     \else

Not on the hour.
284     \ifnum##2<31

Past the hour.
285     \ifnum##2=15

Quarter past the hour.
286     \MakeUppercase\DTMquarterpaststring\space
287     \else
288     \ifnum##2=30

Half past the hour.
289     \MakeUppercase\DTMhalfpaststring\space
290     \else
291     \protect\NUMBERstringnum{##2}
292     \MakeUppercase
293     {%
294     \ifnum##2=1 \DTMminutepaststring\else \DTMminutespaststring\fi
295     }%
296     \space
297     \fi
298     \fi
299     \ifnum##1>12
300     \ifnum##1=24
301     \MakeUppercase\DTMenglishmidnight
302     \else
303     \protect\NUMBERstringnum{\numexpr##1-12}%
304     \fi
305     \else
306     \ifnum##1=0
307     \MakeUppercase\DTMenglishmidnight
308     \else
309     \protect\NUMBERstringnum{##1}%
310     \fi
311     \fi
312     \else

To the hour.
313     \ifnum##2=45
314     \MakeUppercase\DTMquartertostring\space

```

```

315     \else
316     \protect\NUMBERstringnum{\numexpr60-##2}
317     \MakeUppercase
318     {%
319     \ifnum##2=59 \DTMminutetostring\else \DTMminutestostring\fi
320     }%
321     \space
322     \fi
323     \ifnum##1>12
324     \ifnum##1=24
325     \protect\NUMBERstringnum{1}%
326     \else
327     \ifnum##1=23
328     \MakeUppercase\DTMenglishmidnight
329     \else
330     \protect\NUMBERstringnum{\numexpr##1-11}%
331     \fi
332     \fi
333     \else
334     \ifnum##1=12
335     \protect\NUMBERstringnum{1}%
336     \else
337     \protect\NUMBERstringnum{\numexpr##1+1}%
338     \fi
339     \fi
340     \fi
341     \fi
342     \ifnum##1>11
343     \ifnum##1=23
344     \ifnum##2<31
345     \space\MakeUppercase\DTMafternoonstring
346     \fi
347     \else
348     \ifnum##1=24
349     \ifnum##2>30
350     \space\MakeUppercase\DTMmorningstring
351     \fi
352     \else
353     \space\MakeUppercase\DTMafternoonstring
354     \fi
355     \fi
356     \else
357     \ifnum##1>0
358     \space\MakeUppercase\DTMmorningstring
359     \else
360     \ifnum##2>30
361     \space\MakeUppercase\DTMmorningstring
362     \fi
363     \fi
364     \fi

```

```

365 }%
366 }%
367 }

    Define the en-FullText time style. Seconds are ignored.
368 \DTMnewtimestyle{en-FullText}{%
369 \renewcommand*\DTMdisplaytime[3]{%
370 \ifboolexpr
371 { test {\ifnumequal{##2}{0}} and
372 (
373     test {\ifnumequal{##1}{0}}
374     or test {\ifnumequal{##1}{12}}
375     or test {\ifnumequal{##1}{24}}
376 )
377 }%
378 {%

    Either midnight or midday.
379 \ifnum##1=12
380 \expandafter\MakeUppercase\DTMenglishnoon
381 \else
382 \expandafter\MakeUppercase\DTMenglishmidnight
383 \fi
384 }%
385 {%

    Neither midnight nor midday.
386 \ifnum##2=0

    On the hour.
387 \protect\Numberstringnum{##1} \DTMOClockstring
388 \else

    Not on the hour.
389 \ifnum##2<31

    Past the hour.
390 \ifnum##2=15

    Quarter past the hour.
391 \DTMQuarterPaststring\space
392 \else
393 \ifnum##2=30

    Half past the hour.
394 \DTMHalfPaststring\space
395 \else
396 \protect\Numberstringnum{##2}
397 \ifnum##2=1 \DTMMinutePaststring\else \DTMMinutesPaststring\fi
398 \space
399 \fi
400 \fi
401 \ifnum##1>12

```

```

402         \ifnum##1=24
403             \expandafter\MakeUppercase\DTMenglishmidnight
404         \else
405             \protect\Numberstringnum{\numexpr##1-12}%
406         \fi
407     \else
408         \ifnum##1=0
409             \expandafter\MakeUppercase\DTMenglishmidnight
410         \else
411             \protect\Numberstringnum{##1}%
412         \fi
413     \fi
414 \else

```

To the hour.

```

415         \ifnum##2=45
416             \DTMQuarterTostring\space
417         \else
418             \protect\Numberstringnum{\numexpr60-##2}
419             \ifnum##2=59 \DTMMinuteTostring\else \DTMMinutesTostring\fi
420         \space
421     \fi
422     \ifnum##1>12
423         \ifnum##1=24
424             \protect\Numberstringnum{1}%
425         \else
426             \ifnum##1=23
427                 \expandafter\MakeUppercase\DTMenglishmidnight
428             \else
429                 \protect\Numberstringnum{\numexpr##1-11}%
430             \fi
431         \fi
432     \else
433         \ifnum##1=12
434             \protect\Numberstringnum{1}%
435         \else
436             \protect\Numberstringnum{\numexpr##1+1}%
437         \fi
438     \fi
439 \fi
440 \fi
441 \ifnum##1>11
442     \ifnum##1=23
443         \ifnum##2<31
444             \space\DTMAfterNoonstring
445         \fi
446     \else
447         \ifnum##1=24
448             \ifnum##2>30
449                 \space\DTMMorningstring

```

```

450         \fi
451         \else
452         \space\DTMAfterNoonstring
453         \fi
454     \fi
455 \else
456     \ifnum##1>0
457     \space\DTMMorningstring
458     \else
459     \ifnum##2>30
460     \space\DTMMorningstring
461     \fi
462     \fi
463 \fi
464 }%
465 }%
466 }

```

\DTMoclockstring

```
467 \newcommand*\DTMoclockstring{o'clock}
```

\DTMOClockstring

```
468 \newcommand*\DTMOClockstring{O'Clock}
```

\DTMquarterpaststring

```
469 \newcommand*\DTMquarterpaststring{quarter past}
```

\DTMQuarterPaststring

```
470 \newcommand*\DTMQuarterPaststring{Quarter Past}
```

\DTMminutepaststring

```
471 \newcommand*\DTMminutepaststring{minute past}
```

\DTMminutespaststring

```
472 \newcommand*\DTMminutespaststring{minutes past}
```

\DTMMinutePaststring

```
473 \newcommand*\DTMMinutePaststring{Minute Past}
```

\DTMMinutesPaststring

```
474 \newcommand*\DTMMinutesPaststring{Minutes Past}
```

\DTMhalfpaststring

```
475 \newcommand*\DTMhalfpaststring{half past}
```

\DTMHalfPaststring

```
476 \newcommand*\DTMHalfPaststring{Half Past}
```

```

\DTMquartertostring
477 \newcommand*\DTMquartertostring>{quarter to}

\DTMQuarterTostring
478 \newcommand*\DTMQuarterTostring>{Quarter to}

\DTMminutetostring
479 \newcommand*\DTMminutetostring>{minute to}

\DTMMinuteTostring
480 \newcommand*\DTMMinuteTostring>{Minute to}

\DTMminutestostring
481 \newcommand*\DTMminutestostring>{minutes to}

\DTMMinutesTostring
482 \newcommand*\DTMMinutesTostring>{Minutes to}

\DTMmorningstring
483 \newcommand*\DTMmorningstring>{in the morning}

\DTMMorningstring
484 \newcommand*\DTMMorningstring>{in the Morning}

\DTMafternoonstring
485 \newcommand*\DTMafternoonstring>{in the afternoon}

\DTMAfterNoonstring
486 \newcommand*\DTMAfterNoonstring>{in the Afternoon}

Set the en-fulltext time style:
487 \DTMsettimestyle{en-fulltext}

```

Change History

1.0	
General: Initial release	2

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