

# The `tabularht` package

Heiko Oberdiek  
<oberdiek@uni-freiburg.de>

2007/04/11 v2.5

## Abstract

This package defines some environments that adds a height specification to `tabular` and `array`.

## Contents

<b>1</b>	<b>Usage</b>	<b>1</b>
1.1	Option <code>vlines</code>	2
1.2	Limitations	3
1.3	Compatibility	3
1.4	Examples	3
1.4.1	Example 1	3
1.4.2	Example 2	3
<b>2</b>	<b>Implementation</b>	<b>4</b>
2.1	Environments	4
2.2	Options	6
2.3	Option <code>vlines</code> , driver independent stuff	7
2.4	Driver <code>pdftex</code>	7
2.5	DVI drivers	11
<b>3</b>	<b>Installation</b>	<b>13</b>
3.1	Download	13
3.2	Bundle installation	13
3.3	Package installation	14
3.4	Refresh file name databases	14
3.5	Some details for the interested	14
<b>4</b>	<b>History</b>	<b>15</b>
	[2005/09/22 v1.0]	15
	[2005/10/16 v2.0]	15
	[2005/10/18 v2.1]	15
	[2006/02/20 v2.2]	15
	[2006/12/22 v2.3]	15
	[2007/03/21 v2.4]	15
	[2007/04/11 v2.5]	15
<b>5</b>	<b>Index</b>	<b>15</b>

## 1 Usage

`\usepackage{tabularht}`

The package provides the following environments that extend the `tabular`/`array` environment by a height specification as first argument:

- `tabularht`, `tabularht*`
- `arrayht`
- `tabularhtx` (if package `tabularx` is loaded)

The height argument allows a length specification, package `calc` is supported if used. This means, the tabular will have the specified height. You can also use the prefixes `to=` and `spread=`. `to=` is the default, `spread=` means, the natural height of the tabular box is changed by the length after `spread=`.

Examples:

```
\begin{tabularht}{1in}           → height is 1in
\begin{tabularht}{to=1in}        → height is 1in
\begin{tabularht}{spread=0pt}    → natural height, same as \begin{tabular}
\begin{tabularht}{spread=1in}    → natural height increased by 1in
```

Hint: See also package `tabularkv`, it provides an interface, where most parameters for the environments can be given by key-value pairs.

`\interrowspace{...}`

Adds space between table rows. It is essentially the same as `\noalign{\vspace{...}}`.

`\interrowfill`

Short for `\interrowspace{\fill}`

`\interrowstart... \interrowstop`

Marker commands, useful for option `vlines`.

## 1.1 Option `vlines`

Warning: This stuff is experimental.

Vertical lines are interrupted, if space is inserted in `\noalign`, `\interrowspace`, `\addlinespace` (`booktabs`), between double `\hlines`. This option tries to detect and add the vertical lines. The lines in a tabular with `tabularht` support (environments of this package) are numbered from left to right. The gap that is controlled by `\interrowspace` or inbetween `\interrowstart` and `\interrowstop` is then filled with the detected vertical lines.

If only a limited selection of the lines should be drawn, the commands know an optional argument with a list of line numbers, e.g.

```
\begin{tabularht}{50mm}{|1|1|}
  Hello & World\\
  \interrowfill[1,3]
  Foo & Bar
\end{tabularht}
```

There are three lines, but the middle line is not drawn in the gap between the first and second row. Zero can be used to suppress all lines:

```
\interrowspace[0]{10mm}
```

The syntax of the commands with the optional argument with the line number list *<list>*. *<list>* is a comma separated list of numbers, *<height>* means the height specification described above with the optional prefixes `to=` or `spread=`.

```

\interrow space [⟨list⟩] {⟨height⟩}
\interrow fill [⟨list⟩]
\interrow start [⟨list⟩] ... \interrow stop

```

Option `vlines` is driver dependent and uses  $\varepsilon$ -TeX features.

**pdftex:** pdfTeX in PDF mode. Here the positions of the lines are written with the help of the `\pdfsavepos` feature into the `.aux` file(s). Therefore you need two LaTeX runs to get the lines.

**dvips:** Here, PostScript's `currentpoint` is used to get the line positions. The lines are then drawn at the end of the page. Thus one LaTeX/dvips run is sufficient for this option.

**Other drivers:**

**PostScript drivers:** probably possible, an end of page hook would be nice.

**VT<sub>EX</sub>:** with GeX (PostScript interpreter) probably possible.

**dvipdfm:** no idea. The big problem is, how to get the current position?

## 1.2 Limitations

- Vertical lines are interrupted by `\noalign{\vfill}`.

## 1.3 Compatibility

- `array`, `delarray`, `tabularx` are supported.
- There can be problems with packages that redefine `\@array` (or `\@@array`, `\@tabarray`) and `\@arrayrule` (for option `vlines`).
- `colortbl`: it should at least work, but there isn't support for filling the gaps with color, neither the rules nor the backgrounds.

## 1.4 Examples

### 1.4.1 Example 1

```

1 ⟨*example1⟩
2 \documentclass{article}
3 \usepackage{tabularht}
4
5 \begin{document}
6 \fbox{%
7   \begin{tabularht*}{1in}{4in}{@{}l@{\extracolsep{\fill}}r@{}}%
8     upper left corner & upper right corner\\%
9     \noalign{\vfill}%
10    \multicolumn{2}{@{}c@{}}{bounding box}\\%
11    \noalign{\vfill}%
12    lower left corner & lower right corner\\%
13  \end{tabularht*}%
14 }
15 \end{document}
16 ⟨/example1⟩

```

### 1.4.2 Example 2

```

17 ⟨*example2⟩
18 \documentclass{article}
19 \usepackage{booktabs}
20 \usepackage[dvips,vlines]{tabularht}
21
22 \begin{document}

```

```

23
24 \begin{tabularht}{spread=0pt}{|l|l|}
25   \hline
26   First&Line\\%
27   \hline
28 \interrowstart
29   \addlinespace[10mm]%
30 \interrowstop
31   \hline
32   Second&Line\\%
33 \interrowstart
34   \hline
35   \hline
36 \interrowstop
37   Third&Line\\%
38   \hline
39 \interrowspace{10mm}
40   \hline
41   Fourth&Line\\%
42   \hline
43 \end{tabularht}
44
45 \end{document}
46 \end{example2}

```

## 2 Implementation

```

47 (*package)

```

Package identification.

```

48 \NeedsTeXFormat{LaTeX2e}
49 \ProvidesPackage{tabularht}%
50   [2007/04/11 v2.5 Tabular with height specification (H0)]

```

### 2.1 Environments

```

51 \let\@toarrayheight\@empty
52 \let\tabH@array@init\@empty
53
54 \toks@={%
55   \begingroup
56     \long\def\x#1\center\fi\fi\bgroup#2\@sharp#3#4\@nil{%
57       \endgroup
58       \gdef\@array[##1]##2{%
59         \tabH@array@init
60         #1%
61         \center\fi\fi
62         \@toarrayheight
63         \bgroup
64         \let\@toarrayheight\@empty
65         #2\@sharp###3#4%
66       }%
67     }%
68 \expandafter\x\@array[#1]{#2}\@nil % hash-ok
69 }
70 \edef\tabH@patch@array{\the\toks@}
71 \def\tabH@patch@array{%
72   \ifx\@array\@array
73     \def\reserved@a{\let\@array\@array}%
74   \else
75     \let\reserved@a\relax
76   \fi
77   \tabH@patch@array
78   \reserved@a

```

```

79 }
80 \tabH@patch@@array
81
82 \@ifpackageloaded{array}{-}{%
83   \AtBeginDocument{%
84     \@ifpackageloaded{array}{-}{%
85       \tabH@patch@@array
86     }-}%
87   }%
88 }
89
90 \def\tabH@setheight#1{%
91   \tabH@@setheight#1==\@nil
92 }
93 \def\tabH@@setheight#1=#2=#3\@nil{%
94   \ifx\#2#3\%
95     \setlength{\dimen@}{#1}%
96     \edef\@toarrayheight{to\the\dimen@}%
97   \else
98     \edef\tabH@temp{\zap@space#1 \@empty}%
99     \ifx\tabH@temp\tabH@to
100    \else
101      \ifx\tabH@temp\tabH@spread
102      \else
103        \PackageError{tabularht}{%
104          Unknown height specifier %
105          '\expandafter\strip@prefix\meaning\tabH@temp'%
106        }{%
107          The height dimension for tabular height can be prefixed%
108          \MessageBreak
109          with 'to=' or 'spread=', default is 'to='.%
110        }%
111        \let\tabH@temp\tabH@to
112      \fi
113    \fi
114    \setlength{\dimen@}{#2}%
115    \edef\@toarrayheight{\tabH@temp\the\dimen@}%
116  \fi
117 }
118 \def\tabH@to{to}
119 \def\tabH@spread{spread}

```

First argument is the height of the table, then the original arguments for tabular follow.

```

120 \newenvironment{tabularht}[1]{%
121   \tabH@setheight{#1}%
122   \tabular
123 }{%
124   \endtabular
125 }
126
127 \newenvironment{tabularht*}[1]{%
128   \tabH@setheight{#1}%
129   \@nameuse{tabular*}%
130 }{%
131   \@nameuse{endtabular*}%
132 }
133
134 \newenvironment{tabularhtx}[1]{%
135   \tabH@setheight{#1}%
136   \tabularx
137 }{%
138   \endtabularx

```

```

139 }
140
141 \newenvironment{arrayht}[1]{%
142   \tabH@setheight{#1}%
143   \array
144 }{%
145   \endarray
146 }
147
148 \def\interrowSPACE{%
149   \noalign\bgroup
150     \tabH@interrowSPACE
151 }
152 \newcommand*\tabH@interrowSPACE[2][]{%
153   \tabH@vSPACE{#1}{#2}%
154   \egroup
155 }
156 \def\interrowFILL{%
157   \noalign\bgroup
158     \tabH@interrowFILL
159 }
160 \newcommand*\tabH@interrowFILL[1][]{%
161   \tabH@vSPACE{#1}{\fill}%
162   \egroup
163 }
164 \def\tabH@vSPACE#1#2{%
165   \tabH@vSPACE@start{#1}%
166   \vSPACE{#2}%
167   \tabH@vSPACE@stop
168 }
169 \let\tabH@vSPACE@start\@gobble
170 \let\tabH@vSPACE@stop\@empty
171
172 \newcommand*\interrowSTART{%
173   \noalign\bgroup
174     \tabH@interrowSTART
175 }
176 \newcommand*\tabH@interrowSTART[1][]{%
177   \tabH@vSPACE@start{#1}%
178   \egroup
179 }
180 \newcommand*\interrowSTOP{%
181   \noalign{\tabH@vSPACE@stop}%
182 }

```

## 2.2 Options

```

183 \providecommand*\tabH@driver{}
184
185 \DeclareOption{vlines}{%
186   \let\tabH@temp\relax
187 }
188 \DeclareOption{pdftex}{}
189 \DeclareOption{dvips}{%
190   \def\tabH@driver{dvips}%
191 }
192 \ProcessOptions*\relax
193
194 \ifx\tabH@temp\relax
195 \else
196   \expandafter\endinput
197 \fi
198

```

```

199 \begingroup
200   \@ifundefined{eTeXversion}{%
201     \PackageError{tabularht}{%
202       Option 'vlines' requires eTeX%
203     }{%
204       Use of eTeX is recommended for LaTeX, see ltnews16.%
205     }%
206   \endgroup
207   \endinput
208 }{}%
209 \endgroup

```

## 2.3 Option vlines, driver independent stuff

```

210 \begingroup
211   \let\@addtoreset\@gobbletwo
212   \newcounter{tabH@unique}%
213 \endgroup
214 \let\tabH@currenttab\@empty
215
216 \def\tabH@array@init{%
217   \ifx\@toarrayheight\@empty
218     % ignore vertical lines of nested tabular environments
219     \let\tabH@currenttab\@empty
220   \else
221     \stepcounter{tabH@unique}%
222     \edef\tabH@currenttab{\the\c@tabH@unique}%
223   \fi
224 }
225
226 \renewcommand*{\@arrayrule}{%
227   \@addtopreamble{%
228     \hskip -.5\arrayrulewidth
229     \ifx\tabH@currenttab\@empty
230       \else
231         \tabH@vrule{\tabH@currenttab}%
232       \fi
233     \begingroup
234       \expandafter\ifx\csname CT@arc@\endcsname\relax
235       \else
236         \expandafter\CT@arc@
237       \fi
238       \vline
239     \endgroup
240     \hskip -.5\arrayrulewidth
241   }%
242 }
243 \let\tabH@arrayrule\@arrayrule
244 \AtBeginDocument{%
245   \@ifpackageloaded{colortbl}{%
246     \let\@arrayrule\tabH@arrayrule
247   }{}%
248 }
249
250 \let\tabH@vrule\@gobble

```

## 2.4 Driver pdftex

```

251 \RequirePackage{ifpdf}
252 \ifpdf
253   \begingroup
254     \@ifundefined{pdfsavepos}{%
255       \PackageError{tabularht}{%
256         Your pdfTeX is too old%

```

```

257     }{%
258     \string\pdfsavepos\space is missing.%
259     }%
260     \endgroup
261     \csname fi\endcsname
262     \endinput
263 }{%}%
264
265 \let\on@line\@empty
266 \PackageInfo{tabularht}{%
267   Using driver 'pdftex' because of pdfTeX in PDF mode%
268 }%
269 \endgroup
270
271 \protected\def\tabH@vrule#1{%
272   \if@filesw
273     \pdfsavepos
274     \protected@write\@auxout{%
275       \let\tabH@lastxpos\relax
276     }{%
277       \tabH@aux@vrule{#1}{\tabH@lastxpos}%
278     }%
279   \fi
280 }%
281
282 \def\tabH@lastxpos{\the\pdflastxpos}%
283 \def\tabH@lastypos{\the\pdflastypos}%
284
285 % The .aux file contains three commands:
286 % \tabH@aux@vrule{tabular id}{x position}
287 % \tabH@aux@vstart{tabular id}{row id}{x position}{y position}
288 % \tabH@aux@vstop{y position}
289 %
290 \AtBeginDocument{%
291   % The .aux files are read the first time before
292   % \AtBeginDocument and later at \end{document}.
293   % \tabH@aux@done is a marker to distinguish
294   % between these two readings. Only in the first
295   % case we need the \tabH@aux@... commands.
296   \let\tabH@aux@done\@empty
297   \if@filesw
298     \immediate\write\@mainaux{%
299       \@percentchar\@percentchar BeginProlog: tabularht%
300     }%
301     % items in the aux file are executed,
302     % if tabularht is loaded
303     % and during the aux file read at \begin{document} only
304     \immediate\write\@mainaux{%
305       \detokenize{%
306         % the \tabH@aux@... commands are needed only if
307         % tabularht is loaded with driver pdftex.
308         \@ifundefined{tabH@aux@vrule}\@secondoftwo\@firstofone
309       }{%
310         % disable commands except for the first .aux files reading
311         \@ifundefined{tabH@aux@done}\@gobble\@firstofone
312       }%
313     }%
314     \let\tabH@aux@vrule\@gobbletwo
315     \let\tabH@aux@vstart\@gobblefour
316     \let\tabH@aux@vstop\@gobble
317   }%
318 }%

```



```

319     }%
320     \immediate\write\@mainaux{%
321         \@percentchar\@percentchar EndProlog: tabularht%
322     }%
323     \fi
324 }%
325
326 % the x positions of vrules are stored in
327 % \tabH@<tabcount>list with distinct values
328 \protected\def\tabH@aux@vrule#1#2{%
329     \@ifundefined{tabH@#1list}{%
330         \expandafter\xdef\csname tabH@#1list\endcsname{%
331             \noexpand\do{#2}%
332         }%
333     }{%
334         \beginngroup
335         \def\x{#2}%
336         \let\y\@undefined
337         \let\do\tabH@do@add
338         \expandafter\xdef\csname tabH@#1list\endcsname{%
339             \csname tabH@#1list\endcsname\@empty
340             \ifx\y\@undefined
341                 \noexpand\do{\x}%
342             \fi
343         }%
344         \endgroup
345     }%
346 }%
347 \def\tabH@do@add#1{%
348     \ifx\y\@undefined
349         \ifnum#1<\x\space
350         \else
351             \expandafter\ifx\csname y\endcsname\relax\fi
352             \ifnum#1>\x\space
353                 \noexpand\do{\x}%
354             \fi
355         \fi
356     \fi
357     \noexpand\do{#1}%
358 }%
359
360 \def\tabH@vspace@start#1{%
361     \if@filesw
362         \stepcounter{tabH@unique}%
363         \edef\tabH@currentrow{\the\c@tabH@unique}%
364         \pdfsavepos
365         \protected@write\@auxout{%
366             \let\tabH@lastxpos\relax
367             \let\tabH@lastypos\relax
368         }{%
369             \tabH@aux@vstart{\tabH@currenttab}{\tabH@currentrow}%
370                 {\tabH@lastxpos}{\tabH@lastypos}%
371         }%
372     \fi
373     \beginngroup
374     \edef\@{tabH@\tabH@currenttab row\tabH@currentrow}%
375     \expandafter\let\expandafter\x\csname\@ x\endcsname
376     \ifx\x\relax
377     \else
378         \expandafter\let\expandafter\y\csname\@ y\endcsname
379         \expandafter\let\expandafter\l
380         \csname tabH@\tabH@currenttab list\endcsname

```

```

381     \ifx\l\relax
382     \else
383     \def\{#1}%
384     \ifx\{\@empty
385     \let\do\tabH@do@set
386     \else
387     \count@=\z@
388     \let\do\tabH@do@filter
389     \fi
390     \setbox\z@=\hbox{\l}%
391     \wd\z@=\z@
392     \dp\z@=\z@
393     \copy\z@
394     \fi
395     \fi
396     \endgroup
397 }%
398 \def\tabH@vspace@stop{%
399     \if@files
400     \pdfsavepos
401     \protected@write\@auxout{%
402     \let\tabH@lastypos\relax
403     }{%
404     \tabH@aux@vstop{\tabH@lastypos}%
405     }%
406     \fi
407 }%
408 \def\tabH@do@set#1{%
409     \hbox to \z@{%
410     \hskip \dimexpr #1sp - \x sp\relax
411     \vrule \@width\arrayrulewidth
412     \depth\dimexpr \y sp\relax
413     \hss
414     }%
415 }%
416 \def\tabH@do@filter{%
417     \@tempwafalse
418     \advance\count@\@ne
419     \@for\{e:=\f\do{%
420     \ifnum\{e=\count@
421     \@tempwattrue
422     \fi
423     }%
424     \if@tempwa
425     \expandafter\tabH@do@set
426     \else
427     \expandafter\@gobble
428     \fi
429 }%
430
431 \protected\def\tabH@aux@vstart#1#2#3#4{%
432     \def\tabH@current@vstart{{#1}{#2}{#3}{#4}}%
433 }%
434 \protected\def\tabH@aux@vstop{%
435     \expandafter\tabH@aux@v\tabH@current@vstart
436 }%
437 \def\tabH@aux@v#1#2#3#4#5{%
438     \expandafter\gdef\csname tabH@#1row#2x\endcsname{#3}%
439     \expandafter\xdef\csname tabH@#1row#2y\endcsname{%
440     \the\dimexpr #4 - #5\relax
441     }%
442 }%

```

```

443
444 \csname fi\endcsname
445 \endinput
446
447 \fi

2.5 DVI drivers

448 \ifx\tabH@driver\@empty
449 \PackageError{tabularht}{%
450 Missing DVI driver, option 'vlines' disabled%
451 }{%
452 Supported DVI drivers: dvips.%
453 }%
454 \expandafter\endinput
455 \fi
456
457 \def\tabH@driver@dvips{%
458 \def\tabH@literalps##1{\special{ps:SDict begin ##1 end}}%
459 \def\tabH@headerps##1{\special{! ##1}}%
460 }
461
462 \@onelevel@sanitize\tabH@driver
463 \@ifundefined{tabH@driver@\tabH@driver}{%
464 \PackageError{tabularht}{%
465 Unsupported driver '\tabH@driver'%
466 }{%
467 Supported DVI drivers: dvips.%
468 }%
469 \endinput
470 }{}
471
472 \begingroup
473 \let\on@line\@empty
474 \PackageInfo{tabularht}{%
475 Using driver '\tabH@driver'%
476 }%
477 \endgroup
478 \csname tabH@driver@\tabH@driver\endcsname
479
480 \protected\def\tabH@vrule#1#2\vrule#3\arrayrulewidth{%
481 #2% \fi or empty
482 % hack to get rid of maxdrift rounding of dvips,
483 % thus simulate a large motion
484 \kern1in\relax
485 \tabH@literalps{%
486 #1 tabH.vrule %
487 Resolution neg 0 translate%
488 }%
489 \vrule#3\arrayrulewidth
490 \tabH@literalps{Resolution 0 translate}%
491 \kern-1in\relax
492 }
493
494 \def\tabH@vspace@start#1{%
495 \begingroup
496 \let\y\@empty
497 \@for\x:=#1\do{%
498 \ifx\y\@empty
499 \edef\y{\x}%
500 \else
501 \edef\y{\y\space\x}%
502 \fi

```

```

503 }%
504 \tabH@literalps{\tabH@currenttab[\y]currentpoint exch pop}%
505 \endgroup
506 }
507 \def\tabH@vspace@stop{%
508 \tabH@literalps{%
509 currentpoint exch pop %
510 \number\dimexpr\arrayrulewidth\relax\space
511 tabH.vspace%
512 }%
513 }
514
515 \tabH@headerps{%
516 userdict begin%
517 /tabH.list 10 dict def%
518 /tabH.job [] def %
519 end%
520 /tabH.vrule{%
521 10 string cvs cvn dup tabH.list exch known{%
522 tabH.list exch dup [ exch tabH.list exch get %
523 currentpoint pop round exch true exch{%
524 % tabH.list key [ ... x true i
525 % tabH.list key [ ... false i
526 exch{%
527 % ... [ ... x i
528 2 copy lt{false}{%
529 2 copy eq{pop false}{exch true}ifelse%
530 }ifelse%
531 }{false}ifelse%
532 }forall %
533 pop%
534 ]put%
535 }{%
536 tabH.list exch[currentpoint pop round]put%
537 }ifelse%
538 }bind def%
539 % <tab num> <cols array> <ytop> <ybottom> <rulewidth[sp]>
540 /tabH.vspace{%
541 userdict begin %
542 10 dict dup begin %
543 exch 65536 div Resolution mul 72.27 div %
544 % dvips uses a poor man's ceil function
545 % see dopage.c before "drawrule": (int)(... + 0.9999999)
546 0.9999999 add truncate%
547 /rulewidth exch def %
548 exch/ybottom exch def %
549 exch/ytop exch def %
550 exch/cols exch def %
551 exch/tabkey exch 10 string cvs cvn def %
552 end%
553 /tabH.job exch[exch userdict/tabH.job get aload pop]def %
554 end%
555 }bind def %
556 % Now we do the work at the end of the page.
557 % Unhappily "eop-hook" cannot be used, because "eop"
558 % executes "restore" before, so that all data are lost.
559 TeXDict begin%
560 /eop%
561 [%
562 {%
563 tabH.job{%
564 begin%

```

```

565         /colarray %
566         tabH.list tabkey known{tabH.list tabkey get}{[]}\ifelse %
567     def %
568     cols length 0 eq not{%
569         /colarray[%
570             cols{1 sub %
571                 dup 0 lt{pop}{%
572                     dup colarray length ge{pop}{%
573                         colarray exch get%
574                     }ifelse%
575                 }ifelse%
576             }forall%
577         ]def%
578     }if %
579     colarray{%
580         % (rulewidth) == rulewidth == % debug
581         Resolution sub %
582         ytop rulewidth ytop ybottom sub v%
583     }forall %
584     end%
585 }forall%
586 % tabH.list{== ==}forall % debug
587 }bind aload pop %
588 TeXDict /eop get aload pop%
589 ]cvx def %
590 end%
591 }
592 </package>

```

## 3 Installation

### 3.1 Download

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

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

[CTAN:macros/latex/contrib/oberdiek/tabularht.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<sub>E</sub>X Files” ([CTAN:tds/tds.pdf](#)). Directories with `texmf` in their name are usually organized this way.

### 3.2 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><http://ftp.ctan.org/tex-archive/>

### 3.3 Package installation

**Unpacking.** The `.dtx` file is a self-extracting `docstrip` archive. The files are extracted by running the `.dtx` through plain- $\text{\TeX}$ :

```
tex tabularht.dtx
```

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

```
tabularht.sty      → tex/latex/oberdiek/tabularht.sty
tabularht.pdf      → doc/latex/oberdiek/tabularht.pdf
tabularht-example1.tex → doc/latex/oberdiek/tabularht-example1.tex
tabularht-example2.tex → doc/latex/oberdiek/tabularht-example2.tex
tabularht.dtx      → source/latex/oberdiek/tabularht.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`.

### 3.4 Refresh file name databases

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

### 3.5 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 tabularht.pdf unpack_files output .
```

**Unpacking with  $\text{\LaTeX}$ .** The `.dtx` chooses its action depending on the format:

**plain- $\text{\TeX}$ :** Run `docstrip` and extract the files.

**$\text{\LaTeX}$ :** Generate the documentation.

If you insist on using  $\text{\LaTeX}$  for `docstrip` (really, `docstrip` does not need  $\text{\LaTeX}$ ), then inform the autodetect routine about your intention:

```
latex \let\install=y\input{tabularht.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 `pdf $\text{\LaTeX}$` :

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

## 4 History

[2005/09/22 v1.0]

- First public version.

[2005/10/16 v2.0]

- Height specification allows `to=...` or `spread=...`, default is `to=`.
- Option `vlines` added, drivers `pdftex` and `dvips`.
- `\interrowSPACE`, `\interrowfil`, and `\interrowstart... \interrowstop` added.

[2005/10/18 v2.1]

- Fix for package `colortbl`, but the colors of `colortbl` remain unsupported.

[2006/02/20 v2.2]

- Code is not changed.
- DTX framework.

[2006/12/22 v2.3]

- Documentation fix.
- Fix in code of option `vlines`.

[2007/03/21 v2.4]

- Fix: Counter `tabh@unique` must not be changed by `\include`.

[2007/04/11 v2.5]

- Line ends sanitized.

## 5 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	
<code>\@@array</code> .....	<i>72, 73</i>
<code>\@addtopreamble</code> .....	<i>227</i>
<code>\@addtoreset</code> .....	<i>211</i>
<code>\@array</code> .....	<i>58, 68, 72, 73</i>
<code>\@arrayrule</code> .....	<i>226, 243, 246</i>
<code>\@auxout</code> .....	<i>274, 365, 401</i>
<code>\@depth</code> .....	<i>412</i>
<code>\@empty</code> .....	<i>51, 52, 64,</i> <i>98, 170, 214, 217, 219, 229, 265,</i> <i>296, 339, 384, 448, 473, 496, 498</i>
<code>\@firstofone</code> .....	<i>308, 311</i>
<code>\@for</code> .....	<i>419, 497</i>
<code>\@gobble</code> .....	<i>169, 250, 311, 316, 427</i>
<code>\@gobblefour</code> .....	<i>315</i>
<code>\@gobbletwo</code> .....	<i>211, 314</i>
<code>\@ifpackageloaded</code> .....	<i>82, 84, 245</i>
<code>\@ifundefined</code> .....	<i>200, 254, 308, 311, 329, 463</i>
<code>\@mainaux</code> .....	<i>298, 304, 320</i>
<code>\@nameuse</code> .....	<i>129, 131</i>
<code>\@one</code> .....	<i>418</i>
<code>\@nil</code> .....	<i>56, 68, 91, 93</i>
<code>\@onelevel@sanitize</code> .....	<i>462</i>
<code>\@percentchar</code> .....	<i>299, 321</i>
<code>\@secondoftwo</code> .....	<i>308</i>
<code>\@sharp</code> .....	<i>56, 65</i>
<code>\@tempswafalse</code> .....	<i>417</i>
<code>\@tempwattrue</code> .....	<i>421</i>
<code>\@toarrayheight</code> .....	<i>51, 62, 64, 96, 115, 217</i>
<code>\@undefined</code> .....	<i>336, 340, 348</i>
<code>\@width</code> .....	<i>411</i>

<code>\</code> .....	8, 10, 12, 26, 32, 37, 41, 94	<code>\ifx</code> .....	72, 94, 99, 101, 194, 217, 229, 234, 340, 348, 351, 376, 381, 384, 448, 498	
A				
<code>\a</code> .....	374, 375, 378	<code>\immediate</code> .....	298, 304, 320	
<code>\addlinespace</code> .....	29	<code>\interrowfill</code> .....	2, 156	
<code>\advance</code> .....	418	<code>\interrowsspace</code> .....	2, 39, 148	
<code>\array</code> .....	143	<code>\interrowstart</code> .....	2, 28, 33, 172	
<code>\arrayrulewidth</code> .....	228, 240, 411, 480, 489, 510	<code>\interrowstop</code> .....	30, 36, 180	
<code>\AtBeginDocument</code> ...	83, 244, 290, 292	K		
<code>\kern</code> .....				484, 491
B				
<code>\begin</code> .....	5, 7, 22, 24, 303	L		
<code>\l</code> .....				379, 381, 390
C				
<code>\c@tabH@unique</code> .....	222, 363	M		
<code>\copy</code> .....	393	<code>\meaning</code> .....	105	
<code>\count@</code> .....	387, 418, 420	<code>\MessageBreak</code> .....	108	
<code>\csname</code> 234, 261, 330, 338, 339, 351, 375, 378, 380, 438, 439, 444, 478		<code>\multicolumn</code> .....	10	
<code>\CT@arc@</code> .....	236	N		
<code>\NeedsTeXFormat</code> .....				48
D				
<code>\DeclareOption</code> .....	185, 188, 189	<code>\newcommand</code> ...	152, 160, 172, 176, 180	
<code>\detokenize</code> .....	305	<code>\newcounter</code> .....	212	
<code>\dimen@</code> .....	95, 96, 114, 115	<code>\newenvironment</code> ...	120, 127, 134, 141	
<code>\dimexpr</code> .....	410, 412, 510	<code>\noalign</code> ....	9, 11, 149, 157, 173, 181	
<code>\do</code> .....	331, 337, 341, 353, 357, 385, 388, 419, 497	<code>\number</code> .....	510	
<code>\documentclass</code> .....	2, 18	<code>\numexpr</code> .....	440	
<code>\dp</code> .....	392	O		
<code>\on@line</code> .....				265, 473
E				
<code>\e</code> .....	419, 420	P		
<code>\end</code> .....	13, 15, 43, 45, 292	<code>\PackageError</code> .	103, 201, 255, 449, 464	
<code>\endarray</code> .....	145	<code>\PackageInfo</code> .....	266, 474	
<code>\endcsname</code> .....	234, 261, 330, 338, 339, 351, 375, 378, 380, 438, 439, 444, 478	<code>\pdflastxpos</code> .....	282	
<code>\endinput</code> .	196, 207, 262, 445, 454, 469	<code>\pdflastypos</code> .....	283	
<code>\endtabular</code> .....	124	<code>\pdfsavepos</code> .....	258, 273, 364, 400	
<code>\endtabularx</code> .....	138	<code>\ProcessOptions</code> .....	192	
<code>\extracolsep</code> .....	7	<code>\protected</code> ...	271, 328, 431, 434, 480	
F				
<code>\f</code> .....	383, 384, 419	<code>\protected@write</code> .....	274, 365, 401	
<code>\fbox</code> .....	6	<code>\providecommand</code> .....	183	
<code>\fill</code> .....	7, 161	<code>\ProvidesPackage</code> .....	49	
G				
<code>\gdef</code> .....	58, 438	R		
<code>\renewcommand</code> .....				226
H				
<code>\hbox</code> .....	390, 409	<code>\RequirePackage</code> .....	251	
<code>\hline</code> ....	25, 27, 31, 34, 35, 38, 40, 42	<code>\reserved@a</code> .....	73, 75, 78	
<code>\hskip</code> .....	228, 240, 410	S		
<code>\hss</code> .....	413	<code>\setbox</code> .....	390	
I				
<code>\if@filesw</code> .....	272, 297, 361, 399	<code>\setlength</code> .....	95, 114	
<code>\if@tempswa</code> .....	424	<code>\space</code> .....	258, 349, 352, 501, 510	
<code>\ifnum</code> .....	349, 352, 420	<code>\special</code> .....	458, 459	
<code>\ifpdf</code> .....	252	<code>\stepcounter</code> .....	221, 362	
T				
<code>\tabH@</code> .....	327	<code>\strip@prefix</code> .....	105	
<code>\tabH@@setheight</code> .....	91, 93			
<code>\tabH@array@init</code> .....	52, 59, 216			
<code>\tabH@arrayrule</code> .....	243, 246			
<code>\tabH@aux@</code> .....	295, 306			
<code>\tabH@aux@done</code> .....	293, 296			



