EXPDLIST* – an Expanded description Environment

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Abstract

The expanded description environment will not replace the LaTeX-description environment, but on request you will have some additional features. It supports an easy possibility of changing the left margin. Also there is with \listpart a new command available which is valid in all list environments. It gives the possibility to break a list for a comment without touching any counters.

The required STY-file is EXPDLIST and will be enclosed in the LaTeX-file as following:

```
\usepackage{expdlist}
```

1 The Expanded description Environment

The expanded description environment supports an easy possibility of changing the left margin in a desciption list. The text of the item begins at the left margin, either behind the label or in the following line. Another declaration eliminates the vertical space which is set by the LaTeX-STYs. As well you can affect the appearance of the label. The syntax of the expanded description environment is:

```
\begin{description}[declarations]
⋮
\end{description}
```

Without the optional *declarations* this environment is equal to the original LaTeX-description environment.

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The following declarations fix the left margin of the item:

`\setleftmargin{`*size*`}`
: gives the amount of horizontal space to be reserved for the left margin of the item, and defaults to the value of the original LaTeX-`description` list if not entered.

`\setlabelphantom{`*text*`}`
: calculates the left margin by the width of *text* and by the value of `\labelsep`. The setting of `\setlabelstyle` is taken into account.

If you set `\setlabelphantom` as well as `\setleftmargin`, the horizontal space with the width defined by `\setlabelphantom` will be reserved.

There are some other declarations affecting the layout of the expanded `description` list:

`\breaklabel`
: causes the definition description to start on the line following the label if the width of the label exceeds the width of the left margin. The default is to begin the description on the same line after the label.

`\compact`
: indicates that items should not be separated from each other by vertical white space.

`\setlabelstyle{`*typestyle*`}`
: identifies the style to be used for labels, e. g. `\bfseries`, `\itshape`, `\slshape` or `\sffamily` as well as `\small`, `\large`, etc. The default is `\bfseries` and `\normalsize`.

The following examples demonstrate some features of the expanded `description` environment.

The first example shows it without optional parameters being equal to the original LaTeX environment. The command used is:

```
\begin{description}
```

First label The first label is a normalsized label.

Here is a very long label This is the text corresponding to the very long label.

3rd The 3rd label is a very short one.

This item has no label and was produced by `\item` *text*.

In the second example optional parameters are set with the following command:

```
\begin{description}[\breaklabel\setleftmargin{80pt}
                    \setlabelstyle{\itshape}]
```

First label The first label is a normalsized label.

Here is a very long label
This is the text corresponding to the very long label.

3rd The 3rd label is a very short one.

This item has no label and was produced by `\item` *text*.

The last example shows the command with other optional parameters and their effects:

```
\begin{description}[\compact\setlabelphantom{First label}]
```

First label The first label is a normalsized label.
Here is a very long label This is the text corresponding to the very long label.
3rd The 3rd label is a very short one.
This item has no label and was produced by `\item` *text*.

2 The `\listpart` command

In the `EXPDLIST` style there are two new LaTeX commands:

`\listpart{`*text*`}` identifies a comment or explanation that applies to a part of a list. It can be placed anywhere within any `list` environment, immediately preceeding those items to which it applies. The width of *text* depends on the width of the preceeding list. Therefore you are able to continue with the next item without closing and re-opening the list. The numbering of the `enumerate` environment is preserved.

`\listpartsep` is the vertical space between the item and the comment produced by `\listpart`. It defaults to `1ex`.

The following example demonstrates that you can use `\listpart` also in multi-clause `list` environments:

- You can use `\listpart` in multi-clause environments.

This is a `listpart` which puts in some text to interrupt the list.

- You can use `\listpart` in
  1. `itemize`-lists
  2. `enumerate`-lists

  This is a `listpart` which puts in some text to interrupt the list.
  3. `description`-lists:

     1st Label Description A

     This is a `listpart` which puts in some text to interrupt the list.

     2nd Label Description B

3 The description of the EXPDLIST.STY-file

3.1 The beginning

Here is a description of the macros used in the EXPDLIST.STY. We started by defining the current version and date of this file and documentation:

```
\typeout{Document Substyle 'EXPDLIST'.
         Released \filedate \space (\fileversion)}
\typeout{English Documentation \space \docdate}
```

3.2 The optional arguments

\compact The first implemented macro is \compact. Normally two items are separated by a blank line. This blank line is defined in LaTeX by \itemsep + \parsep. To remove this blank line we defined

```
\def\compact%
   {\setlength{\itemsep}{-\parsep}}
```

\setleftmargin \setlabelsize To define \setleftmargin we assigned the new width to \leftmargin:

```
\def\setleftmargin%
   #1%
   {\setlength{\leftmargin}{#1}}
```

The \setleftmargin command was named \setlabelsize in older versions. To be compatible with these versions the old command is also defined:

```
\let\setlabelsize = \setleftmargin
```

\setlabelphantom The \setlabelphantom command reserves the width of the argument as horizontal space for the label. We have to put a \hfil into \@tempboxa to avoid an underful hbox message because the box is wider than the argument by the value of \labelsep. The width is stored in \setleftmargin.

```
\def\setlabelphantom%
   #1%
   {\def\set@labelphantom%
     {\setbox\@tempboxa=\hbox spread \labelsep {\@labelstyle #1\hfil}%
      \setleftmargin{\wd\@tempboxa}%
     }%
   }
\def\set@labelphantom{}
```

\setlabelstyle The \setlabelstyle identifies the style to be used for labels. In \@labelstyle the default \bfseries is stored.

```
\def\@labelstyle%
   {\bfseries}
\def\setlabelstyle%
   #1%
   {\def\@labelstyle{#1}}
```

\breaklabel To let work \breaklabel correctly as described before we need a rule with no dimension in the \item definition of LaTeX. This rule is defined here:

```
\def\breaklabel%
   {\def\@breaklabel%
```

```
25        {\rule{0mm}{0mm}%
26         \\%
27        }%
28    }%
29 \def\@breaklabel%
30    {}
```

The changed `\item` definition follows a little later.

3.3 The main macro

`\description` `\enddescription`

Now we can begin with the new `\description` definition (which is in LaTeX the same as `\begin{description}`). First we had to rename `\description` to `\@orgdlist`. It will be executed if no optional argument is set:

```
31 \let\@orgdlist\description
```

We must look if there is an optional argument. If there is an optional argument the macro `\@expdlist` (our new macro) will be executed. Otherwise the original LaTeX-macro will be executed which we have renamed to `\@orgdlist`:

```
32 \def\description%
33    {\@ifnextchar[%
34        {\@expdlist}%
35        {\@orgdlist}%
36    }
37 \let\enddescription\endlist
```

We had to rename `\description` to `\@orgdlist`. It will be executed if no optional argument is set:

If you have set any optional argument, the `\@expdlist` definition will be executed.

```
38 \def\@expdlistlabel#1%
39     {\@labelstyle
40      #1%
41      \hfil%
42     }
43 \def\@expdlist[#1]%
44     {\list{}%
45       {\def\@breaklabel{}%
46        \def\set@labelphantom{}%
47        \def\@labelstyle{\bfseries}%
48        #1%
49        \set@labelphantom%
50        \setlength{\labelwidth}{\leftmargin}%
51        \addtolength{\labelwidth}{-\labelsep}%
52        \let\makelabel\@expdlistlabel%
53       }%
54     }
```

3.4 `\listpart` and `\listpartsep`

`\listpartsep`

Another feature of the `EXPDLIST.STY` is `\listpart`. To adjust the vertical space between the item and the comment produced by `\listpart` we had to define a new measure named `\listpartsep`.

```
\newlength{\listpartsep}
\listpartsep = 1ex
```

\listpart Now we could define \listpart as a long definition, because its value can go over more than one paragraph. It is an item without label. So the text begins at the point where the label would begin. The width of the text is \linewidth + \rightmargin + \leftmargin. This value is registered in \@tempskipa:

```
\long\def\listpart%
   #1%
   {\vspace{\listpartsep}%
    \item[]\hspace*{-\leftmargin}%
    \@tempskipa=\linewidth%
    \addtolength{\@tempskipa}{\rightmargin}%
    \addtolength{\@tempskipa}{\leftmargin}%
    \parbox{\@tempskipa}{#1}%
    \vspace{\listpartsep}%
   }
```

3.5 The redefinition of \item

\@item To let work \breaklabel correctly we had to redefine the original LaTeX definition of \@item in a few lines (see RUM Change marks). We had to define \set@break globally, because it is set within a \hbox, but used outside. Depending on the width of the label text \set@break is set to \@breaklabel or to nothing. At the end of the \@item macro \setbreak is called after the label is set.

```
\def\@item[#1]{%
  \if@noparitem
    \@donoparitem
  \else
    \if@inlabel
      \indent \par
    \fi
    \ifhmode
      \unskip\unskip \par
    \fi
    \if@newlist
      \if@nobreak
        \@nbitem
      \else
        \addpenalty\@beginparpenalty
        \addvspace\@topsep
        \addvspace{-\parskip}%
      \fi
    \else
      \addpenalty\@itempenalty
      \addvspace\itemsep
    \fi
    \global\@inlabeltrue
  \fi
  \everypar{%
    \@minipagefalse
    \global\@newlistfalse
```

```
94    \if@inlabel
95      \global\@inlabelfalse
96      {\setbox\z@\lastbox
97       \ifvoid\z@
98         \kern-\itemindent
99       \fi}%
100     \box\@labels
101     \penalty\z@
102   \fi
103   \if@nobreak
104     \@nobreakfalse
105     \clubpenalty \@M
106   \else
107     \clubpenalty \@clubpenalty
108     \everypar{}%
109   \fi}%
110 \if@noitemarg
111   \@noitemargfalse
112   \if@nmbrlist
113     \refstepcounter\@listctr
114   \fi
115 \fi
116 \sbox\@tempboxa{\makelabel{#1}}%
117 \global\setbox\@labels\hbox{%
118   \unhbox\@labels
119   \hskip \itemindent
120   \hskip -\labelwidth
121   \hskip -\labelsep
122   \ifdim \wd\@tempboxa >\labelwidth
123     \box\@tempboxa
124     \gdef\set@break{\@breaklabel}     % RUM Change 2.3.90
125   \else
126     \hbox to\labelwidth {\unhbox\@tempboxa}%
127     \gdef\set@break{}%                % RUM Change 2.3.90
128   \fi
129   \hskip \labelsep}%
130   \set@break                          % RUM Change 2.3.90
131 \ignorespaces}
```

4 History of Changes

V 1.0 (02.03.1990) First published Version (Hülse and Kaspar)

V 1.1 (26.03.1990) We had to change `\break` to `\breaklabel` and `\@break` to `\@breaklabel` because `\break` is a TEX-primitive. This could cause difficulties with linebreaking. (Hülse)

V 1.2 (09.05.1990) To be more flexible with the label, we changed `\hfill` to `\hfil` in `\@expdlistlabel` (Hülse)

V 2.0 (31.05.1990) Documentation with the `DOC.STY` from Frank Mittelbach, University of Mainz, FRG.
`\setlabelsize` will be renamed to `\setleftmargin` (Hülse)

V 2.1 (13.08.1992) `\@orgdlist` is defined by `\let`. Definition of `\item[]` out of LATEX Version 2.09 ⟨25 March 1992⟩ (Perske)

V 2.2 (23.09.1992) Included Documentation Driver File and German Documentation File into this `.doc`-File. With Version 2.0 of `docstrip.tex` and the Batchfile `install.rum` you can extract them out of this `.doc`-File. (Perske)

V 2.3 (26.05.1999) The Definition of `\item[]` is out of LaTeX2e ⟨1997/12/01⟩. The distribution is now supplied under the terms of the LPPL. The files were renamed to `expdlist.dtx`, `expdlist.ins` and `readme.txt` (Kaspar)

V 2.4 (22.09.1999) Bugfix: percent added after `\gdef\set@break{}`. Thanks to Peter Karp, who drew my attention to that bug. (Kaspar)