

The etexcmds package

Heiko Oberdiek
<oberdiek@uni-freiburg.de>

2007/09/09 v1.1

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`.

Contents

1	Documentation	1
2	Implementation	2
2.1	Reload check and package identification	2
2.2	Catcodes	3
2.3	Load package <code>infwarerr</code>	3
2.4	<code>\unexpanded</code>	3
3	Test	4
3.1	Catcode checks for loading	4
3.2	Macro tests	5
4	Installation	5
4.1	Download	5
4.2	Bundle installation	6
4.3	Package installation	6
4.4	Refresh file name databases	6
4.5	Some details for the interested	6
5	History	7
	[2007/04/26 v1.0]	7
	[2007/09/09 v1.1]	7
6	Index	7

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    \expandafter\ifx\csname PackageInfo\endcsname\relax
19      \def\x#1#2{%
20        \immediate\write-1{Package #1 Info: #2.}%
21      }%
22    \else
23      \def\x#1#2{\PackageInfo{#1}{#2, stopped}}%
24    \fi
25    \x{etexcmds}{The package is already loaded}%
26  \endgroup
27  \expandafter\endinput
28 \fi
29 \endgroup
```

Package identification:

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

```

48      \xdef#1{#3}%
49      \fi
50    }%
51  \fi
52 \expandafter\x\csname ver@etexcmds.sty\endcsname
53 \ProvidesPackage{etexcmds}%
54 [2007/09/09 v1.1 Providing prefix for e-TeX command names (HO)]

```

2.2 Catcodes

```

55 \expandafter\edef\csname etexcmds@AtEnd\endcsname{%
56   \catcode64 \the\catcode64\relax
57 }
58 \catcode64 11 % @
59 \def\TMP@EnsureCode#1#2{%
60   \edef\etexcmds@AtEnd{%
61     \etexcmds@AtEnd
62     \catcode#1 \the\catcode#1\relax
63   }%
64   \catcode#1 #2\relax
65 }
66 \TMP@EnsureCode{44}{12}% ,
67 \TMP@EnsureCode{45}{12}% -
68 \TMP@EnsureCode{46}{12}% .
69 \TMP@EnsureCode{47}{12}% /
70 \TMP@EnsureCode{61}{12}% =

```

2.3 Load package infwarerr

```

71 \begingroup\expandafter\expandafter\expandafter\endgroup
72 \expandafter\ifx\csname RequirePackage\endcsname\relax
73   \input infwarerr.sty\relax
74 \else
75   \RequirePackage{infwarerr}[2007/09/09]%
76 \fi

```

2.4 \unexpanded

\ifetex@unexpanded

```

77 \newif\ifetex@unexpanded

```

\etex@unexpanded

```

78 \begingroup
79 \escapechar=92 % backslash
80 \edef\x{\string\unexpanded}%
81 \edef\y{\meaning\unexpanded}%
82 \ifx\x\y
83   \endgroup
84   \let\etex@unexpanded\unexpanded
85   \etex@unexpandedtrue
86 \else
87   \edef\y{\meaning\normalunexpanded}%
88   \ifx\x\y
89     \endgroup
90     \let\etex@unexpanded\normalunexpanded
91     \etex@unexpandedtrue
92 \else
93   \edef\y{\meaning\@@unexpanded}%
94   \ifx\x\y
95     \endgroup
96     \let\etex@unexpanded\@@unexpanded
97     \etex@unexpandedtrue
98 \else

```

```

99      \endgroup
100     \@PackageInfoNoLine{etexcmds}{%
101       Could not find \string\unexpanded.\MessageBreak
102       That can mean that you are not using e-TeX or\MessageBreak
103       that some package has redefined \string\unexpanded.\MessageBreak
104       In the latter case, load this package earlier%
105     }%
106     \etex@unexpandedfalse
107   \fi
108 \fi
109 \fi

110 \etexcmds@AtEnd
111 \end{package}

```

3 Test

3.1 Catcode checks for loading

```

112 (*test1)
113 \catcode'\@=11 %
114 \def\RestoreCatcodes{}
115 \count@=0 %
116 \loop
117   \edef\RestoreCatcodes{%
118     \RestoreCatcodes
119     \catcode\the\count@=\the\catcode\count@\relax
120   }%
121   \ifnum\count@<255 %
122     \advance\count@\@ne
123   \repeat
124
125 \def\RangeCatcodeInvalid#1#2{%
126   \count@=#1\relax
127   \loop
128     \catcode\count@=15 %
129     \ifnum\count@<#2\relax
130       \advance\count@\@ne
131     \repeat
132 }
133 \def\Test{%
134   \RangeCatcodeInvalid{0}{47}%
135   \RangeCatcodeInvalid{58}{64}%
136   \RangeCatcodeInvalid{91}{96}%
137   \RangeCatcodeInvalid{123}{255}%
138   \catcode'\@=12 %
139   \catcode'\=0 %
140   \catcode'\{=1 %
141   \catcode'\}=2 %
142   \catcode'\#=6 %
143   \catcode'\[=12 %
144   \catcode'\]=12 %
145   \catcode'\%=14 %
146   \catcode'\ =10 %
147   \catcode13=5 %
148   \input etexcmds.sty\relax
149   \RestoreCatcodes
150 }
151 \Test
152 \csname @@end\endcsname
153 \end

```

```
154 </test1>
```

3.2 Macro tests

```
155 <*test2>
156 \immediate\write16{etexcmds-test2.tex: test file for plainTeX}
157 \input etexcmds.sty\relax
158 \catcode'\@=11 %
159 \edef\x{\string\unexpanded}
160 \edef\y{\meaning\etex\unexpanded}
161 \ifx\x\y
162 \else
163   \@PackageError{etexcmds-test2}{Test failed}\@ehc
164 \fi
165 \end
166 </test2>

167 <*test3>
168 \NeedsTeXFormat{LaTeX2e}
169 \ProvidesFile{etexcmds-test3.tex}[2007/09/09 v1.1 Test file for LaTeX]
170 \RequirePackage{etexcmds}
171 \makeatletter
172 \edef\x{\string\unexpanded}
173 \edef\y{\meaning\etex\unexpanded}
174 \ifx\x\y
175 \else
176   \@PackageError{etexcmds-test3}{Test failed}\@ehc
177 \fi
178 \stop
179 </test3>

180 <*test4>
181 \NeedsTeXFormat{LaTeX2e}
182 \ProvidesFile{etexcmds-test4.tex}[2007/09/09 v1.1 Test file for LaTeX]
183 \documentclass{article}
184 \usepackage{m-pictex}
185 \usepackage{m-ch-de}
186 \usepackage{etexcmds}
187 \makeatletter
188 \ifetex\unexpanded
189   \edef\x{\string\unexpanded}%
190   \edef\y{\meaning\etex\unexpanded}%
191   \ifx\x\y
192   \else
193     \@PackageWarningNoLine{etexcmds-test4}{Test failed}%
194   \fi
195 \else
196   \@PackageWarningNoLine{etexcmds-test4}{%
197     Test failed because of ConTeXt%
198   }%
199 \fi
200 \stop
201 </test4>
```

4 Installation

4.1 Download

Package. This package is available on CTAN¹:

[CTAN:macros/latex/contrib/oberdiek/etexcmds.dtx](http://ftp.ctan.org/tex-archive/macros/latex/contrib/oberdiek/etexcmds.dtx) The source file.

[CTAN:macros/latex/contrib/oberdiek/etexcmds.pdf](http://ftp.ctan.org/tex-archive/macros/latex/contrib/oberdiek/etexcmds.pdf) Documentation.

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

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):

```
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-T_EX:

```
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
etexcmds-test1.tex → doc/latex/oberdiek/etexcmds-test1.tex
etexcmds-test2.tex → doc/latex/oberdiek/etexcmds-test2.tex
etexcmds-test3.tex → doc/latex/oberdiek/etexcmds-test3.tex
etexcmds-test4.tex → doc/latex/oberdiek/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 T_EX distribution (teT_EX, mikT_EX, ...) relies on file name databases, you must refresh these. For example, teT_EX 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 L^AT_EX. The .dtx chooses its action depending on the format:

plain-T_EX: Run docstrip and extract the files.

L^AT_EX: Generate the documentation.

If you insist on using L^AT_EX for docstrip (really, docstrip does not need L^AT_EX), 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

Numbers written in *italic* refer to the page where the corresponding entry is described; numbers underlined refer to the code line of the definition; numbers in roman refer to the code lines where the entry is used.

Symbols

\#	142	_	146
\%	145		
\@	113, 138, 158	A	
\@@unexpanded	93, 96	\advance	122, 130
\@PackageError	163, 176		
\@PackageInfoNoLine	100	C	
\@PackageWarningNoLine	193, 196	\catcode	3,
\@ehc	163, 176		4, 5, 6, 7, 31, 32, 33, 34, 35,
\@ne	122, 130		36, 37, 38, 56, 58, 62, 64, 113,
\[143		119, 128, 138, 139, 140, 141,
\\	139		142, 143, 144, 145, 146, 147, 158
\{	140	\count@	115,
\}	141		119, 121, 122, 126, 128, 129, 130
\]	144	\csname	8, 18, 39, 52, 55, 72, 152

D		P	
<code>\documentclass</code>	183	<code>\PackageInfo</code>	23
E		<code>\ProvidesFile</code>	169, 182
<code>\empty</code>	12	<code>\ProvidesPackage</code>	53
<code>\end</code>	153, 165	R	
<code>\endcsname</code>	8, 18, 39, 52, 55, 72, 152	<code>\RangeCatcodeInvalid</code>	125, 134, 135, 136, 137
<code>\endinput</code>	27	<code>\repeat</code>	123, 131
<code>\escapechar</code>	79	<code>\RequirePackage</code>	75, 170
<code>\etex@unexpanded</code>	1, 78, 160, 173, 190	<code>\RestoreCatcodes</code>	114, 117, 118, 149
<code>\etex@unexpandedfalse</code>	106	S	
<code>\etex@unexpandedtrue</code>	85, 91, 97	<code>\stop</code>	178, 200
<code>\etexcmds@AtEnd</code>	60, 61, 110	T	
I		<code>\Test</code>	133, 151
<code>\ifcase</code>	9	<code>\the</code>	56, 62, 119
<code>\ifetex@unexpanded</code>	2, 77, 188	<code>\TMP@EnsureCode</code>	59, 66, 67, 68, 69, 70
<code>\ifnum</code>	121, 129	U	
<code>\ifx</code>	10, 12, 18, 39, 47, 72, 82, 88, 94, 161, 174, 191	<code>\unexpanded</code>	80, 81, 84, 101, 103, 159, 172, 189
<code>\immediate</code>	20, 41, 156	<code>\usepackage</code>	184, 185, 186
<code>\input</code>	73, 148, 157	W	
L		<code>\write</code>	20, 41, 156
<code>\loop</code>	116, 127	X	
M		<code>\x</code>	8, 10, 12, 19, 23, 25, 40, 45, 52, 80, 82, 88, 159, 161, 172, 174, 189, 191
<code>\makeatletter</code>	171, 187	Y	
<code>\meaning</code>	81, 87, 93, 160, 173, 190	<code>\y</code>	81, 82, 87, 88, 93, 94, 160, 161, 173, 174, 190, 191
<code>\MessageBreak</code>	101, 102, 103		
N			
<code>\NeedsTeXFormat</code>	168, 181		
<code>\newif</code>	77		
<code>\normalunexpanded</code>	87, 90		