

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`.

Contents

1	Documentation	1
1.1	<code>\unexpanded</code>	1
1.2	<code>\expanded</code>	2
2	Implementation	2
2.1	Reload check and package identification	2
2.2	Catcodes	3
2.3	Load package infwarerr	4
2.4	<code>\unexpanded</code>	4
2.5	<code>\expanded</code>	4
3	Test	5
3.1	Catcode checks for loading	5
3.2	Macro tests	6
4	Installation	7
4.1	Download	7
4.2	Bundle installation	7
4.3	Package installation	8
4.4	Refresh file name databases	8
4.5	Some details for the interested	8
5	History	9
	[2007/05/06 v1.0]	9
	[2007/09/09 v1.1]	9
	[2007/12/12 v1.2]	9
6	Index	9

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 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.

1.2 `\expanded`

Probably `\expanded` will be added in pdfTeX 1.50.4 and L^AT_EX. Again ConT_EXt 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 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     \xdef#1{#4}%
49   }%
50 \else
51   \def\x#1#2[#3]{\endgroup
52     #2[#{#3}]%
53     \ifx#1\@undefined
54       \xdef#1{#3}%
55     \fi
56     \ifx#1\relax
57       \xdef#1{#3}%
58     \fi
59   }%
60 \fi
61 \expandafter\x\csname ver@etexcmds.sty\endcsname
62 \ProvidesPackage{etexcmds}%
63 [2007/12/12 v1.2 Prefix for e-TeX command names (HO)]

```

2.2 Catcodes

```

64 \begingroup
65 \catcode123 1 % {
66 \catcode125 2 % }
67 \def\x{\endgroup
68   \expandafter\edef\csname etexcmds@AtEnd\endcsname{%
69     \catcode35 \the\catcode35\relax
70     \catcode64 \the\catcode64\relax
71     \catcode123 \the\catcode123\relax
72     \catcode125 \the\catcode125\relax
73   }%
74 }%
75 \x
76 \catcode35 6 % #
77 \catcode64 11 % @
78 \catcode123 1 % {
79 \catcode125 2 % }
80 \def\TMP@EnsureCode#1#2{%
81   \edef\etexcmds@AtEnd{%
82     \etexcmds@AtEnd
83     \catcode#1 \the\catcode#1\relax
84   }%
85   \catcode#1 #2\relax
86 }
87 \TMP@EnsureCode{44}{12}% ,
88 \TMP@EnsureCode{45}{12}% -
89 \TMP@EnsureCode{46}{12}% .
90 \TMP@EnsureCode{47}{12}% /
91 \TMP@EnsureCode{61}{12}% =
92 \edef\etexcmds@AtEnd{%
93   \etexcmds@AtEnd
94   \escapechar\the\escapechar\relax
95 }

```

```
96 \escapechar=92 % backslash
```

2.3 Load package infwarerr

```
97 \begingroup\expandafter\expandafter\expandafter\endgroup
98 \expandafter\ifx\csname RequirePackage\endcsname\relax
99   \input infwarerr.sty\relax
100 \else
101   \RequirePackage{infwarerr}[2007/09/09]%
102 \fi
```

2.4 \unexpanded

\ifetex@unexpanded

```
103 \newif\ifetex@unexpanded
```

\etex@unexpanded

```
104 \begingroup
105 \edef\x{\string\unexpanded}%
106 \edef\y{\meaning\unexpanded}%
107 \ifx\x\y
108   \endgroup
109   \let\etex@unexpanded\unexpanded
110   \etex@unexpandedtrue
111 \else
112   \edef\y{\meaning\normalunexpanded}%
113   \ifx\x\y
114     \endgroup
115     \let\etex@unexpanded\normalunexpanded
116     \etex@unexpandedtrue
117   \else
118     \edef\y{\meaning\@@unexpanded}%
119     \ifx\y
120       \endgroup
121       \let\etex@unexpanded\@@unexpanded
122       \etex@unexpandedtrue
123     \else
124       \endgroup
125       \@PackageInfoNoLine{etexcmds}{%
126         Could not find \string\unexpanded.\MessageBreak
127         That can mean that you are not using e-TeX or\MessageBreak
128         that some package has redefined \string\unexpanded.\MessageBreak
129         In the latter case, load this package earlier%
130       }%
131       \etex@unexpandedfalse
132     \fi
133   \fi
134 \fi
```

2.5 \expanded

\ifetex@expanded

```
135 \newif\ifetex@expanded
```

\etex@expanded

```
136 \begingroup
137 \edef\x{\string\expanded}%
138 \edef\y{\meaning\expanded}%
139 \ifx\x\y
140   \endgroup
141   \let\etex@expanded\expanded
142   \etex@expandedtrue
```

```

143 \else
144   \edef\y{\meaning\normalexpanded}%
145   \ifx\x\y
146     \endgroup
147     \let\etex@expanded\normalexpanded
148     \etex@expandedtrue
149   \else
150     \edef\y{\meaning\@@expanded}%
151     \ifx\y
152       \endgroup
153       \let\etex@expanded\@@expanded
154       \etex@expandedtrue
155     \else
156       \endgroup
157       \@PackageInfoNoLine{etexcmds}{%
158         Could not find \string\expanded.\MessageBreak
159         That can mean that you are not using pdfTeX 1.50 or\MessageBreak
160         that some package has redefined \string\expanded.\MessageBreak
161         In the latter case, load this package earlier%
162       }%
163       \etex@expandedfalse
164     \fi
165   \fi
166 \fi

167 \etexcmds@AtEnd
168 \endpackage

```

3 Test

3.1 Catcode checks for loading

```

169 \test1
170 \catcode'\{=1 %
171 \catcode'\}=2 %
172 \catcode'\#=6 %
173 \catcode'\@=11 %
174 \expandafter\ifx\csname count@\endcsname\relax
175   \countdef\count@=255 %
176 \fi
177 \expandafter\ifx\csname @gobble\endcsname\relax
178   \long\def@gobble#1{%
179 \fi
180 \expandafter\ifx\csname @firstofone\endcsname\relax
181   \long\def@firstofone#1{#1}%
182 \fi
183 \expandafter\ifx\csname loop\endcsname\relax
184   \expandafter\@firstofone
185 \else
186   \expandafter\@gobble
187 \fi
188 {%
189   \def\loop#1\repeat{%
190     \def\body{#1}%
191     \iterate
192   }%
193   \def\iterate{%
194     \body
195     \let\next\iterate
196   \else
197     \let\next\relax
198   \fi

```

```

199     \next
200 }%
201 \let\repeat=\fi
202 }%
203 \def\RestoreCatcodes{}
204 \count@=0 %
205 \loop
206   \edef\RestoreCatcodes{%
207     \RestoreCatcodes
208     \catcode\the\count@=\the\catcode\count@\relax
209   }%
210 \ifnum\count@<255 %
211   \advance\count@ 1 %
212 \repeat
213
214 \def\RangeCatcodeInvalid#1#2{%
215   \count@=#1\relax
216   \loop
217     \catcode\count@=15 %
218   \ifnum\count@<#2\relax
219     \advance\count@ 1 %
220   \repeat
221 }
222 \expandafter\ifx\csname LoadCommand\endcsname\relax
223   \def\LoadCommand{\input etexcmds.sty\relax}%
224 \fi
225 \def\Test{%
226   \RangeCatcodeInvalid{0}{47}%
227   \RangeCatcodeInvalid{58}{64}%
228   \RangeCatcodeInvalid{91}{96}%
229   \RangeCatcodeInvalid{123}{255}%
230   \catcode'\@=12 %
231   \catcode'\=0 %
232   \catcode'\{=1 %
233   \catcode'\}=2 %
234   \catcode'\#=6 %
235   \catcode'\[=12 %
236   \catcode'\]=12 %
237   \catcode'\%=14 %
238   \catcode'\ =10 %
239   \catcode13=5 %
240   \LoadCommand
241   \RestoreCatcodes
242 }
243 \Test
244 \csname @@end\endcsname
245 \end
246 </test1>

```

3.2 Macro tests

```

247 <*test2>
248 \immediate\write16{etexcmds-test2.tex: test file for plainTeX}
249 \input etexcmds.sty\relax
250 \catcode'\@=11 %
251 \edef\x{\string\unexpanded}
252 \edef\y{\meaning\etex\unexpanded}
253 \ifx\x\y
254 \else
255   \@PackageError{etexcmds-test2}{Test failed}\@ehc
256 \fi
257 \end
258 </test2>

```

```

259 <*test3>
260 \NeedsTeXFormat{LaTeX2e}
261 \ProvidesFile{etexcmds-test3.tex}[2007/12/12 v1.2 Test file for LaTeX]
262 \RequirePackage{etexcmds}
263 \makeatletter
264 \edef\x{\string\unexpanded}
265 \edef\y{\meaning\etex\unexpanded}
266 \ifx\x\y
267 \else
268   \@PackageError{etexcmds-test3}{Test failed}\@ehc
269 \fi
270 \stop
271 </test3>

272 <*test4>
273 \NeedsTeXFormat{LaTeX2e}
274 \ProvidesFile{etexcmds-test4.tex}[2007/12/12 v1.2 Test file for LaTeX]
275 \documentclass{article}
276 \usepackage{m-pictex}
277 \usepackage{m-ch-de}
278 \usepackage{etexcmds}
279 \makeatletter
280 \ifetex\unexpanded
281   \edef\x{\string\unexpanded}%
282   \edef\y{\meaning\etex\unexpanded}%
283   \ifx\x\y
284     \else
285       \@PackageWarningNoLine{etexcmds-test4}{Test failed}%
286     \fi
287   \else
288     \@PackageWarningNoLine{etexcmds-test4}{%
289       Test failed because of ConTeXt%
290     }%
291   \fi
292 \stop
293 </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:install/macros/latex/contrib/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
```

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

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

[2007/05/06 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.

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		B	
<code>\#</code>	172, 234	<code>\body</code>	190, 194
<code>\%</code>	237	C	
<code>\@</code>	173, 230, 250	<code>\catcode</code>	3, 4, 5, 6, 7, 18, 19, 20, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 65, 66, 69, 70, 71, 72, 76, 77, 78, 79, 83, 85, 170, 171, 172, 173, 208, 217, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 250
<code>\@@expanded</code>	150, 153	<code>\count@</code>	175, 204, 208, 210, 211, 215, 217, 218, 219
<code>\@@unexpanded</code>	118, 121	<code>\countdef</code>	175
<code>\@PackageError</code>	255, 268	<code>\csname</code>	8, 21, 45, 61, 68, 98, 174, 177, 180, 183, 222, 244
<code>\@PackageInfoNoLine</code>	125, 157	D	
<code>\@PackageWarningNoLine</code>	285, 288	<code>\documentclass</code>	275
<code>\@ehc</code>	255, 268	E	
<code>\@firstofone</code>	181, 184	<code>\empty</code>	12
<code>\@gobble</code>	178, 186	<code>\end</code>	245, 257
<code>\@undefined</code>	53		
<code>\[</code>	235		
<code>\]</code>	231		
<code>\{</code>	170, 232		
<code>\}</code>	171, 233		
<code>\]</code>	236		
<code>_</code>	238		
A			
<code>\advance</code>	211, 219		

<code>\endcsname</code>	8, 21, 45, 61, 68, 98, 174, 177, 180, 183, 222, 244	<code>\normalexpanded</code>	144, 147
<code>\endinput</code>	30	<code>\normalunexpanded</code>	112, 115
<code>\escapechar</code>	94, 96	P	
<code>\etex@expanded</code>	136	<code>\PackageInfo</code>	26
<code>\etex@expandedfalse</code>	163	<code>\ProvidesFile</code>	261, 274
<code>\etex@expandedtrue</code>	142, 148, 154	<code>\ProvidesPackage</code>	62
<code>\etex@unexpanded</code>	1, 104, 252, 265, 282	R	
<code>\etex@unexpandedfalse</code>	131	<code>\RangeCatcodeInvalid</code>	
<code>\etex@unexpandedtrue</code> ..	110, 116, 122	214, 226, 227, 228, 229
<code>\etexcmds@AtEnd</code>	81, 82, 92, 93, 167	<code>\repeat</code>	189, 201, 212, 220
<code>\expanded</code>	137, 138, 141, 158, 160	<code>\RequirePackage</code>	101, 262
I		<code>\RestoreCatcodes</code> ..	203, 206, 207, 241
<code>\ifcase</code>	9	S	
<code>\ifetex@expanded</code>	135	<code>\stop</code>	270, 292
<code>\ifetex@unexpanded</code>	2, 103, 280	T	
<code>\ifnum</code>	210, 218	<code>\Test</code>	225, 243
<code>\ifx</code> ..	10, 12, 21, 45, 53, 56, 98, 107, 113, 119, 139, 145, 151, 174, 177, 180, 183, 222, 253, 266, 283	<code>\the</code>	69, 70, 71, 72, 83, 94, 208
<code>\immediate</code>	23, 47, 248	<code>\TMP@EnsureCode</code> ..	80, 87, 88, 89, 90, 91
<code>\input</code>	99, 223, 249	U	
<code>\iterate</code>	191, 193, 195	<code>\unexpanded</code>	105, 106, 109, 126, 128, 251, 264, 281
L		<code>\usepackage</code>	276, 277, 278
<code>\LoadCommand</code>	223, 240	W	
<code>\loop</code>	189, 205, 216	<code>\write</code>	23, 47, 248
M		X	
<code>\makeatletter</code>	263, 279	<code>\x</code> ..	8, 10, 12, 22, 26, 28, 46, 51, 61, 67, 75, 105, 107, 113, 137, 139, 145, 251, 253, 264, 266, 281, 283
<code>\meaning</code>	106, 112, 118, 138, 144, 150, 252, 265, 282	Y	
<code>\MessageBreak</code>		<code>\y</code>	106, 107, 112, 113, 118, 119, 138, 139, 144, 145, 150, 151, 252, 253, 265, 266, 282, 283
.....	126, 127, 128, 158, 159, 160		
N			
<code>\NeedsTeXFormat</code>	260, 273		
<code>\newif</code>	103, 135		
<code>\next</code>	195, 197, 199		