The harveyballs Package

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Abstract
This document exemplifies the harveyballs package for \LaTeX in a nutshell. Harvey balls can be used in arbitrary contexts such as to present survey results in a visual manner or express parameter values of certain characteristics. They provide a visual means to easily compare these values best facilitated by the sophisticated pattern recognition techniques of build in visual human cognition by mother nature.

1 Package Dependencies
The harveyballs package requires the tikz package.

2 Examples and Options
2.1 In text
This is a normal text with Harvey Balls included. Here is a value commonly indicating a property is not fulfilled \(\bigcirc\). For partially fulfilled properties you could use a Harvey Ball filled by a quarter, e.g. \(\bullet\). If it is half fulfilled, you could use \(\bigtriangleup\). Almost fulfilled properties could be illustrated with \(\bigtriangleup\). Finally, if a certain property is fullfilled entirely you should use \(\bigcirc\).

2.2 In table
Harvey Balls can also be integrated in tables (cf. Table 1).

<table>
<thead>
<tr>
<th>Property</th>
<th>Approach 1</th>
<th>Approach 2</th>
<th>Approach 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Property 1</td>
<td>(\bigcirc)</td>
<td>(\bullet)</td>
<td>(\bigtriangleup)</td>
</tr>
<tr>
<td>Property 2</td>
<td>(\bigtriangleup)</td>
<td>(\bigtriangleup)</td>
<td>(\bullet)</td>
</tr>
<tr>
<td>Property 3</td>
<td>(\bullet)</td>
<td>(\bigtriangleup)</td>
<td>(\bigtriangleup)</td>
</tr>
</tbody>
</table>

Table 1: Example for a table including Harvey Balls
2.3 Custom size

There are two variables available to the user to override the size of the Harvey Balls globally.

- \( \texttt{\textbackslash harveyBallsSize} \), i.e. the size of the Harvey Balls and
- \( \texttt{\textbackslash harveyBallsLineWidth} \), i.e. the line width used to draw the Harvey Balls.

These values can be changed using the following commands:

- \( \texttt{\textbackslash def \textbackslash harveyBallsSize\{0.85ex\}} \)
- \( \texttt{\textbackslash def \textbackslash harveyBallsLineWidth\{0.2pt\}} \)

Whereas 0.85ex and 0.2pt would be parameters, i.e. your custom sizes. Note that these are also the default values. \( \texttt{\textbackslash def \textbackslash harveyBallsLineWidth\{1pt\}} \) and \( \texttt{\textbackslash def \textbackslash harveyBallsSize\{3ex\}} \) produces:

\[ \text{\textbackslash harveyBallNone[14pt]}, \text{\textbackslash harveyBallQuarter[14pt]}, \text{\textbackslash harveyBallHalf[14pt]}, \text{\textbackslash harveyBallThreeQuarter[14pt]}, \text{\textbackslash harveyBallFull[14pt]} \]

You can also use custom sized using an optional parameter for each Harvey Ball.

<table>
<thead>
<tr>
<th>Command</th>
<th>Produced Harvey Ball</th>
</tr>
</thead>
<tbody>
<tr>
<td>\texttt{\textbackslash harveyBallNone[14pt]}</td>
<td>\textbackslash harveyBallNone[14pt]</td>
</tr>
<tr>
<td>\texttt{\textbackslash harveyBallQuarter[14pt]}</td>
<td>\textbackslash harveyBallQuarter[14pt]</td>
</tr>
<tr>
<td>\texttt{\textbackslash harveyBallHalf[14pt]}</td>
<td>\textbackslash harveyBallHalf[14pt]</td>
</tr>
<tr>
<td>\texttt{\textbackslash harveyBallThreeQuarter[14pt]}</td>
<td>\textbackslash harveyBallThreeQuarter[14pt]</td>
</tr>
<tr>
<td>\texttt{\textbackslash harveyBallFull[14pt]}</td>
<td>\textbackslash harveyBallFull[14pt]</td>
</tr>
</tbody>
</table>

Table 2: Example for custom-sized Harvey Balls

2.4 Custom Colors

The colors of the Harvey Balls can be overridden utilizing the user variables.
• \texttt{\harveyBallsColor}, i.e. the fill color of the Harvey Ball and
• \texttt{\harveyBallsLineColor}, i.e. the border color of the Harvey Ball.

For instance with \texttt{\def\harveyBallsColor{red}} and \texttt{\def\harveyBallsLineColor{blue}} you Harvey Balls will appear like this:

\begin{itemize}
  \item \includegraphics[width=0.1\textwidth]{harvey_ball_1}
  \item \includegraphics[width=0.1\textwidth]{harvey_ball_2}
  \item \includegraphics[width=0.1\textwidth]{harvey_ball_3}
  \item \includegraphics[width=0.1\textwidth]{harvey_ball_4}
\end{itemize}

3 Changelog

<table>
<thead>
<tr>
<th>Date</th>
<th>Version</th>
<th>Changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013/10/26</td>
<td>Version 1.1</td>
<td>Added user variables for fill and border colors, custom sizes and improved visual appearance. Thanks to Daniel H. Luecking from University of Arkansas for the valuable feedback to the initial version and suggestions for improvements</td>
</tr>
<tr>
<td>2013/10/22</td>
<td>Version 1.0</td>
<td>Initial release.</td>
</tr>
</tbody>
</table>

4 License

Harvey Balls for \LaTeX

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