The extdash package

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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\ Hyphdash*

The main purpose of the extdash package is to allow hyphenation of compound words. When the word something-something occur 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). Some times the line break immediately after the dash is inadmissible. To avoid it you can write

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

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(the last case is also shortcut). An example is the word \textit{L-approximation} which can’t be broken at the dash.

Analogously, you can use \texttt{\Endash} command (may be with star) to join words by \textit{en-dash}. Shortcuts for it are \texttt{\--} and \texttt{\==}.

The last case is the use of \textit{em-dash} when some glue before and after em-dash have to be added. The command \texttt{\Emdash} adds this glue, named \texttt{\Halfspace}, which natural width is equal to the half of the ordinary interword space. The \texttt{\Halfspace} command produces the \textit{elastic} horizontal space and its \texttt{*}-form produces the unbreakable elastic space. All these commands have shortcuts, named \texttt{\---} \texttt{\===} \texttt{\-,} \texttt{\=},

Note, that \texttt{\Emdash} command removes extra space before and after it. When \texttt{\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 that it is required by Russian typesetting rules. To decrease its length to required one you have to use \texttt{extdash} package with \texttt{cyremdash} option.

2 The Package Options

The \texttt{extdash} package provides two options, \texttt{shortcuts} and \texttt{cyremdash}:

\begin{verbatim}
\usepackage[shortcuts,cyremdash]{extdash}
\end{verbatim}

First option redefines \LaTeX\ commands \texttt{-} and \texttt{=} 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 \texttt{-} sets extra hyphenation point and \texttt{=} means the accent command.

The last option redefines \texttt{\Emdash} to be shorter than the standard em-dash.

3 The Shortcuts Table

\begin{tabular}{llll}
Command & Shortcut & Command & Shortcut \\
\Hyphdash & \-/ & \Hyphdash* & \=/
\Endash & \-- & \Endash* & \==
\Emdash & \--- & \Emdash* & \===
\Halfspace & \-, & \Halfspace* & \=,
\end{tabular}

All described commands and shortcuts are robust.

4 The Basic Implementation Part

\begin{verbatim}
\EXD@test \EXD@break
\end{verbatim}

First we implement the command, \texttt{\EXD@test}. It recognizes the star after the command, sets \texttt{\EXD@break} command to be equal to \texttt{\nobreak} if star is found or \texttt{\@empty} if not, and calls its parameter.
\begin{verbatim}
\def\EXD@test#1{\@ifstar{\let\EXD@break\nobreak #1}{\let\EXD@break\@empty #1}}

Now we declare user’s level commands
\begin{verbatim}
\DeclareRobustCommand{\Hyphdash}{\EXD@test{\EXD@dash-}}
\DeclareRobustCommand{\Endash}{\EXD@test{\EXD@dash{--}}}
\DeclareRobustCommand{\Emdash}{\EXD@test{\EXD@emd@sh}}
\end{verbatim}

and then the basic commands
\begin{verbatim}
\def\EXD@dash#1{\nobreak\leavevmode\hbox{#1}\EXD@break\hskip\z@skip \ignorespaces}
\def\EXD@emd@sh{\ifvmode\EXD@emdash\nobreak\hskip.35em\else
\unskip\nobreak\@tempcnta\m@ne\EXD@space\EXD@emdash\EXD@break\EXD@space\fi \ignorespaces}
\end{verbatim}

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.

\begin{verbatim}
\def\EXD@space{%\edef\@tempa{%\ifnum\@tempcnta<\z@ .4\else\ifnum\@tempcnta=\z@ .5\else .6\fi\fi}%\hskip\@tempa\fontdimen2\font\@plus.5\fontdimen3\font\@minus\@tempa\fontdimen4\font\@tempcnta\@tempcnta}
\end{verbatim}

The last basic command is the default \textit{em-dash}. It could be redefined later in \texttt{cyremdash} option.

\begin{verbatim}
\def\EXD@emdash{\leavevmode\hbox{---}}
\end{verbatim}
\end{verbatim}

5 Shortcuts

\begin{verbatim}
\DeclareOption{shortcuts}{%}
\end{verbatim}
The commands \HyphOrDash and \BarOrDash will be called by \- and \= commands. They choose the corresponding shortcut or the original commands saved in \EXD@hyph and \EXD@dash.

\begin{verbatim}
\DeclareRobustCommand{\HyphOrDash}{%\let\EXD@break@empty\@ifnextchar/{\EXD@d@sh}{%\@ifnextchar-\EXD@hdash{\@ifnextchar,\EXD@sp@ce}{\EXD@hyph}%)%\}%}
\DeclareRobustCommand{\BarOrDash}{%\let\EXD@break\nobreak\@ifnextchar/{\EXD@d@sh}{%\@ifnextchar={\EXD@bdash}{\@ifnextchar,{\nobreak\EXD@sp@ce}{\EXD@bar}%)%\}%}
\end{verbatim}

Shortcuts:
\begin{verbatim}
\def\EXD@d@sh/{\EXD@dash-}
\def\EXD@sp@ce,{\EXD@space}
\def\EXD@hdash-{{\@ifnextchar-{{\EXD@hhdash}{\EXD@dash{--}}}}}
\def\EXD@bdash={{{\@ifnextchar={{{\EXD@bbdash}{\EXD@dash{--}}}}}}}
\end{verbatim}

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

\begin{verbatim}
\AtBeginDocument{%\let\EXD@hyph-\let@dischyph\HyphOrDash \let\-=\dischyph
\let\EXD@bar=\let@acciii\BarOrDash \let\=\@acciii
}%}
\end{verbatim}

\section{Cyrillic Em-dash}

\begin{verbatim}
\DeclareOption{cyremdash}{%\def\EXD@emdash{\leavevmode\hb@xt@.8\fontdimen6\font{--\hss--}}}
\ProcessOptions\relax
\end{verbatim}