

# The letltxmacro package

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## Abstract

TEX's `\let` assignment does not work for L<sup>A</sup>T<sub>E</sub>X macros with optional arguments or for macros that are defined as robust macros by `\DeclareRobustCommand`. This package defines `\LetLtxMacro` that also takes care of the involved internal macros.

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# 1 Documentation

If someone wants to redefine a macro with using the old meaning, then one method is  $\text{\TeX}$ 's command `\let`:

```
\newcommand{\Macro}{\typeout{Test Macro}}
\let\SavedMacro=\Macro
\renewcommand{\Macro}{%
  \typeout{Begin}%
  \SavedMacro
  \typeout{End}%
}
```

However, this method fails, if `\Macro` is defined by `\DeclareRobustCommand` and/or has an optional argument. In both cases  $\text{\LaTeX}$  defines an additional internal macro that is forgotten in the simple `\let` assignment of the example above.

`\LetLtxMacro {<new macro>} {<old macro>}`

Macro `\LetLtxMacro` behaves similar to  $\text{\TeX}$ 's `\let` assignment, but it takes care of macros that are defined by `\DeclareRobustCommand` and/or have optional arguments. Example:

```
\DeclareRobustCommand{\Macro}[1][default]{...}
\LetLtxMacro{\SavedMacro}{\Macro}
```

Then macro `\SavedMacro` only uses internal macro names that are derived from `\SavedMacro`'s macro name. Macro `\Macro` can now be redefined without affecting `\SavedMacro`.

`\GlobalLetLtxMacro {<new macro>} {<old macro>}`

Like `\LetLtxMacro`, but the `<new macro>` is defined globally. Since version 2010/09/02 v1.4.

## 1.1 Supported macro definition commands

<code>\newcommand</code> , <code>\renewcommand</code>	latex/base
<code>\newenvironment</code> , <code>\renewenvironment</code>	latex/base
<code>\DeclareRobustCommand</code>	latex/base
<code>\newrobustcmd</code> , <code>\renewrobustcmd</code>	etoolbox
<code>\robustify</code>	etoolbox 2008/06/22 v1.6

# 2 Implementation

## 2.1 Show cases

### 2.1.1 letltxmacro-showcases.tex

```
1 <*showcases>
2 \NeedsTeXFormat{LaTeX2e}
3 \makeatletter
```

`\Line` The result is displayed by macro `\Line`. The percent symbol at line start allows easy grepping and inserting into the DTX file.

```

4 \newcommand*{\Line}[1]{%
5   \typeout{\@percentchar#1}%
6 }

7 \newcommand*{\ShowCmdName}[1]{%
8   \@ifundefined{#1}{}{%
9     \Line{%
10      \space\space(\expandafter\string\csname#1\endcsname) = %
11      (\expandafter\meaning\csname#1\endcsname)%
12    }%
13  }%
14 }
15 \newcommand*{\ShowCmds}[1]{%
16   \ShowCmdName{#1}%
17   \ShowCmdName{#1 }%
18   \ShowCmdName{\#1}%
19   \ShowCmdName{\#1 }%
20 }
21 \let\\ \@backslashchar

\ShowDef
22 \newcommand*{\ShowDef}[2]{%
23   \begingroup
24   \Line{}%
25   \newcommand*{\DefString}{#2}%
26   \@onelevel@sanitize\DefString
27   \Line{\DefString}%
28   #2%
29   \ShowCmds{#1}%
30   \endgroup
31 }

32 \typeout{}
33 \Line{* LaTeX definitions:}
34 \ShowDef{cmd}{%
35   \newcommand{\cmd}[2][default]{}%
36 }
37 \ShowDef{cmd}{%
38   \DeclareRobustCommand{\cmd}{}%
39 }
40 \ShowDef{cmd}{%
41   \DeclareRobustCommand{\cmd}[2][default]{}%
42 }
43 \typeout{}

The minimal version of package etoolbox is 2008/06/12 v1.6a because it fixes
\robustify.
44 \RequirePackage{etoolbox}[2008/06/12]%
45 \Line{}
46 \Line{* etoolbox's robust definitions:}
47 \ShowDef{cmd}{%
48   \newrobustcmd{\cmd}{}%
49 }
50 \ShowDef{cmd}{%
51   \newrobustcmd{\cmd}[2][default]{}%
52 }
53 \Line{}
54 \Line{* etoolbox's \string\robustify:}
55 \ShowDef{cmd}{%

```

```

56 \newcommand{\cmd}[2][default]{ } %
57 \robustify{\cmd}%
58 }
59 \ShowDef{\cmd}{%
60 \DeclareRobustCommand{\cmd}{ } %
61 \robustify{\cmd}%
62 }
63 \ShowDef{\cmd}{%
64 \DeclareRobustCommand{\cmd}[2][default]{ } %
65 \robustify{\cmd}%
66 }
67 \typeout{ }
68 \@@end
69 </showcases>

```

### 2.1.2 Result

\* LaTeX definitions:

```

\newcommand {\cmd }[2][default]{ }
  (\cmd) = (macro:->\@protected@testopt \cmd \cmd {default})
  (\cmd) = (\long macro:[#1]#2->)

\DeclareRobustCommand {\cmd }{ }
  (\cmd) = (macro:->\protect \cmd_ )
  (\cmd_) = (\long macro:->)

\DeclareRobustCommand {\cmd }[2][default]{ }
  (\cmd) = (macro:->\protect \cmd_ )
  (\cmd_) = (macro:->\@protected@testopt \cmd_ \cmd_ {default})
  (\cmd_) = (\long macro:[#1]#2->)

```

\* etoolbox's robust definitions:

```

\newrobustcmd {\cmd }{ }
  (\cmd) = (\protected\long macro:->)

\newrobustcmd {\cmd }[2][default]{ }
  (\cmd) = (\protected macro:->\@testopt \cmd {default})
  (\cmd) = (\long macro:[#1]#2->)

```

\* etoolbox's \robustify:

```

\newcommand {\cmd }[2][default]{ } \robustify {\cmd }
  (\cmd) = (\protected macro:->\@protected@testopt \cmd \cmd {default})
  (\cmd) = (\long macro:[#1]#2->)

\DeclareRobustCommand {\cmd }{ } \robustify {\cmd }
  (\cmd) = (\protected macro:->)

\DeclareRobustCommand {\cmd }[2][default]{ } \robustify {\cmd }
  (\cmd) = (\protected macro:->\@protected@testopt \cmd_ \cmd_ {default})
  (\cmd_) = (macro:->\@protected@testopt \cmd_ \cmd_ {default})
  (\cmd_) = (\long macro:[#1]#2->)

```

## 2.2 Package

```

70 < *package>

```

### 2.2.1 Catcodes and identification

```

71 \begingroup\catcode61\catcode48\catcode32=10\relax%
72 \catcode13=5 % ^^M
73 \endlinechar=13 %
74 \catcode123=1 % {
75 \catcode125=2 % }
76 \catcode64=11 % @
77 \def\x{\endgroup
78   \expandafter\edef\csname llm@AtEnd\endcsname{%
79     \endlinechar=\the\endlinechar\relax
80     \catcode13=\the\catcode13\relax
81     \catcode32=\the\catcode32\relax
82     \catcode35=\the\catcode35\relax
83     \catcode61=\the\catcode61\relax
84     \catcode64=\the\catcode64\relax
85     \catcode123=\the\catcode123\relax
86     \catcode125=\the\catcode125\relax
87   }%
88 }%
89 \x\catcode61\catcode48\catcode32=10\relax%
90 \catcode13=5 % ^^M
91 \endlinechar=13 %
92 \catcode35=6 % #
93 \catcode64=11 % @
94 \catcode123=1 % {
95 \catcode125=2 % }
96 \def\TMP@EnsureCode#1#2{%
97   \edef\llm@AtEnd{%
98     \llm@AtEnd
99     \catcode#1=\the\catcode#1\relax
100   }%
101   \catcode#1=#2\relax
102 }
103 \TMP@EnsureCode{40}{12}% (
104 \TMP@EnsureCode{41}{12}% )
105 \TMP@EnsureCode{42}{12}% *
106 \TMP@EnsureCode{45}{12}% -
107 \TMP@EnsureCode{46}{12}% .
108 \TMP@EnsureCode{47}{12}% /
109 \TMP@EnsureCode{58}{12}% :
110 \TMP@EnsureCode{62}{12}% >
111 \TMP@EnsureCode{91}{12}% [
112 \TMP@EnsureCode{93}{12}% ]
113 \edef\llm@AtEnd{%
114   \llm@AtEnd
115   \escapechar\the\escapechar\relax
116   \noexpand\endinput
117 }
118 \escapechar=92 % '\

Package identification.
119 \NeedsTeXFormat{LaTeX2e}
120 \ProvidesPackage{letltxmacro}%
121 [2010/09/02 v1.4 Let assignment for LaTeX macros (HO)]

```

### 2.2.2 Main macros

\LetLtxMacro

```

122 \newcommand*{\LetLtxMacro}{%

```

```

123 \llm@ModeLetLtxMacro{%
124 }

\GlobalLetLtxMacro

125 \newcommand*{\GlobalLetLtxMacro}{%
126 \llm@ModeLetLtxMacro\global
127 }

\llm@ModeLetLtxMacro

128 \newcommand*{\llm@ModeLetLtxMacro}[3]{%
129 \edef\llm@escapechar{\the\escapechar}%
130 \escapechar=-1 %
131 \edef\reserved@a{%
132 \noexpand\protect
133 \expandafter\noexpand
134 \csname\string#3 \endcsname
135 }%
136 \ifx\reserved@a#3\relax
137 #1\edef#2{%
138 \noexpand\protect
139 \expandafter\noexpand
140 \csname\string#2 \endcsname
141 }%
142 #1\expandafter\let
143 \csname\string#2 \expandafter\endcsname
144 \csname\string#3 \endcsname
145 \expandafter\llm@LetLtxMacro
146 \csname\string#2 \expandafter\endcsname
147 \csname\string#3 \endcsname{#1}%
148 \else
149 \llm@LetLtxMacro{#2}{#3}{#1}%
150 \fi
151 \escapechar=\llm@escapechar\relax
152 }

\llm@LetLtxMacro

153 \def\llm@LetLtxMacro#1#2#3{%
154 \escapechar=92 %
155 \expandafter\llm@CheckParams\meaning#2:->\@nil{%
156 \begingroup
157 \def\@protected@testopt{%
158 \expandafter\@testopt\@gobble
159 }%
160 \def\@testopt##1##2{%
161 \toks@={##2}%
162 }%
163 \let\llm@testopt\@empty
164 \edef\x{%
165 \noexpand\@protected@testopt
166 \noexpand#2%
167 \expandafter\noexpand\csname\string#2\endcsname
168 }%
169 \expandafter\expandafter\expandafter\def
170 \expandafter\expandafter\expandafter\y
171 \expandafter\expandafter\expandafter{%
172 \expandafter\llm@CarThree#2{}{}\llm@nil
173 }%
174 \ifx\x\y

```

```

175      #2%
176      \def\llm@testopt{%
177        \noexpand\@protected@testopt
178        \noexpand#1%
179      }%
180    \else
181      \edef\x{%
182        \noexpand\@testopt
183        \expandafter\noexpand
184        \csname\string#2\endcsname
185      }%
186      \expandafter\expandafter\expandafter\def
187      \expandafter\expandafter\expandafter\y
188      \expandafter\expandafter\expandafter{%
189        \expandafter\llm@CarTwo#2{}}\llm@nil
190      }%
191      \ifx\x\y
192        #2%
193        \def\llm@testopt{%
194          \noexpand\@testopt
195        }%
196      \fi
197    \fi
198    \ifx\llm@testopt\@empty
199    \else
200      \llm@protected\xdef\llm@GlobalTemp{%
201        \llm@testopt
202        \expandafter\noexpand
203        \csname\string#1\endcsname
204        {\the\toks@}%
205      }%
206    \fi
207    \expandafter\endgroup\ifx\llm@testopt\@empty
208      #3\let#1=#2\relax
209    \else
210      #3\let#1=\llm@GlobalTemp
211      #3\expandafter\let
212        \csname\string#1\expandafter\endcsname
213        \csname\string#2\endcsname
214    \fi
215  }{%
216    #3\let#1=#2\relax
217  }%
218 }

\llm@CheckParams
219 \def\llm@CheckParams#1:->#2\@nil{%
220   \begingroup
221     \def\x{#1}%
222     \ifx\x\llm@macro
223       \endgroup
224     \def\llm@protected{}%
225     \expandafter\@firstoftwo
226   \else
227     \ifx\x\llm@protectedmacro
228       \endgroup
229     \def\llm@protected{\protected}%
230     \expandafter\expandafter\expandafter\@firstoftwo

```

```

231     \else
232     \endgroup
233     \expandafter\expandafter\expandafter\@secondoftwo
234     \fi
235     \fi
236 }

\llm@macro
237 \def\llm@macro{macro}
238 \@onelevel@sanitize\llm@macro

\llm@protectedmacro
239 \def\llm@protectedmacro{\protected macro}
240 \@onelevel@sanitize\llm@protectedmacro

\llm@CarThree
241 \def\llm@CarThree#1#2#3#4\llm@nil{#1#2#3}%

\llm@CarTwo
242 \def\llm@CarTwo#1#2#3\llm@nil{#1#2}%

243 \llm@AtEnd%
244 </package>

```

### 3 Test

#### 3.1 Catcode checks for loading

```

245 (*test1)

246 \NeedsTeXFormat{LaTeX2e}
247 \documentclass{minimal}
248 \makeatletter
249 \def\RestoreCatcodes{}
250 \count@=0 %
251 \loop
252   \edef\RestoreCatcodes{%
253     \RestoreCatcodes
254     \catcode\the\count@=\the\catcode\count@\relax
255   }%
256 \ifnum\count@<255 %
257   \advance\count@\@ne
258 \repeat
259
260 \def\RangeCatcodeInvalid#1#2{%
261   \count@=#1\relax
262   \loop
263     \catcode\count@=15 %
264     \ifnum\count@<#2\relax
265       \advance\count@\@ne
266     \repeat
267 }
268 \def\Test{%
269   \RangeCatcodeInvalid{0}{47}%
270   \RangeCatcodeInvalid{58}{64}%
271   \RangeCatcodeInvalid{91}{96}%
272   \RangeCatcodeInvalid{123}{127}%
273   \catcode'\@=12 %

```



```

274 \catcode'\=0 %
275 \catcode'\{=1 %
276 \catcode'\}=2 %
277 \catcode'\#=6 %
278 \catcode'\[=12 %
279 \catcode'\]=12 %
280 \catcode'\%=14 %
281 \catcode'\_ =10 %
282 \catcode13=5 %
283 \RequirePackage{letltxmacro}[2010/09/02]\relax
284 \RestoreCatcodes
285 }
286 \Test
287 \csname @@end\endcsname
288 \end
289 </test1>

```

### 3.2 Package tests

```

290 <*test2>
291 \NeedsTeXFormat{LaTeX2e}
292 \nofiles
293 \documentclass{minimal}
294
295 \usepackage{letltxmacro}[2010/09/02]
296
297 \usepackage{qstest}
298 \IncludeTests{*}
299 \LogTests{log}{*}{*}
300
301 \makeatletter
302
303 \def\TestDef#1{%
304   \begingroup
305     \@makeother\%
306     \@makeother\_ %
307     \expandafter\@TestDef\csname #1\endcsname
308 }
309 \def\@TestDef#1#2{%
310   \edef\a{\expandafter\strip@prefix\meaning#1}%
311   \edef\b{\detokenize{#2}}%
312   \ifx\a\b
313     \else
314       \typeout{1 [\a]}%
315       \typeout{2 [\b]}%
316     \fi
317   \endgroup
318   \Expect*\expandafter\strip@prefix\meaning#1*{\detokenize{#2}}%
319 }
320 \def\TestEquals#1#2{%
321   \Expect*{%
322     \expandafter\ifx\csname#1\expandafter\endcsname
323       \csname#2\endcsname
324     equals%
325     \else
326     wrong%
327     \fi
328   }{equals}%

```

```

329 }
330 \def\SaveA{%
331   \let\SavedA\TestA
332   \expandafter\let\csname\string\SavedA\expandafter\endcsname
333     \csname\string\TestA\endcsname
334   \expandafter\let\csname SavedA \expandafter\endcsname
335     \csname TestA \endcsname
336 }
337 \def\CheckA{%
338   \TestEquals{SavedA}{TestA}%
339   \TestEquals{\string\SavedA}{\string\TestA}%
340   \TestEquals{SavedA }{TestA }%
341 }
342
343 \begin{qstest}{robust}{robust}
344   \begingroup
345     \DeclareRobustCommand*\TestA{Test}%
346     \SaveA
347     \TestDef{TestA}{\protect \TestA }%
348     \CheckA
349     \DeclareRobustCommand\TestA{Test}%
350     \SaveA
351     \TestDef{TestA}{\protect \TestA }%
352     \LetLtxMacro\TestB\TestA
353     \TestDef{TestB}{\protect \TestB }%
354     \TestEquals{TestB }{TestA }%
355     \CheckA
356     \GlobalLetLtxMacro\TestC\TestA
357     \CheckA
358   \endgroup
359   \TestDef{TestC}{\protect \TestC }%
360   \DeclareRobustCommand\TestA{Test}%
361   \TestEquals{TestC }{TestA }%
362 \end{qstest}
363
364 \begin{qstest}{default}{default}
365   \begingroup
366     \newcommand{\TestA}[1][\relax default \empty]{TestA #1}%
367     \SaveA
368     \TestDef
369     {TestA}{\@protected@testopt \TestA \TestA {\relax default \empty }}%
370     \LetLtxMacro\TestB\TestA
371     \TestDef
372     {TestB}{\@protected@testopt \TestB \TestB {\relax default \empty }}%
373     \CheckA
374     \TestEquals{\string\TestB}{\string\TestA}%
375     \GlobalLetLtxMacro\TestC\TestA
376     \CheckA
377   \endgroup
378   \TestDef
379   {TestC}{\@protected@testopt \TestC \TestC {\relax default \empty }}%
380   \newcommand{\TestA}[1][\relax default \empty]{TestA #1}%
381   \TestEquals{\string\TestC}{\string\TestA}%
382 \end{qstest}
383
384 \begin{qstest}{robustdefault}{robustdefault}
385   \begingroup
386     \DeclareRobustCommand\TestA[1][\default]{TestA}%

```

```

387 \SaveA
388 \LetLtxMacro\TestB\TestA
389 \TestDef{TestB}{\protect \TestB }%
390 \TestDef{TestB }{\@protected@testopt \TestB \TestB {\default }}%
391 \CheckA
392 \GlobalLetLtxMacro\TestC\TestA
393 \CheckA
394 \endgroup
395 \TestDef{TestC}{\protect \TestC }%
396 \TestDef{TestC }{\@protected@testopt \TestC \TestC {\default }}%
397 \end{qstest}
398
399 \begin{qstest}{plain}{plain}
400 \LetLtxMacro\NewRelax\relax
401 \Expect*{\meaning\relax}*{\string\relax}%
402 \Expect*{\meaning\NewRelax}*{\string\relax}%
403 \LetLtxMacro\NewHbox\hbox
404 \Expect*{\meaning\hbox}*{\string\hbox}%
405 \Expect*{\meaning\NewHbox}*{\string\hbox}%
406 \LetLtxMacro\NewEmpty\empty
407 \Expect*{\meaning\empty}{macro:->}%
408 \Expect*{\meaning\NewEmpty}{macro:->}%
409 \def\TestA{\iffalse}%
410 \LetLtxMacro\TestB\TestA
411 \TestDef{TestB}{\iffalse }%
412 \TestEquals{TestA}{TestB}%
413 \end{qstest}

414 \usepackage{etoolbox}[2008/06/22]
415
416 \begin{qstest}{oldnewrobustcmd}{oldnewrobustcmd}
417 \begingroup
418 \protected\edef\TestA{%
419 \noexpand\@protected@testopt
420 \noexpand\TestA
421 \expandafter\noexpand\csname\string\TestA\endcsname
422 {\noexpand\default}}%
423 }%
424 \expandafter\protected\expandafter
425 \def\csname\string\TestA\endcsname{TestA}%
426 \SaveA
427 \LetLtxMacro\TestB\TestA
428 \TestDef{TestB}{\@protected@testopt \TestB \TestB {\default }}%
429 \protected\edef\TestC{%
430 \noexpand\@protected@testopt
431 \noexpand\TestB
432 \expandafter\noexpand\csname\string\TestB\endcsname
433 {\noexpand\default}}%
434 }%
435 \TestEquals{TestB}{TestC}%
436 \CheckA
437 \GlobalLetLtxMacro\TestD\TestA
438 \CheckA
439 \endgroup
440 \TestDef{TestD}{\@protected@testopt \TestD \TestD {\default }}%
441 \protected\edef\TestC{%
442 \noexpand\@protected@testopt
443 \noexpand\TestD
444 \expandafter\noexpand\csname\string\TestD\endcsname

```

```

445     {\noexpand\default}%
446   }%
447   \TestEquals{TestD}{TestC}%
448 \end{qstest}
449
450 \begin{qstest}{newrobustcmd}{newrobustcmd}
451   \begingroup
452     \newrobustcmd{\TestA}[1][\default]{TestA}%
453     \SaveA
454     \LetLtxMacro\TestB\TestA
455     \TestDef{TestB}{\@testopt \TestB {\default }}%
456     \protected\edef\TestC{%
457       \noexpand\@testopt
458       \expandafter\noexpand\csname\string\TestB\endcsname
459       {\noexpand\default}%
460     }%
461     \TestEquals{TestB}{TestC}%
462     \CheckA
463     \GlobalLetLtxMacro\TestD\TestA
464     \CheckA
465   \endgroup
466   \TestDef{TestD}{\@testopt \TestD {\default }}%
467   \protected\edef\TestC{%
468     \noexpand\@testopt
469     \expandafter\noexpand\csname\string\TestD\endcsname
470     {\noexpand\default}%
471   }%
472   \TestEquals{TestD}{TestC}%
473 \end{qstest}
474
475 \begin{qstest}{robustifyopt}{robustifyopt}
476   \newcommand{\TestA}[2][\default]{}%
477   \TestDef{TestA}{\@protected@testopt \TestA \TestA {\default }}%
478   \robustify\TestA
479   \TestDef{TestA}{\@protected@testopt \TestA \TestA {\default }}%
480   \protected\edef\TestC{%
481     \noexpand\@protected@testopt
482     \noexpand\TestA
483     \expandafter\noexpand\csname\string\TestA\endcsname
484     {\noexpand\default}%
485   }%
486   \TestEquals{TestA}{TestC}%
487   \SaveA
488   \LetLtxMacro\TestB\TestA
489   \TestDef{TestB}{\@protected@testopt \TestB \TestB {\default }}%
490   \protected\edef\TestC{%
491     \noexpand\@protected@testopt
492     \noexpand\TestB
493     \expandafter\noexpand\csname\string\TestB\endcsname
494     {\noexpand\default}%
495   }%
496   \TestEquals{TestB}{TestC}%
497   \CheckA
498 \end{qstest}
499
500 \begin{qstest}{robustifydeclare}{robustifydeclare}
501   \DeclareRobustCommand\TestA{\iffalse}%
502   \robustify\TestA

```

```

503 \SaveA
504 \LetLtxMacro\TestB\TestA
505 \TestDef{TestB}{\iffalse }%
506 % before etoolbox 2008/06/22: \protected\long\def
507 % since etoolbox 2008/06/22: \protected\def
508 \protected\def\TestC{\iffalse}%
509 \TestEquals{TestB}{TestC}%
510 \CheckA
511 \end{qstest}
512
513 \begin{qstest}{\robustifydeclarelong}{\robustifydeclarelong}
514 \DeclareRobustCommand\TestA[1]{\iffalse}%
515 \robustify\TestA
516 \SaveA
517 \LetLtxMacro\TestB\TestA
518 \TestDef{TestB}{\iffalse }%
519 % before etoolbox 2008/06/22: \protected\long\def
520 % since etoolbox 2008/06/22: \protected\def
521 \protected\long\def\TestC#1{\iffalse}%
522 \TestEquals{TestB}{TestC}%
523 \CheckA
524 \end{qstest}
525 \csname @@end\endcsname
526 \</test2>

```

## 4 Installation

### 4.1 Download

**Package.** This package is available on CTAN<sup>1</sup>:

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

[CTAN:macros/latex/contrib/oberdiek/letltxmacro.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<sub>E</sub>X 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/
```

---

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

### 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 letltxmacro.dtx
```

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

```
letltxmacro.sty      → tex/latex/oberdiek/letltxmacro.sty
letltxmacro.pdf      → doc/latex/oberdiek/letltxmacro.pdf
letltxmacro-showcases.tex → doc/latex/oberdiek/letltxmacro-showcases.tex
test/letltxmacro-test1.tex → doc/latex/oberdiek/test/letltxmacro-test1.tex
test/letltxmacro-test2.tex → doc/latex/oberdiek/test/letltxmacro-test2.tex
letltxmacro.dtx      → source/latex/oberdiek/letltxmacro.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 (`teTEX`, `mikTEX`, ...) relies on file name databases, you must refresh these. For example, `teTEX` 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 letltxmacro.pdf unpack_files output .
```

**Unpacking with L<sup>A</sup>T<sub>E</sub>X.** The `.dtx` chooses its action depending on the format:

**plain T<sub>E</sub>X:** Run `docstrip` and extract the files.

**L<sup>A</sup>T<sub>E</sub>X:** Generate the documentation.

If you insist on using L<sup>A</sup>T<sub>E</sub>X for `docstrip` (really, `docstrip` does not need L<sup>A</sup>T<sub>E</sub>X), then inform the autodetect routine about your intention:

```
latex \let\install=y\input{letltxmacro.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 letltxmacro.dtx
makeindex -s gind.ist letltxmacro.idx
pdflatex letltxmacro.dtx
makeindex -s gind.ist letltxmacro.idx
pdflatex letltxmacro.dtx
```

## 5 Catalogue

The following XML file can be used as source for the **TeX Catalogue**. The elements `caption` and `description` are imported from the original XML file from the Catalogue. The name of the XML file in the Catalogue is `letltxmacro.xml`.

```
527 (*catalogue)
528 <?xml version='1.0' encoding='us-ascii'?>
529 <!DOCTYPE entry SYSTEM 'catalogue.dtd'>
530 <entry datestamp='$Date$' modifier='$Author$' id='letltxmacro'>
531   <name>letltxmacro</name>
532   <caption>Let assignment for LaTeX macros.</caption>
533   <authorref id='auth:oberdiek'>/>
534   <copyright owner='Heiko Oberdiek' year='2008,2010'>/>
535   <license type='lppl1.3'>/>
536   <version number='1.4'>/>
537   <description>
538     TeX&#x2019;s <tt>\let</tt> assignment does not work for LaTeX macros
539     with optional arguments or for macros that are defined
540     as robust macros by <tt>\DeclareRobustCommand</tt>. This package
541     defines <tt>\LetLtxMacro</tt> that also takes care of the involved
542     internal macros.
543   <p/>
544   The package is part of the <xref refid='oberdiek'>oberdiek</xref>
545   bundle.
546 </description>
547 <documentation details='Package documentation'
548   href='ctan:/macros/latex/contrib/oberdiek/letltxmacro.pdf'>/>
549 <ctan file='true' path='/macros/latex/contrib/oberdiek/letltxmacro.dtx'>/>
550 <miktex location='oberdiek'>/>
551 <texlive location='oberdiek'>/>
552 <install path='/macros/latex/contrib/oberdiek/oberdiek.tds.zip'>/>
553 </entry>
554 </catalogue>
```

## 6 History

[2008/06/09 v1.0]

- First version.

[2008/06/12 v1.1]

- Support for etoolbox's `\newrobustcmd` added.

[2008/06/13 v1.2]

- Support for etoolbox's `\robustify` added.

[2008/06/24 v1.3]

- Test file adapted for etoolbox 2008/06/22 v1.6.

[2010/09/02 v1.4]

- `\GlobalLetLtxMacro` added.

## 7 Index

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