The **somedefs** toolkit package

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long time ago in a different century...

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**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 *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 *fred* used the *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 *somedefs* package in your own packages or classes, you say:

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

You can then use four new commands:

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

```latex
\RequirePackage{somedefs}
\UseAllDefinitions
\DeclareOption{only}{\UseSomeDefinitions}
\DeclareOption*{\UseDefinition{\CurrentOption}}
\ProcessOptions
\ProvidesDefinition{\newcommand{\foo}{\ldots}}
\ProvidesDefinition{\newcommand{\baz}{\ldots}}
```

One of the commands `\UseAllDefinitions` or `\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 `\bar` needs the command `\foo`, you could say:

```latex
\DeclareOption{bar}{\UseDefinition{\bar}\UseDefinition{\foo}}
```

For a longer example of the use of the `somedefs` package, look at the `rawfonts` package.

### Implementation

The driver for the documentation you’re now reading.

```latex
\documentclass{ltxdoc}
\begin{document}
\DocInput{somedefs.dtx}
\end{document}
```

This is a L\TeX\ 2ε package.

```
\NeedsTeXFormat{LaTeX2e}
\ProvidesPackage{somedefs}[1994/06/01 v0.03 Toolkit for optional definitions]
```

The package works by having `\UseDefinition{\langle name \rangle}` define `\name` to be `@unprovided@definition`. If `\UseSomeDefinitions` has been called, then `\ProvidesDefinition` looks to see if `\name` is `@unprovided@definition`. If `\UseAllDefinitions` has been called, then `\ProvidesDefinition` does nothing. If neither has been called, then `\ProvidesDefinition` produces an error message.

```latex
\def\UseSomeDefinitions{%
\let\ProvidesDefinition@providesdefinition
\let\ProvidesDefinition@unprovidesdefinition
}
\def\UseAllDefinitions{%
\let\ProvidesDefinition@firstofone
}
\def\UseDefinition#1{%
\expandafter\let\csname#1\endcsname@unprovided@definition
}
\def\ProvidesDefinition#1{%
\PackageError{somedefs}{No \useoption{\useoption}{\string{\useoption}}}%
```

\{No \noexpand\useoption{\useoption}{\string{\useoption}}%
22 {The package which used the ‘somedefs’ package has an error.}%
23 }
24 \def\@providesdefinition#1{\@provides@definition#1\relax
25 \@provides@definition}
26 \def\@provides@definition#1#2#3\@provides@definition{%
27 \ifeq#2\@unprovided@definition
28 \else#1#2#3%
29 \fi
30 }
31 \def\@unprovided@definition{%
32 \PackageError{somedefs}{%
33 {Package ‘somedefs’ error: this command was never defined}%
34 {You have requested a command which does not exist.}%
35 }
36 \onlypreamble\UseSomeDefinitions
37 \onlypreamble\UseAllDefinitions
38 \onlypreamble\UseDefinition
39 \onlypreamble\ProvidesDefinition
40 \onlypreamble\@providesdefinition
41 \onlypreamble\@provides@definition

That’s it!
42 ⟨/package⟩