

The **dashundergaps** package

Merciadri Luca

July 6, 2011

Contents

1	Introduction	2
2	Use	2
2.1	Loading the Package	2
2.2	Available Options	2
3	Possible Combinations	4
4	Examples	4
4.1	Dashing	4
4.2	Gaps with Dots – Student Version	5
4.3	With Tabular	5
5	Implementation	6
6	Limitations	6
7	Remarks	7
7.1	Dashing and Dotting Hierarchy	7
7.1.1	Numbering	7
7.1.2	Titles	7
7.2	Ulem and the Emphasize Command	7
8	Bugs	8
9	Version History	8
10	Contact	8
11	Thanks	8
12	References	I

1 Introduction

This package (v1.2) *helps you to* use (a) pattern(s) from this list:

1. dashing;
2. dotting;
3. underlining

for a word which can be either

1. hidden;
2. or not.

This can be *useful in* these situations:

1. You are writing a document for which you need to dash or (and) to dot text,
2. You want to write a test for which students have to “fill in the gaps,” and you want to choose when to print the answers.

2 Use

2.1 Loading the Package

To *load the package*, please use

```
\usepackage[options]{dashundergaps}
```

2.2 Available Options

Without any option, the package will not be really useful, as it will not perform anything that will be nice for you. Consequently, the *following options are available*:

- **dash**: will dash `text` if used with the command

```
\dashuline{text}
```

where you want “text” to be dashed (*i.e.* somewhere in the **document environment**),

- **dot**: will dot `text` if used with the command

```
\dotuline{text}
```

where you want “text” to be dotted (*i.e.* somewhere in the **document environment**),

- **phantomtext**: will help you to write a pattern at the place of the text. This pattern can be

- dashing, if used with `dash` option;
 - dotting, if used with `dot` option;
 - underlining, if used with (`dash and dot`) options *or* with neither `dash` nor `dot`;
 - the text in itself, if used with `teachernotes` option.
- `teachernotes`: see the last point of `phantomtext`,
 - `displaynbgaps`: will produce, at the end of your document (and in the center of the page), a summary of the number of gaps like

GAPS: *x*.

3 Possible Combinations

All the possible sensed commands (the launching order has no importance) of `dashundergaps.sty` are given at Table 1 *except* the use of `displaynbgaps`, which can trivially be used iff `phantomtext` is used. Here, “×” is equivalent to the well-known “N.A.” and thus means “Not Applicable.” Notice that gaps are automatically numbered.

Option(s)	Consequence		
	<code>\gap{text}</code>	<code>\dashuline{text}</code>	<code>\dotuline{text}</code>
<code>dash</code> (only)	×	<code>text</code>	×
<code>dot</code> (only)	×	×	<code>text</code>
<code>dash, dot</code>	×	<code>text</code>	<code>text</code>
<code>phantomtext</code> (only)	___ (1)	×	×
<code>phantomtext, dash</code>	__ (1)	<code>text</code>	×
<code>phantomtext, dot</code>	... (1)	×	<code>text</code>
<code>phantomtext, dash, dot</code>	___ (1)	<code>text</code>	<code>text</code>
<code>phantomtext, teachernotes</code>	<code>text</code>	×	×
<code>phantomtext, dash, teachernotes</code>	<code>text</code>	<code>text</code>	×
<code>phantomtext, dot, teachernotes</code>	<code>text</code>	×	<code>text</code>
<code>phantomtext, dash, dot, teachernotes</code>	<code>text</code>	<code>text</code>	<code>text</code>

Table 1: Possible sensed commands of this package except `displaynbgaps`.

4 Examples

From now on, the output of the listed codes will be put in rectangular boxes.

4.1 Dashing

Here is an *example of sentence dashing*.

```
\documentclass[10pt]{article}

\usepackage[dash]{dashundergaps}

\begin{document}
\dashuline{This is a dashed sentence}
\end{document}
```

gives

This is a dashed sentence

Dotting is done in the same way.

4.2 Gaps with Dots – Student Version

Here is an *example* of *dotted gaps* for the student version.

```
\documentclass[10pt]{article}

\usepackage[dot, phantomtext]{dashundergaps}

\begin{document}
In Computer Science, ‘‘PC’’ means ‘‘Personal \gap{Computer}.’’

We can still \dotuline{dot this}.
\end{document}
```

results in

In Computer Science, ‘‘PC’’ means ‘‘Personal (1).’’ We can still <u>dot this</u> .

4.3 With Tabular

To produce

Head A	Head B	Head C
Col 1	Col 2	Col 3
Col 1	Col 2	Col 3

just use

```
\begin{tabular}{lll}
\hline
Head A & Head B & Head C\\
\multicolumn{2}{l}{\dotuline{\hfill}}\\
Col 1 & Col 2 & Col 3\\
Col 1 & Col 2 & Col 3\\
\hline
\end{tabular}
```

where you want it to appear.

5 Implementation

Here is the code of `dashundergaps.sty`:

```
1 %% This is file 'dashundergaps.sty' v1.2 by Mericiadri Luca.
2
3 \NeedsTeXFormat{LaTeX2e}
4 \ProvidesPackage{dashundergaps}[2010/01/20 Dashing and underlining (phantom) text]
5 \PackageInfo{dashundergaps}{This is DashUnderGaps by Mericiadri Luca.}
6
7 \RequirePackage{ifthen}[1994/06/01]
8 \PassOptionsToPackage{normalem}{ulem}
9 \RequirePackage{ulem}
10 \newboolean{dot} % false at start
11 \newboolean{dash} % false at start
12
13
14 \DeclareOption{dash}{%
15 \typeout{Dashing mode activated!}
16 \setboolean{dash}{true}
17 \providecommand{\dashuline}{\bgroup
18 \ifdim\ULdepth=\maxdimen
19 \settodepth\ULdepth{(j)\advance\ULdepth.4pt\fi
20 \markoverwith{\kern.15em
21 \vtop{\kern\ULdepth\hrule width .3em}%
22 \kern.15em}\ULon}
23 }
24
25
26 \DeclareOption{dot}{%
27 \typeout{Dotting mode activated!}
28 \setboolean{dot}{true}
29 \providecommand{\dotuline}{\bgroup
30 \ifdim\ULdepth=\maxdimen
31 \settodepth\ULdepth{(j)\advance\ULdepth.4pt\fi
32 \markoverwith{\beginingroup
33 \advance\ULdepth0.08ex
34 \lower\ULdepth\hbox{\kern.15em .\kern.1em}%
35 \endgroup}\ULon}
36 }
37
38
39 \DeclareOption{phantomtext}{%
40 \typeout{Phantom mode activated! All the gaps will be filled.}
41 \newboolean{teachernotes} % false at start
42 \newcounter{nb-gaps}
43 \setcounter{nb-gaps}{1}
44 \newcounter{nth-gaps}
45 \setcounter{nth-gaps}{1}
46
47 \def\phantom@putbox{\ifx\UL@start\@empty \else % not inner
48 \vrule\@width\z@\LA@penalty\@M
49 {\UL@skip\wd\UL@box \UL@leaders \kern-\UL@skip}%
50 \hbox to\wd\UL@box{\fi}%
51
52 \providecommand{\gap}[1]{%
53 \bgroup
54 \let\UL@putbox=\phantom@putbox
55 \ifthenelse{\boolean{teachernotes}}
56 {\textbf{#1}} (\arabic{nth-gaps})}
57 {\ifthenelse{\boolean{dash} \AND \boolean{dot}}{\uline{#1}(\arabic{nth-gaps})}{\ifthenelse{\boolean{dash}}{\dashuline{#1}(\arabic{nth-gaps})}{\dotuline{#1}(\arabic{nth-gaps})}}
58 }
59 \addtocounter{nb-gaps}{1}
60 \addtocounter{nth-gaps}{1}
61 \egroup
62 }}
63
64
65 \DeclareOption{teachernotes}{%
66 \typeout{Phantom mode deactivated! All the gaps will be filled with their content.}
67 \setboolean{teachernotes}{true}
68 }
69
70
71 \DeclareOption{displaynbgaps}{%
72 \typeout{Gaps counting mode activated!}
73 \addtocounter{nb-gaps}{-1}
74 \AtEndDocument{\vfill \centering \bfseries GAPS: \arabic{nb-gaps}.}
75 }
76
77 \ProcessOptions\relax
```

6 Limitations

This package is currently not able to cope with strange users such as the ones which would

- Like to use both `\dashuline{text}` and `\dotuline{text}` and would

like `\gap{text}` to appear either as `\dotuline{}` or as `\dashuline{}`. This is not implemented as this would be a really unuseful feature: there are not many folks who want their `\gap{text}` to be filled with something else than

```
\underline{\phantom{text}}
```

when already using `\dashuline` or `\dotuline` in the text!

7 Remarks

7.1 Dashing and Dotted Hierarchy

7.1.1 Numbering

Some users would like to use a code like this:

```
...
\usepackage[dash,dot]{dashundergaps}
...
\usepackage[calwidth,pagestyles,raggedright,bf,sf,...]{titlesec}
\titleformat{\section}{\normalfont\Huge\bfseries}{\dashuline{\thesection}}{1em}{}
\titleformat{\subsection}{\normalfont\LARGE\bfseries}{\dotuline{\thesubsection}}{1em}{}
\titleformat{\subsubsection}{\normalfont\Large\bfseries}{\thesubsubsection}{1em}{}
\titleformat{\paragraph}[runin]{\normalfont\large\bfseries\itshape}{\theparagraph}{1em}{}
\titleformat{\subparagraph}[runin]{\normalfont\normalsize\bfseries\itshape}{\thesubparagraph}{1em}{}
...
```

It is possible, and will work. For example, here, sections and subsections will have their numbering respectively dashed and dotted.

7.1.2 Titles

You cannot modify

```
...
\usepackage[dash,dot]{dashundergaps}
...
\usepackage[calwidth,pagestyles,raggedright,bf,sf,...]{titlesec}
\titleformat{\section}{\normalfont\Huge\bfseries}{\thesection}{1em}{}
\titleformat{\subsection}{\normalfont\LARGE\bfseries}{\thesubsection}{1em}{}
\titleformat{\subsubsection}{\normalfont\Large\bfseries}{\thesubsubsection}{1em}{}
\titleformat{\paragraph}[runin]{\normalfont\large\bfseries\itshape}{\theparagraph}{1em}{}
\titleformat{\subparagraph}[runin]{\normalfont\normalsize\bfseries\itshape}{\thesubparagraph}{1em}{}
...
```

to output the names of your sections, subsections, ... in a dashed or dotted fashion. For this, the temporary solution is to use, at each of the points of the hierarchy, a code like this (this is for `\section`):

```
\section{\protect\dashuline{This is the First Section}}
```

Do not forget the `\protect` please. It must be written because `\dashuline` and `\dotuline` were not declared as robust commands.

7.2 Ulem and the Emphasize Command

Donald Arseneau informed me in an e-mail that adding

```
\PassOptionsToPackage{normalem}{ulem}
```

before

```
\RequirePackage{ulem}
```

would be a good idea, since `\emph` is equivalent to `\underline` for `ulem` when the `normalem` option is not given to it. This has been modified, and is in `v1.1`.

8 Bugs

[Chronologically ordered.]

1. (20/01/2010): Thanks to [2], the first bug has been discovered: if the argument of `\gap` was too long, and that `teachernotes` was activated, the underlining was not done according to margins. It has now been solved. Many thanks to Donald Arseneau for this.

9 Version History

1. `v1.0`: package is introduced to the \LaTeX world,
2. `v1.1`: see 7.2,
3. `v1.2`: fixed bug 1, and the commands are now defined using `\providecommand`.

10 Contact

If you have any question concerning this package (limitations, bugs, ...), please contact me at Luca.Merciadri@student.ulg.ac.be.

11 Thanks

Thanks to many users for feedback and to Glad Deschrijver [1] for the `\dotuline` and `\dashuline` code.

Index

dash, [2](#), [4](#)
displaynbgaps, [3](#), [4](#)
dot, [2](#), [4](#)
phantomtext, [2](#), [4](#)
teachernotes, [3](#), [4](#)

12 References

References

- [1] G. DESCHRIJVER, TeX Tricks – Dashed underline, 2011. <http://users.ugent.be/~gdschrij/LaTeX/textricks.html#dashedul>.
- [2] MATHEMATEX, Souligner un phantom en pointillés avec retour à la ligne : LaTeX, 2009. <http://forum.mathematex.net/latex-f6/souligner-un-phantom-en-pointilles-avec-retour-a-la-ligne-t10057.html>.
- [3] E. WEGNERS, Dashed or dotted underline, 2009. <http://ewus.de/tipp-1014.html>.