The \texttt{bxcalcux} package

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\input{bxcalcux}

\section{Overview}

This package allows one to create a new unit of length that can be used in length expressions of the \texttt{calc} package. For example,

\begin{verbatim}
\newcalcunit{thou}{0.07227pt} \% thousandth of inch
\setlength{\lengthA}{10\thou}
\end{verbatim}

will assign 0.72266 pt to \texttt{\lengthA}.\footnote{Using \texttt{0.001in} instead of \texttt{0.07227pt} will give rather inaccurate results, since \texttt{0.001in} is evaluated to 0.7277 pt.}

\subsection*{Supported format}
\LaTeX.

\subsection*{Supported engine}
Any engine with \TeX{} extension.

\subsection*{Prerequisite packages}
\texttt{calc}, \texttt{etoolbox}.

\section{Package Loading}

Use \texttt{\usepackage} as usual, with no options.

\begin{verbatim}
\usepackage{bxcalcux}
\end{verbatim}

\section{Usage}

\begin{itemize}
\item \texttt{\newcalcunit{\textit{unit}}{\textit{length}}}: Declares a new unit \textit{unit} as equal to \textit{length}. The unit name must consist only of alphabets. You can use relative units such as \texttt{0.5\em} in \textit{length}, and such relative units are resolved when \texttt{calc} expressions are evaluated.
\item \texttt{\DeclareCalcUnit{\textit{unit}}{\textit{text}}}: (for \TeX{}icians) Declares a new unit \textit{unit} as equal to the unit expressed by a token list \textit{text}, which must form a "unit of dimen" (in \TeX{} terminology). Here is an example.

\begin{verbatim}
\DeclareCalcUnit{ls}{\baselineskip}\% current line skip
\end{verbatim}
\end{itemize}

\section{Notices}

\begin{itemize}
\item Usually unit names are treated as case-insensitive; but as exception, unit names with a single letter are case-sensitive.
\item You must not create a unit name that coincides with a prefix of existing (built-in or created) units or any keywords that could be used in \texttt{calc} expressions (such as \texttt{plus}, \texttt{fil}, etc.); otherwise unexpected things would occur.
\end{itemize}