

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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1 Documentation

`\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 L^AT_EX 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.

2 Implementation

```
1 (*package)
```

2.1 Reload check and package identification

Reload check, especially if the package is not used with L^AT_EX.

```
2 \begingroup
3   \catcode44 12 % ,
4   \catcode45 12 % -
5   \catcode46 12 % .
6   \catcode58 12 % :
7   \catcode64 11 % @
8   \expandafter\let\expandafter\x\csname ver@etexcmds.sty\endcsname
9   \ifcase 0%
10    \ifx\x\relax % plain
11    \else
12      \ifx\x\empty % LaTeX
13      \else
14        1%
15      \fi
16    \fi
17  \else
18    \catcode35 6 % #
19    \catcode123 1 % {
20    \catcode125 2 % }
21    \expandafter\ifx\csname PackageInfo\endcsname\relax
22      \def\x#1#2{%
23        \immediate\write-1{Package #1 Info: #2.}%
24      }%
25    \else
26      \def\x#1#2{\PackageInfo{#1}{#2, stopped}}%
27    \fi
28    \x{etexcmds}{The package is already loaded}%
29  \endgroup
30  \expandafter\endinput
31 \fi
32 \endgroup
```

Package identification:

```
33 \begingroup
34   \catcode35 6 % #
35   \catcode40 12 % (
36   \catcode41 12 % )
37   \catcode44 12 % ,
38   \catcode45 12 % -
39   \catcode46 12 % .
40   \catcode47 12 % /
41   \catcode58 12 % :
42   \catcode64 11 % @
43   \catcode123 1 % {
44   \catcode125 2 % }
45   \expandafter\ifx\csname ProvidesPackage\endcsname\relax
46     \def\x#1#2#3[#4]{\endgroup
47       \immediate\write-1{Package: #3 #4}%
48     }
```

```

48     \xdef#1{#4}%
49   }%
50   \else
51     \def\x#1#2[#3]{\endgroup
52       #2[#3]}%
53     \ifx#1\relax
54       \xdef#1{#3}%
55     \fi
56   }%
57 \fi
58 \expandafter\x\csname ver@etexcmds.sty\endcsname
59 \ProvidesPackage{etexcmds}%
60 [2007/09/09 v1.1 Prefix for e-TeX command names (H0)]

```

2.2 Catcodes

```

61 \begingroup
62   \catcode123 1 % {
63   \catcode125 2 % }
64   \def\x{\endgroup
65     \expandafter\edef\csname etexcmds@AtEnd\endcsname{%
66       \catcode35 \the\catcode35\relax
67       \catcode64 \the\catcode64\relax
68       \catcode123 \the\catcode123\relax
69       \catcode125 \the\catcode125\relax
70     }%
71   }%
72 \x
73 \catcode35 6 % #
74 \catcode64 11 % @
75 \catcode123 1 % {
76 \catcode125 2 % }
77 \def\TMP@EnsureCode#1#2{%
78   \edef\etexcmds@AtEnd{%
79     \etexcmds@AtEnd
80     \catcode#1 \the\catcode#1\relax
81   }%
82   \catcode#1 #2\relax
83 }
84 \TMP@EnsureCode{44}{12}% ,
85 \TMP@EnsureCode{45}{12}% -
86 \TMP@EnsureCode{46}{12}% .
87 \TMP@EnsureCode{47}{12}% /
88 \TMP@EnsureCode{61}{12}% =

```

2.3 Load package infwarerr

```

89 \begingroup\expandafter\expandafter\expandafter\endgroup
90 \expandafter\ifx\csname RequirePackage\endcsname\relax
91   \input infwarerr.sty\relax
92 \else
93   \RequirePackage{infwarerr}[2007/09/09]%
94 \fi

```

2.4 \unexpanded

\ifetex@unexpanded

```

95 \newif\ifetex@unexpanded

```

\etex@unexpanded

```

96 \begingroup
97 \escapechar=92 % backslash
98 \edef\x{\string\unexpanded}%

```

```

99 \edef\y{\meaning\unexpanded}%
100 \ifx\x\y
101   \endgroup
102   \let\etex@unexpanded\unexpanded
103   \etex@unexpandedtrue
104 \else
105   \edef\y{\meaning\normalunexpanded}%
106   \ifx\x\y
107     \endgroup
108     \let\etex@unexpanded\normalunexpanded
109     \etex@unexpandedtrue
110   \else
111     \edef\y{\meaning\@@unexpanded}%
112     \ifx\y
113       \endgroup
114       \let\etex@unexpanded\@@unexpanded
115       \etex@unexpandedtrue
116     \else
117       \endgroup
118       \@PackageInfoNoLine{etexcmds}{%
119         Could not find \string\unexpanded.\MessageBreak
120         That can mean that you are not using e-TeX or\MessageBreak
121         that some package has redefined \string\unexpanded.\MessageBreak
122         In the latter case, load this package earlier%
123       }%
124       \etex@unexpandedfalse
125     \fi
126   \fi
127 \fi

128 \etexcmds@AtEnd
129 \endpackage

```

3 Test

3.1 Catcode checks for loading

```

130 \test1\
131 \catcode'\{=1 %
132 \catcode'\}=2 %
133 \catcode'\#=6 %
134 \catcode'\@=11 %
135 \expandafter\ifx\csname count\endcsname\relax
136   \countdef\count@=255 %
137 \fi
138 \expandafter\ifx\csname @gobble\endcsname\relax
139   \long\def@gobble#1{%
140 \fi
141 \expandafter\ifx\csname @firstofone\endcsname\relax
142   \long\def@firstofone#1{#1}%
143 \fi
144 \expandafter\ifx\csname loop\endcsname\relax
145   \expandafter@firstofone
146 \else
147   \expandafter@gobble
148 \fi
149 {%
150   \def\loop#1\repeat{%
151     \def\body{#1}%
152     \iterate
153   }%
154   \def\iterate{%

```

```

155     \body
156     \let\next\iterate
157     \else
158     \let\next\relax
159     \fi
160     \next
161 }%
162 \let\repeat=\fi
163 }%
164 \def\RestoreCatcodes{}
165 \count@=0 %
166 \loop
167   \edef\RestoreCatcodes{%
168     \RestoreCatcodes
169     \catcode\the\count@=\the\catcode\count@\relax
170   }%
171   \ifnum\count@<255 %
172     \advance\count@ 1 %
173   \repeat
174
175 \def\RangeCatcodeInvalid#1#2{%
176   \count@=#1\relax
177   \loop
178     \catcode\count@=15 %
179     \ifnum\count@<#2\relax
180       \advance\count@ 1 %
181     \repeat
182 }
183 \def\Test{%
184   \RangeCatcodeInvalid{0}{47}%
185   \RangeCatcodeInvalid{58}{64}%
186   \RangeCatcodeInvalid{91}{96}%
187   \RangeCatcodeInvalid{123}{255}%
188   \catcode'\@=12 %
189   \catcode'\=0 %
190   \catcode'\{=1 %
191   \catcode'\}=2 %
192   \catcode'\#=6 %
193   \catcode'\[=12 %
194   \catcode'\]=12 %
195   \catcode'\%=14 %
196   \catcode'\ =10 %
197   \catcode13=5 %
198   \input etexcmds.sty\relax
199   \RestoreCatcodes
200 }
201 \Test
202 \csname @@end\endcsname
203 \end
204 </test1>

```

3.2 Macro tests

```

205 <*test2>
206 \immediate\write16{etexcmds-test2.tex: test file for plainTeX}
207 \input etexcmds.sty\relax
208 \catcode'\@=11 %
209 \edef\x{\string\unexpanded}
210 \edef\y{\meaning\etex\unexpanded}
211 \ifx\x\y
212 \else
213   \@PackageError{etexcmds-test2}{Test failed}\@ehc
214 \fi

```

```

215 \end
216 </test2>

217 (*test3)
218 \NeedsTeXFormat{LaTeX2e}
219 \ProvidesFile{etexcmds-test3.tex}[2007/09/09 v1.1 Test file for LaTeX]
220 \RequirePackage{etexcmds}
221 \makeatletter
222 \edef\x{\string\unexpanded}
223 \edef\y{\meaning\etex@unexpanded}
224 \ifx\x\y
225 \else
226   \@PackageError{etexcmds-test3}{Test failed}\@ehc
227 \fi
228 \stop
229 </test3>

230 (*test4)
231 \NeedsTeXFormat{LaTeX2e}
232 \ProvidesFile{etexcmds-test4.tex}[2007/09/09 v1.1 Test file for LaTeX]
233 \documentclass{article}
234 \usepackage{m-pictex}
235 \usepackage{m-ch-de}
236 \usepackage{etexcmds}
237 \makeatletter
238 \ifetex@unexpanded
239   \edef\x{\string\unexpanded}%
240   \edef\y{\meaning\etex@unexpanded}%
241   \ifx\x\y
242   \else
243     \@PackageWarningNoLine{etexcmds-test4}{Test failed}%
244   \fi
245 \else
246   \@PackageWarningNoLine{etexcmds-test4}{%
247     Test failed because of ConTeXt%
248   }%
249 \fi
250 \stop
251 </test4>

```

4 Installation

4.1 Download

Package. This package is available on CTAN¹:

[CTAN:macros/latex/contrib/oberdiek/etexcmds.dtx](#) The source file.

[CTAN:macros/latex/contrib/oberdiek/etexcmds.pdf](#) Documentation.

Bundle. All the packages of the bundle ‘oberdiek’ 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:macros/latex/contrib/oberdiek/oberdiek-tds.zip](#)

TDS refers to the standard “A Directory Structure for T_EX Files” ([CTAN:tds/tds.pdf](#)). Directories with `texmf` in their name are usually organized this way.

4.2 Bundle installation

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

¹[ftp://ftp.ctan.org/tex-archive/](http://ftp.ctan.org/tex-archive/)

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

Script installation. Check the directory `TDS:scripts/oberdiek/` for scripts that need further installation steps. Package `attachfile2` comes with the Perl script `pdfatfi.pl` that should be installed in such a way that it can be called as `pdfatfi`. Example (linux):

```
chmod +x scripts/oberdiek/pdfatfi.pl
cp scripts/oberdiek/pdfatfi.pl /usr/local/bin/
```

4.3 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/oberdiek/etexcmds.sty
etexcmds.pdf      → doc/latex/oberdiek/etexcmds.pdf
test/etexcmds-test1.tex → doc/latex/oberdiek/test/etexcmds-test1.tex
test/etexcmds-test2.tex → doc/latex/oberdiek/test/etexcmds-test2.tex
test/etexcmds-test3.tex → doc/latex/oberdiek/test/etexcmds-test3.tex
test/etexcmds-test4.tex → doc/latex/oberdiek/test/etexcmds-test4.tex
etexcmds.dtx      → source/latex/oberdiek/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.

4.4 Refresh file name databases

If your \TeX distribution (te \TeX , mik \TeX , ...) relies on file name databases, you must refresh these. For example, te \TeX users run `texhash` or `mktextlsr`.

4.5 Some details for the interested

Attached source. The PDF documentation on CTAN also includes the `.dtx` source file. It can be extracted by AcrobatReader 6 or higher. Another option is `pdftk`, e.g. unpack the file into the current directory:

```
pdftk etexcmds.pdf unpack_files output .
```

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 pdfL^AT_EX:

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

5 History

[2007/04/26 v1.0]

- First version.

[2007/09/09 v1.1]

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

6 Index

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