The \texttt{somedefs} toolkit package

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long time ago in a different century...

This file is maintained by the \LaTeX\ Project team.
Bug reports can be opened (category \textit{tools}) at
https://latex-project.org/bugs.html.

Overview

This is an example ‘programmers toolkit’ package, for use by package writers. It
allows package writers to provide options which switch definitions on and off. For
example, a package \texttt{fred} might define a large number of commands, including
\texttt{\textbackslash foo} and \texttt{\textbackslash baz}, so:

\begin{verbatim}
\usepackage{fred}
\end{verbatim}

would use a lot of memory, even if \texttt{\textbackslash foo} and \texttt{\textbackslash baz} were the only commands needed.
However, if the author of \texttt{fred} used the \texttt{somedefs} package, then the user would
be able to say:

\begin{verbatim}
\usepackage[only,foo,baz]{fred}
\end{verbatim}

and only the commands \texttt{\textbackslash foo} and \texttt{\textbackslash baz} would be defined.
To use the \texttt{somedefs} package in your own packages or classes, you say:

\begin{verbatim}
\RequirePackage{somedefs}
\end{verbatim}

You can then use four new commands:

\begin{itemize}
  \item \texttt{\textbackslash UseAllDefinitions} which says that all the commands in the file should be defined.
  \item \texttt{\textbackslash UseSomeDefinitions} which says that only the commands specified by \texttt{\textbackslash UseDefinition} should be defined.
  \item \texttt{\textbackslash UseDefinition\{\texttt{name}\}} which says that the command \texttt{name} should be defined.
  \item \texttt{\textbackslash ProvidesDefinition\{\texttt{definition}\}} which provides one definition, of the form \texttt{\textbackslash definingcommand\{\texttt{command}\}…
\end{itemize}
For example, the package \texttt{fred} could say:

\begin{verbatim}
\RequirePackage{somedefs}
\UseAllDefinitions
\DeclareOption{only}{\UseSomeDefinitions}
\DeclareOption*{\UseDefinition{\CurrentOption}}
\ProcessOptions
\ProvidesDefinition{\newcommand{\foo}{...}}
\ProvidesDefinition{\newcommand{\baz}{...}}
\end{verbatim}

One of the commands \texttt{\UseAllDefinitions} or \texttt{\UseSomeDefinitions} should always be used. You may have some commands which need other commands, in which case you have to declare the options by hand. For example, if the command \texttt{\bar} needs the command \texttt{\foo}, you could say:

\begin{verbatim}
\DeclareOption{bar}{\UseDefinition{bar}\UseDefinition{foo}}
\end{verbatim}

For a longer example of the use of the \texttt{somedefs} package, look at the \texttt{rawfonts} package.

\section*{Implementation}

The driver for the documentation you're now reading.

\begin{verbatim}
\documentclass{ltexdoc}
\begin{document}
\DocInput{somedefs.dtx}
\end{document}
\end{verbatim}

This is a \LaTeX\ 2\epsilon\ package.

\begin{verbatim}
\NeedsTeXFormat{LaTeX2e}
\ProvidesPackage{somedefs}[1994/06/01 v0.03 Toolkit for optional definitions]
\UseSomeDefinitions
\UseAllDefinitions
\UseDefinition
\ProvidesDefinition
@providesdefinition
@unprovideddefinition
\end{verbatim}

The package works by having \texttt{\UseDefinition{⟨name⟩}} define \texttt{name} to be \@unprovideddefinition. If \texttt{\UseSomeDefinitions} has been called, then \texttt{\ProvidesDefinition} looks to see if \texttt{name} is \@unprovideddefinition. If \texttt{\UseAllDefinitions} has been called, then \texttt{\ProvidesDefinition} does nothing. If neither has been called, then \texttt{\ProvidesDefinition} produces an error message.
{The package which used the 'somedefs' package has an error.}
\def\@provides@definition#1{\@provides@definition#1\relax
\@provides@definition}
\def\@provides@definition#1#2#3\@provides@definition{%
\ifx#2\@unprovided@definition
#1#2#3%
\fi
\@unprovided@definition{%
\PackageError{somedefs}{%}
{Package 'somedefs' error: this command was never defined}%
{You have requested a command which does not exist.}%
}%
\@onlypreamble\UseSomeDefinitions
\@onlypreamble\UseAllDefinitions
\@onlypreamble\UseDefinition
\@onlypreamble\ProvidesDefinition
\@onlypreamble\@providesdefinition
\@onlypreamble\@provides@definition
That's it!
{/package}