

The `extdash` package*

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2018/06/24

The package implements the commands, `\Hyphdash`, `\Endash`, and `\Emdash`, to control hyphenation of compound words and ordinary words dashed by *em-dash*. Some additional commands and shortcuts are also introduced.

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1 User Interface

`\Hyphdash` The main purpose of the `extdash` package is to allow hyphenation of compound
`\Hyphdash*` words. When the word `something-something` occurs, the only hyphenation point after the dash is available. To allow hyphenation of both words joint by dash you can write

`something\Hyphdash something` or easier `something\-/something`

(the last case is available if you use the package `extdash` with `shortcuts` option). Sometimes the line break immediately after the dash is inadmissible. To avoid this, you can write

`something\Hyphdash* something` or easier `something\=/something`

(the last case is also a shortcut). An example is the word *L-approximation* which can't be broken at the dash.

*This file has version number v1.3, last revised 2018/06/24.

`\Endash` Analogously, you can use `\Endash` command (and its star version) to join words with *en-dash*. Shortcuts for it are `\--` and `\==`.
`\Endash*`
`\Emdash` The last case is the use of *em-dash* when some glue before and after em-dash have to be added. The command `\Emdash` adds this glue, named `\Halfspace`, which natural width is equal to the half of the ordinary interword space. The `\Halfspace` command produces the *elastic* horizontal space and its *-form produces the nonbreakable elastic space. All these commands have shortcuts
`\Halfspace*`

`\---` `\===` `\-,` `\=,`

Note, that `\Emdash` command removes extra space before and after it. When `\Emdash` appears at the beginning of a paragraph (the direct speech) the space after it will be rigid and unbreakable.

The standard em-dash is longer than that required by Russian and German typesetting rules. To decrease its length to the required one, you can use this package with `shortemdash` option (the `cyremdash` option is also supported for compatibility with the previous version).

Note: Some more options are available from the version 1.3. They control the spacing around `\Emdash` and the breaking strategy to be applied before it.

2 Package Options

2.1 Shortcuts

`\usepackage[shortcuts]{extdash}`

The `shortcuts` option redefines L^AT_EX commands `\-/` and `\=` in such a way to recognize shortcut sequences. If no shortcut recognized, the corresponding original command will be called. In other words, when no shortcut recognized, the command `\-/` sets extra hyphenation point and `\=` means the accent command.

Command	Shortcut	Command	Shortcut
<code>\Hyphdash</code>	<code>\-/</code>	<code>\Hyphdash*</code>	<code>\=/</code>
<code>\Endash</code>	<code>\--</code>	<code>\Endash*</code>	<code>\==</code>
<code>\Emdash</code>	<code>\---</code>	<code>\Emdash*</code>	<code>\===</code>
<code>\Halfspace</code>	<code>\-,</code>	<code>\Halfspace*</code>	<code>\=,</code>

All described commands and shortcuts are robust.

2.2 Breaks before em-dash

All dash commands defined in this package disallow line breaks before a dash. For em-dash this rule can be changed. To allow breaks before a em-dash, please use the option

`\usepackage[allowbreakbefore]{extdash}`

2.3 Shorter em-dash

```
\usepackage[shortemdash]{extdash}
```

This option redefines `\Emdash` to be shorter than the standard em-dash (0.8 em).

2.4 Spaces around em-dash

By default, the half-space is inserted before and after em-dash. This behavior can be changed with option

```
\usepackage[wordspacearound]{extdash}
```

or

```
\usepackage[nospacearound]{extdash}
```

The first option provides interword spaces around em-dash and the last one removes spaces around em-dash. Of course, these two options are mutually exclusive.

3 The Implementation

`\EXD@test` First we implement the command, `\EXD@test`. It recognizes the star after the
`\EXD@break` command, sets `\EXD@break` command to be equal to `\nobreak` if star is found or
`\@empty` if not, and calls its parameter.

```
1 <*package>  
2 \def\EXD@test#1{%  
3   \@ifstar{\let\EXD@break\nobreak #1}{\let\EXD@break\@empty #1}%  
4 }
```

`\Hyphdash` Now we declare user's level commands

```
\Endash 5 \DeclareRobustCommand{\Hyphdash}{\EXD@test{\EXD@dash-}}  
\Emdash 6 \DeclareRobustCommand{\Emdash}{\EXD@test{\EXD@dash--}}  
\Halfspace 7 \DeclareRobustCommand{\Emdash}{\EXD@test{\EXD@emd@sh}}  
8 \DeclareRobustCommand{\Halfspace}{\@tempcnta\z@  
9   \@ifstar{\EXD@nobreak\EXD@space\ignorespaces}{\EXD@space\ignorespaces}%  
10 }
```

`\EXD@dash` and then the basic commands

```
\EXD@emd@sh 11 \def\EXD@nobreak{\ifvmode\leavevmode\else\nobreak\fi}  
\EXD@nobreak 12 \def\EXD@dash#1{%  
\EXD@embreakbefore 13   \EXD@nobreak\hbox{#1}\EXD@break\hskip\z@skip \ignorespaces  
\EXD@spacecalc 14 }  
\EXD@space 15 \def\EXD@emnobreak{\nobreak}  
16 \def\EXD@emd@sh{%  
17   \ifvmode
```

```

18 \leavevmode\EXD@emdash\nobreak\hskip.35em
19 \else
20 \unskip\EXD@emnobreak \@tempcnta\m@ne
21 \EXD@space \EXD@emdash \EXD@break \EXD@space
22 \fi \ignorespaces
23 }
24 \DeclareOption{allowbreakbefore}{%
25 \let\EXD@emnobreak\@empty
26 }

```

The `\@tempcnta` specifies the width of half-space. It can have the following values: -1, 0, or +1. The negative value means using the space before em-dash (the space is narrow at this point), zero value means an ordinary half space, and the positive value means a half-space after em-dash (the space is wider at this point). This trick compensates a visual effect of wider space before an em-dash especially if the punctuation mark goes before.

The meaning of negative and positive values of `\@tempcnta` is redefined with `wordspacearound` and `nospacearound` options.

```

27 \def\EXD@spacecalc{%
28 \edef\@tempa{%
29 \ifnum\@tempcnta<\z@ .4\else \ifnum \@tempcnta=\z@ .5\else .6\fi\fi
30 }%
31 \def\@tempb{.5}%
32 }
33 \def\EXD@space{%
34 \EXD@spacecalc
35 \hskip \@tempa\fontdimen2\font \@plus \@tempb\fontdimen3\font
36 \@minus \@tempa\fontdimen4\font
37 \@tempcnta -\@tempcnta
38 }
39 \DeclareOption{wordspacearound}{%
40 \def\EXD@spacecalc{%
41 \edef\@tempa{\ifnum \@tempcnta=\z@ .5\fi}%
42 \let\@tempb\@tempa
43 }
44 }
45 \DeclareOption{nospacearound}{%
46 \def\EXD@spacecalc{%
47 \edef\@tempa{\ifnum \@tempcnta=\z@ .5\else0\fi}%
48 \let\@tempb\@tempa
49 }
50 }

```

`\EXD@emdash` The last basic command is the default *em-dash*. It could be redefined later in `shortemdash` option.

```

51 \def\EXD@emdash{\hbox{---}}
52 \DeclareOption{shortcuts}{%

```

`\HyphOrDash` The commands `\HyphOrDash` and `\BarOrDash` are called by `\-` and `\=` commands
`\BarOrDash`

and can appear in aux file. They choose the corresponding shortcut or the original command saved in \EXD@hyph and \EXD@bar.

```

53 \DeclareRobustCommand{\HyphOrDash}{%
54   \let\EXD@break\@empty
55   \@ifnextchar/{\EXD@dsh}{%
56     \@ifnextchar-{\EXD@hdash}{%
57       \@ifnextchar,{\EXD@space}{\EXD@hyph}%
58     }%
59   }%
60 }
61 \DeclareRobustCommand{\BarOrDash}{%
62   \let\EXD@break\nobreak
63   \@ifnextchar/{\EXD@dsh}{%
64     \@ifnextchar={\EXD@bdash}{%
65       \@ifnextchar,{\nobreak\EXD@space}{\EXD@bar}%
66     }%
67   }%
68 }

```

Shortcuts:

```

69 \def\EXD@dsh/{\EXD@dash-}
70 \def\EXD@space,{\EXD@space}
71 \def\EXD@hdash-{\@ifnextchar-{\EXD@hhdash}{\EXD@dash{--}}}
72 \def\EXD@bdash={\@ifnextchar={\EXD@bbdash}{\EXD@dash{--}}}
73 \def\EXD@hhdash-{\EXD@emdsh}
74 \def\EXD@bbdash={\EXD@emdsh}

```

We turn on the shortcuts mechanism at the beginning of the document to avoid conflict with fontenc package which redefines accents.

```

75 \AtBeginDocument{%
76   \let\EXD@hyph- \let\@dischyph\HyphOrDash \let\-\@dischyph
77   \let\EXD@bar= \let\@acciii\BarOrDash \let\=\@acciii
78 }
79 }

80 \DeclareOption{shortemdash}{%
81   \def\EXD@emdash{\hb@xt@.8\fontdimen6\font{--\hss--}}
82 }
83 \DeclareOption{cyremdash}{%
84   \def\EXD@emdash{\hb@xt@.8\fontdimen6\font{--\hss--}}
85 }
86 \ProcessOptions\relax
87 </package>

```