

The letltxmacro package

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Abstract

TeX's `\let` assignment does not work for L^AT_EX 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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*Please report any issues at <https://github.com/ho-tex/oberdiek/issues>

1 Documentation

If someone wants to redefine a macro with using the old meaning, then one method is \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 \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 \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 2016/05/16 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 [2016/05/16 v1.5 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}[2016/05/16]\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}[2016/05/16]
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 \end{test2}

```

4 Installation

4.1 Download

Package. This package is available on CTAN¹:

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

[CTAN:macros/latex/contrib/oberdiek/letltxmacro.pdf](http://ctan.org/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](http://ctan.org/install/macros/latex/contrib/oberdiek.tds.zip)

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

¹<http://ctan.org/pkg/letltxmacro>

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 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 T_EX distribution (teT_EX, miK_T_EX, ...) relies on file name databases, you must refresh these. For example, teT_EX users run texhash or mktexlsr.

4.5 Some details for the interested

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{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 pdfL^AT_EX:

```
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 [T_EX 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='1.5'/>
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.

[2016/05/16 v1.5]

- Documentation updates.

7 Index

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