The \texttt{spverbatim} package*

Scott Pakin
\texttt{scott+spverb@pakin.org}
August 10, 2009

1 Introduction

\LaTeX{}'s \texttt{\verb} macro treats its argument as an unbreakable unit of text. This can lead to poor typesetting, especially when the argument is long:

\begin{quote}
Be sure to run \texttt{"my\_program | awk \$1~/^[0-9]+$/ \{printf \ "%s & \%s \\
\n", \$2, \$NF\} > $#HOME/.myprogrc"} to extract the data. Otherwise, when you run \texttt{"bad\_program \&\& rm $#HOME/.*#backup\_file#~"}, the program will delete all of your files.
\end{quote}

The \texttt{spverbatim} package enables \LaTeX{} to break lines at spaces within verbatim text:

\begin{quote}
Be sure to run \texttt{"my\_program | awk \$1~/^[0-9]+$/ \{printf \ "%s & \%s \\
\n", \$2, \$NF\} > $#HOME/.myprogrc"} to extract the data. Otherwise, when you run \texttt{"bad\_program \&\& rm $#HOME/.*#backup\_file#~"}, the program will delete all of your files.
\end{quote}

2 Usage

\texttt{\spverb} The \texttt{spverbatim} package provides an \texttt{\spverb} macro that resembles \texttt{\verb} except that it allows line breaks at space characters. Like \texttt{\verb}, \texttt{\spverb} must be followed by a character that ends the verbatim text on its second occurrence:

\texttt{\spverb <char> <literal text> <char>}

The following shows how the final sentence in Section 1 was entered:

\begin{quote}
Otherwise, when you run \texttt{"\spverb!bad\_program \&\& rm $#HOME/.*#backup\_file#!"}, the program will delete all of your files.
\end{quote}

\footnote{This document corresponds to \texttt{spverbatim} v1.0, dated 2009/08/10.}
Although \spverb allows line breaks on output, it does not allow line breaks on input (i.e., within ⟨literal text⟩). Hence, the following \LaTeX{} code is incorrect:

```
Otherwise, when you run "\spverb!bad_program & & rm $HOME/.*#backup_file#~!", the program will delete all of your files.
```

```
\begin{spverbatim}
my_program | awk ' $1 ~ /^\[0-9\]+$/ {printf "\%s & \%s \n", $2, $NF}' > $HOME/.myprogrc
\end{spverbatim}
```

produces

```
my_program | awk ' $1 ~ /^\[0-9\]+$/ {printf "\%s & \%s \n", $2, $NF}' > $HOME/.myprogrc
```

Unlike \verb and \verbatim, \spverb and \spverbatim do not support a -form in which space characters are typeset as \texttt{\_u"\_"}. Please contact the author if this is a feature you’d like to see in \spverbatim.

3 Implementation

This section presents the complete source code for the \spverbatim package. Unless you’re interested in seeing precisely how \spverbatim works, there’s no need to read any further.

```
\begin{verbatim}
\spverb \spverb@ve \verb@egroup
\@xobeysp
\verb
1 \gdef\spverb{%
2 \bgroup
3 \let\spverb@ve=\verb@egroup
4 \def\verb@egroup{\spverb@ve\egroup}%
5 \def\@xobeysp{\mbox{\space}}%
6 \verb
7 }
```

2
\texttt{verbatim} is no ordinary \LaTeX{} environment. Because \texttt{"\textbackslash"}, \texttt{\{}, and \texttt{\}} are treated as literals within a \texttt{verbatim} environment, \texttt{\textbackslash\end{verbatim}} can't automatically end the environment. Rather, \texttt{\begin{verbatim}} invokes the \texttt{\@xverbatim} macro, which pattern-matches against the literal text \texttt{"\end{verbatim}} sequence. Here, we define an \texttt{spv@xverbatim} macro that's just like \texttt{\@xverbatim} except that it pattern-matches against the literal text \texttt{"\end{spverbatim}} and ends with a call to the real \texttt{\end{spverbatim}} sequence.

\begin{verbatim}
\begingroup
\catcode'|=0
\catcode'|=1
\catcode'|=2
\catcode'|=12
\catcode'|=12
\catcode'\}=12
\catcode'\}=12
\catcode'\}=12
\catcode'\}\=12
\lgdef|spv@xverbatim#1\end{spverbatim}[#1|end[spverbatim]]
\endgroup
\end{verbatim}

\texttt{spverbatim} Because the \texttt{verbatim} environment already begins a new group, all we have to do to get it to preserve spaces is locally redefine the nonbreaking space macro, \texttt{\@xobeysp}, to produce a breaking space; and locally redefine \texttt{\@xverbatim} as \texttt{\spv@xverbatim} (see above) so that a \texttt{\begin{spverbatim}} is matched by an \texttt{\end{spverbatim}}, not an \texttt{\end{verbatim}}.

\begin{verbatim}
\newenvironment{spverbatim}{% 
def\@xobeysp{\mbox{}\space}% \let\@verbatim=\spv@xverbatim \verbatim }{% }
\end{verbatim}

\section{Legal notices}

Copyright \copyright\ 2009 Scott Pakin.\hyperref[scott+spverb@pakin.org]{\texttt{scott+spverb@pakin.org}}

This package may be distributed and/or modified under the conditions of the \LaTeX{} Project Public License, either version 1.3c of this license or (at your option) any later version. The latest version of this license is in:

\url{http://www.latex-project.org/lppl.txt}

and version 1.3c or later is part of all distributions of \LaTeX{} version 2006/05/20 or later.
# Index

Numbers written in italic refer to the page where the corresponding entry is described; numbers underlined refer to the code line of the definition; numbers in roman refer to the code lines where the entry is used.

<table>
<thead>
<tr>
<th>Symbols</th>
<th>E</th>
<th>\verb@re</th>
</tr>
</thead>
<tbody>
<tr>
<td>@xobeysp</td>
<td>1, 18</td>
<td>@verb@re</td>
</tr>
<tr>
<td>@xverbatim</td>
<td>19</td>
<td>\verbatim</td>
</tr>
<tr>
<td>\verb@verbatim</td>
<td>1</td>
<td>\verb@verbage</td>
</tr>
<tr>
<td>\verb@verbatim</td>
<td>1, 18</td>
<td>\verbatim</td>
</tr>
<tr>
<td>\verbatim</td>
<td>1</td>
<td>\verb</td>
</tr>
<tr>
<td>\sverb</td>
<td>6</td>
<td>\verb@egroup</td>
</tr>
<tr>
<td>\verbatim@verbage</td>
<td>8, 19</td>
<td>\verbatim</td>
</tr>
<tr>
<td>\space</td>
<td>5, 18</td>
<td>\verbatim</td>
</tr>
<tr>
<td>\verb@verbage</td>
<td>3, 4</td>
<td>\verbatim</td>
</tr>
<tr>
<td>\verbatim</td>
<td>20</td>
<td>\verbatim</td>
</tr>
</tbody>
</table>