The \texttt{termlist} package

Bernd Rellermeyer

v1.1, 2010/06/12

Abstract

The \texttt{termlist} package provides environments to typeset lists of numbered terms, where the "terms" may contain anything printable. The list of terms is formatted to look consistent to a list of mathematical equations inside an \texttt{equation} environment. Also for consistency, the same \texttt{equation} counter is used for numbering. You may think of termlist as a generalisation of the \texttt{equation} environment, if you want to typeset more than just mathematics.

1 Introduction

The \LaTeX{} typesetting system is widely used by mathematicians. A number of constructs, like the \texttt{equation} or \texttt{eqnarray} environments, fit the specific needs of mathematical texts. The math modes are intrinsic parts of \TeX{} and have left their marks on the whole system.

The \texttt{termlist} package may be seen as a generalization of the \texttt{equation} and \texttt{eqnarray} environments for non-mathematical texts. It provides environments to typeset any kinds of mathematical or non-mathematical terms, like propositions, hypotheses, examples, or linguistic terms, in the same way mathematical terms are typesetted inside an \texttt{equation} or \texttt{eqnarray} environment. I.e., the terms are indented and labelled with a continuous number—for consistency with the \texttt{equation} and \texttt{eqnarray} environments, the same \texttt{equation} counter is used for that—so that the look consistent to mathematical terms inside those environments.

The \texttt{termlist} package is based on an idea of the \texttt{covington} package.

2 Usage

The \texttt{termlist} package provides the four new environments \texttt{termlist}, \texttt{term}, \texttt{termlist*}, and \texttt{term*}.

The \texttt{termlist} environment is the fundamental one of these environments. It is a list of terms, each indented and labelled with the \texttt{equation} counter on the left side by default. The default label can be changed by the optional argument of the \texttt{\item} command.
For consistency with the `equation` and `eqnarray` environments, the global `leqno` option or something similar should be used to print the labels of mathematical terms inside these environments also on the left side.

\begin{term}
The term environment is a termlist environment with only one list item.
\end{term}

\begin{termlist}
\item Here is an example of the termlist environment.
\item Each term is indented and labelled with the equation counter.
\item The label of the term can be changed by the optional argument of the \item command.
\item Using the optional argument of the \item command does not increment the equation counter.
\end{termlist}

\begin{termlist*}
\item The termlist* environment is a list of terms. The terms do not have labels.
\end{termlist*}
The `term*` environment is the same as the `term` environment, but with an empty label.

The `term*` environment does not label the term.

(5) Using the `termlist*` or `term*` environment does not increment the `equation` counter.

\begin{term*}
The \verb|term*| environment does not label the term.
\end{term*}

\begin{term}
Using the \verb|termlist*| or \verb|term*| environment does not increment the \verb|equation| counter.
\end{term}

The four environments provided by this package can be customized by the three macros `\termlabel`, `\termlabelfont`, and `\termindent`.

`\termlabel` The label of each term is defined by the macro `\termlabel`. For consistency with the `equation` and `eqnarray` environments, its default value is `(\theequation)`. Use one of the commands

\begin{verbatim}
\def\termlabel{(labeldescription)}, or
\renewcommand{\termlabel}{(labeldescription)}
\end{verbatim}

to change its value. Note that even if the value of `\termlabel` does not contain something like `\theequation`, the `equation` counter is incremented with each list item.

The label font and label color is defined by the macro `\termlabelfont`. For consistency with the `equation` and `eqnarray` environments, its default value is `\normalfont\normalcolor`. Use one of the commands

\begin{verbatim}
\def\termlabelfont{(fontdescription)}, or
\renewcommand{\termlabelfont}{(fontdescription)}
\end{verbatim}

to change its value.

Note that for the `equation` and `eqnarray` environments, the whole label, including its font and color, is defined by the macro `\@eqnnum`. For consistency, `\termlabel` and `\termlabelfont` should always have values that match the value of `\@eqnnum`.

`\termindent` The amount of the left indentation of each term is defined by the macro `\termindent`. Its default value is `\leftmargini`. This is also the default value of the macro `\mathindent`, which defines the amount of the left indentation of mathematical terms inside an `equation` or `eqnarray` environment, if the `fleqn`
package is used. In this case, \textindent and \mathindent should always have the same values. Use one of the commands

\textindent⟨dimension⟩, or
\setlength{\textindent}{⟨dimension⟩}

to change the value of \textindent.

3 Implementation

The \termlabel macro defines the label of each term inside the \termlist and \term environments.
\begin{verbatim}
1 \def\termlabel{(\theequation)}
\end{verbatim}

The \termlabelfont macro defines the font and color of the label of each term inside the \termlist and \term environments. The macro \@termlistmklab is used internally in the definition of the \termlist environment.
\begin{verbatim}
2 \def\termlabelfont{\normalfont\normalcolor}
3 \def\@termlistmklab#1{\termlabelfont #1\hfil}
\end{verbatim}

The \termindent macro defines the amount of the left indentation of each term inside one of the four environments provided by this package.
\begin{verbatim}
4 \newdimen\termindent
5 \termindent\leftmargini
\end{verbatim}

The \termlist environment is implemented as a list. Each list item has a default label defined by \termlabel and \@termlistmklab and left and right margins defined by \termindent and \leftmargini, resp. The indentation \listparindent and the amount of space between two paragraphs \parsep inside the list are set to their corresponding values outside the list, \parindent and \parskip, resp. The total amount of space between two list items is the sum of \parsep and \itemsep. The extra amount of space \itemsep is set to such a value, that the total amount of space between two list items is the maximum of \parsep and the extra amount of space \jot between two lines inside an eqnarray environment. To be further consistent to the equation and eqnarray environments, the amount of space above and below the list \topsep is set to \abovedisplayskip.
\begin{verbatim}
6 \newenvironment{termlist}{%
7 \list{\termlabel}{%
8 \@nmbrlisttrue
9 \def\@listctr{equation}%
10 \partopsep\z@\@plus\p@\@minus\p@
11 \topsep\abovedisplayskip
12 \leftmargin\termindent
13 \labelwidth\leftmargin
14 \advance\labelwidth-\labelsep
15 \listparindent\parindent
16 \parsep\parskip
\%}
\%}
\end{verbatim}
The `term` environment is implemented as a `termlist` environment with only one list item.

\begin{termlist}
\item
\end{termlist}

The `termlist*` environment is implemented as a `termlist` environment with empty labels.

\begin{termlist*}
\item
\end{termlist*}

The `term*` environment is implemented as a `termlist*` environment with only one list item.

\begin{termlist*}
\item
\end{termlist*}