7 segment displayer with PGF/TIKZ

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1 Outlook

This package has been built to draw seven segment displayers with PGF/TIKZ. Segments are directly displayed in the right color to show the hexadecimal number \((0, \ldots, 9, A, \ldots, F)\) or decimal \((0, \ldots, 15)\).

Unzip the package to your local folder.

Put on top of your file \texttt{\usepackage{SevenSeg}} just below \texttt{\documentclass{\ldots}}.

2 Commandes

2.1 Segment letters

To name each segment of the display, use the command \texttt{\SSGLeg[size]{position}}:

- \texttt{size}. This defines the size. Default is 3em
- \texttt{position} refers to an existing point. To select the point \((0, 0)\) just write \texttt{}

\begin{tikzpicture}
\coordinate (A) at (5em,0);
\SSGLeg{}{A}
\end{tikzpicture}

2.2 Seven segment displayers

The command \texttt{\SSGNb[size]{position}{number}} display the cell with the right lighted segments. Arguments allow to change:

- \texttt{the size}. PDefault is 3em
- \texttt{the position}. Position refers to an existing point. To select the point \((0, 0)\), just write \texttt{}
- \texttt{the number}. Number should be in 0 and 15 or \texttt{A} et \texttt{F}

\begin{tikzpicture}
\SSGNb[2cm]{A}{8}
\end{tikzpicture}
2.3 Logical cell

To put a box around the cell, just use the command\texttt{SSGBox[Style]{position}} with

- \texttt{Style} to change the style. Default is \texttt{line width=2pt}
- \texttt{position} refers to an existing point. To select the point $(0,0)$, just write \{\}

To change the cell into a seven segment display with binary connections, use \texttt{SSGDcb[Style]{position}}. To connect the cell, \texttt{positionBit0}, \texttt{positionBit1}, \texttt{positionBit2} and \texttt{positionBit3} refers to the connecting points.

\begin{tikzpicture}
\coordinate(A)at(6em,1cm);
\SSGNb{A}{F}
\SSGBox{A}
\def\taille{1.5cm}
\SSGNb[\taille]{5}
\SSGDcb[line width=2pt, blue]{}
\foreach \x in {0,...,3}
{\node at(Bit\x)[below]{$B_\x$};}
\end{tikzpicture}

3 Options

3.1 Slanted cell

To slant the cell, use the \texttt{xslant} option of PGF/TIKZ, or use a \texttt{scope} environment
\begin{tikzpicture}[xslant=0.1]
\SSGNb\{5\}
\SSGDcb{}
\end{tikzpicture}

3.2 Styles

The style is given by \texttt{SSGSty}. The style of on (off) segments is \texttt{SSGOn} (resp. \texttt{SSGOff}).

\begin{verbatim}
\tikzstyle SSGSty=[line cap=round]
\tikzstyle SSGOn=[green,line width=3pt]
\tikzstyle SSGOff=[gray!20!white,line width=3pt]
\end{verbatim}
4 Examples