The etexcmds package

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Abstract

New primitive commands are introduced in ε-TEX. Sometimes the names collide with existing macros. This package solves this name clashes by adding a prefix to ε-TEX's commands. For example, ε-TEX's `\unexpanded` is provided as `\etex@unexpanded`.

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*Please report any issues at https://github.com/ho-tex/etexcmds/issues

1 Documentation

1.1 \unexpanded

`\etex@unexpanded`

New primitive commands are introduced in ε-TEX. Unhappily `\unexpanded` collides with a macro in ConTEXt with the same name. This also affects the LATEX world. For example, package m-ch-de loads `base/syst-gen.tex` that redefines `\unexpanded`. Thus this package defines `\etex@unexpanded` to get rid of the name clash.

`\ifetex@unexpanded`

Package etexcmds can be loaded even if ε-TEX is not present or `\unexpanded` cannot be found. The switch `\ifetex@unexpanded` tells whether it is safe to use `\etex@unexpanded`. The switch is true (`\iftrue`) only if the primitive `\unexpanded` has been found and `\etex@unexpanded` is available.

1.2 \expanded

Probably `\expanded` will be added in pdfTEX 1.50 and LuaTEX. Again ConTEXt defines this as macro. Therefore version 1.2 of this packages also provides `\etex@expanded` and `\ifetex@unexpanded`.

2 Implementation

1 ⟨*package⟩

2.1 Reload check and package identification

Reload check, especially if the package is not used with LATEX.

```
2 \begingroup\catcode61\catcode48\catcode32=10\relax%
3   \catcode13=5 % ^^M
4   \endlinechar=13 %
5   \catcode35=6 % #
6   \catcode39=12 % '
7   \catcode44=12 % ,
8   \catcode45=12 % -
9   \catcode46=12 % .
10  \catcode58=12 % :
11  \catcode64=11 % @
12  \catcode123=1 % {
13  \catcode125=2 % }
14  \expandafter\let\expandafter\x\csname ver@etexcmds.sty\endcsname
15  \ifx\x\relax % plain-TeX, first loading
16  \else
17    \def\empty{}%
18    \ifx\x\empty % LaTeX, first loading,
19      % variable is initialized, but \ProvidesPackage not yet seen
20    \else
21      \expandafter\ifx\csname PackageInfo\endcsname\relax
22        \def\x#1#2{%
23          \immediate\write-1{Package #1 Info: #2.}%
24        }%
```

```
      \else
        \def\x#1#2{\PackageInfo{#1}{#2, stopped}}%
      \fi
      \x{etexcmds}{The package is already loaded}%
      \aftergroup\endinput
    \fi
  \fi
\endgroup%
```

Package identification:

```
\begingroup\catcode61\catcode48\catcode32=10\relax%
  \catcode13=5 % ^^M
  \endlinechar=13 %
  \catcode35=6 % #
  \catcode39=12 % '
  \catcode40=12 % (
  \catcode41=12 % )
  \catcode44=12 % ,
  \catcode45=12 % -
  \catcode46=12 % .
  \catcode47=12 % /
  \catcode58=12 % :
  \catcode64=11 % @
  \catcode91=12 % [
  \catcode93=12 % ]
  \catcode123=1 % {
  \catcode125=2 % }
  \expandafter\ifx\csname ProvidesPackage\endcsname\relax
    \def\x#1#2#3[#4]{\endgroup
      \immediate\write-1{Package: #3 #4}%
      \xdef#1{#4}%
    }%
  \else
    \def\x#1#2[#3]{\endgroup
      #2[{#3}]%
      \ifx#1\@undefined
        \xdef#1{#3}%
      \fi
      \ifx#1\relax
        \xdef#1{#3}%
      \fi
    }%
  \fi
\expandafter\x\csname ver@etexcmds.sty\endcsname
\ProvidesPackage{etexcmds}%
  [2019/12/15 v1.7 Avoid name clashes with e-TeX commands (HO)]%
```

2.2 Catcodes

```
\begingroup\catcode61\catcode48\catcode32=10\relax%
  \catcode13=5 % ^^M
  \endlinechar=13 %
  \catcode123=1 % {
  \catcode125=2 % }
  \catcode64=11 % @
  \def\x{\endgroup
    \expandafter\edef\csname etexcmds@AtEnd\endcsname{%
      \endlinechar=\the\endlinechar\relax
      \catcode13=\the\catcode13\relax
```

```
      \catcode32=\the\catcode32\relax
      \catcode35=\the\catcode35\relax
      \catcode61=\the\catcode61\relax
      \catcode64=\the\catcode64\relax
      \catcode123=\the\catcode123\relax
      \catcode125=\the\catcode125\relax
    }%
  }%
\x\catcode61\catcode48\catcode32=10\relax%
\catcode13=5 % ^^M
\endlinechar=13 %
\catcode35=6 % #
\catcode64=11 % @
\catcode123=1 % {
\catcode125=2 % }
\def\TMP@EnsureCode#1#2{%
  \edef\etexcmds@AtEnd{%
    \etexcmds@AtEnd
    \catcode#1=\the\catcode#1\relax
  }%
  \catcode#1=#2\relax
}
\TMP@EnsureCode{39}{12}% '
\TMP@EnsureCode{40}{12}% (
\TMP@EnsureCode{41}{12}% )
\TMP@EnsureCode{44}{12}% ,
\TMP@EnsureCode{45}{12}% -
\TMP@EnsureCode{46}{12}% .
\TMP@EnsureCode{47}{12}% /
\TMP@EnsureCode{60}{12}% <
\TMP@EnsureCode{91}{12}% [
\TMP@EnsureCode{93}{12}% ]
\edef\etexcmds@AtEnd{%
  \etexcmds@AtEnd
  \escapechar\the\escapechar\relax
  \noexpand\endinput
}
\escapechar=92 % backslash
```

2.3 Provide \newif

\etexcmds@newif

```
\def\etexcmds@newif#1{%
  \expandafter\edef\csname etex@#1false\endcsname{%
    \let
    \expandafter\noexpand\csname ifetex@#1\endcsname
    \noexpand\iffalse
  }%
  \expandafter\edef\csname etex@#1true\endcsname{%
    \let
    \expandafter\noexpand\csname ifetex@#1\endcsname
    \noexpand\iftrue
  }%
  \csname etex@#1false\endcsname
}
```

2.4 Load package **infwarerr**

```
\begingroup\expandafter\expandafter\expandafter\endgroup
\expandafter\ifx\csname RequirePackage\endcsname\relax
  \def\TMP@RequirePackage#1[#2]{%
    \begingroup\expandafter\expandafter\expandafter\endgroup
    \expandafter\ifx\csname ver@#1.sty\endcsname\relax
      \input #1.sty\relax
    \fi
  }%
  \TMP@RequirePackage{infwarerr}[2007/09/09]%
  \TMP@RequirePackage{iftex}[2019/11/07]%
\else
  \RequirePackage{infwarerr}[2007/09/09]%
  \RequirePackage{iftex}[2019/11/07]%
\fi
```

2.5 \unexpanded

\ifetex@unexpanded

```
\etexcmds@newif{unexpanded}
```

\etex@unexpanded

```
\begingroup
\edef\x{\string\unexpanded}%
\edef\y{\meaning\unexpanded}%
\ifx\x\y
  \endgroup
  \let\etex@unexpanded\unexpanded
  \etex@unexpandedtrue
\else
  \edef\y{\meaning\normalunexpanded}%
  \ifx\x\y
    \endgroup
    \let\etex@unexpanded\normalunexpanded
    \etex@unexpandedtrue
  \else
    \edef\y{\meaning\@@unexpanded}%
    \ifx\x\y
      \endgroup
      \let\etex@unexpanded\@@unexpanded
      \etex@unexpandedtrue
    \else
      \ifluatex
        \ifnum\luatexversion<36 %
        \else
          \begingroup
            \directlua{%
              tex.enableprimitives('etex@',{'unexpanded'})%
            }%
            \global\let\etex@unexpanded\etex@unexpanded
          \endgroup
        \fi
      \fi
      \edef\y{\meaning\etex@unexpanded}%
      \ifx\x\y
        \endgroup
        \etex@unexpandedtrue
      \else
        \endgroup
        \@PackageInfoNoLine{etexcmds}{%
```

```
          Could not find \string\unexpanded.\MessageBreak
          That can mean that you are not using e-TeX or%
          \MessageBreak
          that some package has redefined \string\unexpanded.%
          \MessageBreak
          In the latter case, load this package earlier%
        }%
        \etex@unexpandedfalse
      \fi
    \fi
  \fi
\fi
```

2.6 \expanded

\ifetex@expanded

```
\etexcmds@newif{expanded}
```

\etex@expanded

```
\begingroup
\edef\x{\string\expanded}%
\edef\y{\meaning\expanded}%
\ifx\x\y
  \endgroup
  \let\etex@expanded\expanded
  \etex@expandedtrue
\else
  \edef\y{\meaning\normalexpanded}%
  \ifx\x\y
    \endgroup
    \let\etex@expanded\normalexpanded
    \etex@expandedtrue
  \else
    \edef\y{\meaning\@@expanded}%
    \ifx\x\y
      \endgroup
      \let\etex@expanded\@@expanded
      \etex@expandedtrue
    \else
      \ifluatex
        \ifnum\luatexversion<36 %
        \else
          \begingroup
            \directlua{%
              tex.enableprimitives('etex@',{'expanded'})%
            }%
            \global\let\etex@expanded\etex@expanded
          \endgroup
        \fi
      \fi
      \edef\y{\meaning\etex@expanded}%
      \ifx\x\y
        \endgroup
        \etex@expandedtrue
      \else
        \endgroup
        \@PackageInfoNoLine{etexcmds}{%
          Could not find \string\expanded.\MessageBreak
```

```
          That can mean that you are not using pdfTeX 1.50 or%
          \MessageBreak
          that some package has redefined \string\expanded.%
          \MessageBreak
          In the latter case, load this package earlier%
        }%
        \etex@expandedfalse
      \fi
    \fi
  \fi
\fi
\etexcmds@AtEnd%
```
⟨/package⟩

3 Installation

3.1 Download

Package. This package is available on CTAN[1]:

CTAN:macros/latex/contrib/etexcmds/etexcmds.dtx The source file.

CTAN:macros/latex/contrib/etexcmds/etexcmds.pdf Documentation.

Bundle. All the packages of the bundle 'etexcmds' are also available in a TDS compliant ZIP archive. There the packages are already unpacked and the documentation files are generated. The files and directories obey the TDS standard.

CTAN:install/macros/latex/contrib/etexcmds.tds.zip

TDS refers to the standard "A Directory Structure for TEX Files" (CTAN:pkg/tds). Directories with `texmf` in their name are usually organized this way.

3.2 Bundle installation

Unpacking. Unpack the `etexcmds.tds.zip` in the TDS tree (also known as `texmf` tree) of your choice. Example (linux):

```
unzip etexcmds.tds.zip -d ~/texmf
```

3.3 Package installation

Unpacking. The `.dtx` file is a self-extracting docstrip archive. The files are extracted by running the `.dtx` through plain TEX:

```
tex etexcmds.dtx
```

TDS. Now the different files must be moved into the different directories in your installation TDS tree (also known as `texmf` tree):

```
etexcmds.sty → tex/generic/etexcmds/etexcmds.sty
etexcmds.pdf → doc/latex/etexcmds/etexcmds.pdf
etexcmds.dtx → source/latex/etexcmds/etexcmds.dtx
```

If you have a `docstrip.cfg` that configures and enables docstrip's TDS installing feature, then some files can already be in the right place, see the documentation of docstrip.

[1] CTAN:pkg/etexcmds

3.4 Refresh file name databases

If your TEX distribution (TEX Live, MiKTEX, ...) relies on file name databases, you must refresh these. For example, TEX Live users run `texhash` or `mktexlsr`.

3.5 Some details for the interested

Unpacking with LATEX. The `.dtx` chooses its action depending on the format:

plain TEX: Run docstrip and extract the files.

LATEX: Generate the documentation.

If you insist on using LATEX for docstrip (really, docstrip does not need LATEX), then inform the autodetect routine about your intention:

```
latex \let\install=y\input{etexcmds.dtx}
```

Do not forget to quote the argument according to the demands of your shell.

Generating the documentation. You can use both the `.dtx` or the `.drv` to generate the documentation. The process can be configured by the configuration file `ltxdoc.cfg`. For instance, put this line into this file, if you want to have A4 as paper format:

```
\PassOptionsToClass{a4paper}{article}
```

An example follows how to generate the documentation with pdfLATEX:

```
pdflatex etexcmds.dtx
makeindex -s gind.ist etexcmds.idx
pdflatex etexcmds.dtx
makeindex -s gind.ist etexcmds.idx
pdflatex etexcmds.dtx
```

4 History

[2007/05/06 v1.0]

- First version.

[2007/09/09 v1.1]

- Documentation for `\ifetex@unexpanded` added.
- Catcode section rewritten.

[2007/12/12 v1.2]

- `\etex@expanded` added.

[2010/01/28 v1.3]

- Compatibility to iniTEX added.

[2011/01/30 v1.4]

- Already loaded package files are not input in plain TEX.

[2011/02/16 v1.5]

- Using LuaTEX's `tex.enableprimitives` if available.

[2016/05/16 v1.6]

- Documentation updates.

[2019/12/15 v1.7]

- Documentation updates.
- Use iftex package.

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