

The **tabularht** package

Heiko Oberdiek*
<heiko.oberdiek at googlemail.com>

2016/05/16 v2.6

Abstract

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

Contents

1 Usage	2
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	4
2 Implementation	4
2.1 Environments	4
2.2 Options	7
2.3 Option <code>vlines</code> , driver independent stuff	7
2.4 Driver <code>pdftex</code>	8
2.5 DVI drivers	11
3 Installation	14
3.1 Download	14
3.2 Bundle installation	14
3.3 Package installation	15
3.4 Refresh file name databases	15
3.5 Some details for the interested	15
4 Catalogue	16
5 History	16
[2005/09/22 v1.0]	16
[2005/10/16 v2.0]	16
[2005/10/18 v2.1]	17
[2006/02/20 v2.2]	17
[2006/12/22 v2.3]	17
[2007/03/21 v2.4]	17
[2007/04/11 v2.5]	17
[2016/05/16 v2.6]	17

*Please report any issues at <https://github.com/ho-tex/oberdiek/issues>

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=**.

```
\interrowspace[<list>]{<height>}
\interrowfill[<list>]
\interrowstart[<list>] ... \interrowstop
```

Option **vlines** is driver dependent and uses ε -**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.

VTEX: 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}{0{}1@{\extracolsep{\fill}}r@{}}
8    upper left corner & upper right corner\\%
9    \noalign{\vfill}%
10   \multicolumn{2}{c@{}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}{|1|1|}%
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 </example2>

```

2 Implementation

```

47 <*package>
Package identification.
48 \NeedsTeXFormat{LaTeX2e}
49 \ProvidesPackage{tabularht}%
50 [2016/05/16 v2.6 Tabular with height specified (HO)]

```

2.1 Environments

```

51 \let\@toarrayheight\@empty
52 \let\@tabH@array\@init\@empty
53
54 \toks@=%
55   \begingroup
56     \long\def\x{\vcenter\fi\fi\bgroup\#2\sharp\#4\@nil}%

```

```

57      \endgroup
58      \gdef\@array[##1]##2{%
59          \tabH@array@init
60          #1%
61          \vcenter\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   \begin{tabular}
123 }{%
124   \end{tabular}
125 }
126
127 \newenvironment{tabularht*}[1]{%
128   \tabH@setheight{#1}%
129   \nameuse{tabular*}%
130 }{%
131   \nameuse{endtabular*}%
132 }
133
134 \newenvironment{tabularrhtx}[1]{%
135   \tabH@setheight{#1}%
136   \begin{tabularx}
137 }{%
138   \end{tabularx}
139 }
140
141 \newenvironment{arrayht}[1]{%
142   \tabH@setheight{#1}%
143   \begin{array}
144 }{%
145   \end{array}
146 }
147
148 \def\interrowspace{%
149   \noalign\begin{array}{@{}c@{}}
150     \tabH@interrowspace
151   \end{array}%
152 }
153 \newcommand*\tabH@interrowspace[2][]{%
154   \vspace{#1}\vspace{#2}%
155 }
156 \def\interrowfill{%
157   \noalign\begin{array}{@{}c@{}}
158     \tabH@interrowfill
159   \end{array}%
160 }
161 \newcommand*\tabH@interrowfill[1][]{%
162   \vspace{#1}\fill%
163 }
164 \def\tabH@vspace#1#2{%
165   \vspace{#1}\vspace{#2}%
166   \vspace{#2}%
167   \vspace{#1}%
168 }
169 \let\tabH@vspace@start\gobble
170 \let\tabH@vspace@stop\empty

```

```

171
172 \newcommand*{\interrowstart}{%
173   \noalign\hgroup
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   \Qifundefined{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\relax
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 \def\tabH@lastxpos{\the\pdflastxpos}%
282 \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     \begingroup
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 \begingroup
374   \edef\@{tabH@\tabH@currenttab row\tabH@currentrow}%
375   \expandafter\let\expandafter\x\csname a x\endcsname
376   \ifx\x\relax
377   \else
378     \expandafter\let\expandafter\y\csname a y\endcsname
379     \expandafter\let\expandafter\l
380           \csname tabH@\tabH@currenttab list\endcsname
381     \ifx\l\relax
382     \else
383       \def\f{\#1}%
384       \ifx\f\@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@filesw
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   \tempswafalse
418   \advance\count@ \one
419   \for\e:=\f\do{%
420     \ifnum\e=\count@
421       \tempswatrue
422     \fi
423   }%
424   \if@tempswa
425     \expandafter\tabH@do@set
426   \else
427     \expandafter\@gobble
428   \fi
429 }%
430 \protected\def\tabH@aux@vstart#1#2#3#4{%
431   \def\tabH@current@vstart{{#1}{#2}{#3}{#4}}%
432 }%
433 \protected\def\tabH@aux@vstop{%
434   \expandafter\tabH@aux@v\tabH@current@vstart
435 }%
436 \def\tabH@aux@v#1#2#3#4#5{%
437   \expandafter\gdef\csname tabH@#1row#2x\endcsname{#3}%
438   \expandafter\xdef\csname tabH@#1row#2y\endcsname{%
439     \the\numexpr #4 - #5\relax
440   }%
441 }%
442 }%
443 \csname fi\endcsname
444 \endinput
445
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 @onelvel@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         lput%
535       }{%
536         tabH.list exch[currentpoint pop round]put%
537       }ifelse%
538     }bind def%
539   % <tab num> <cols array> <ytop> <ybottom> <rulerwidth[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         /rulerwidth 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 getaload 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 CTAN¹:

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

[CTAN:macros/latex/contrib/oberdiek/tabularht.pdf](http://ctan.org/pkg/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: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 TeX Files” ([CTAN:tds/tds.pdf](http://ctan.org/texmf)). 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 `TDSScripts/oberdiek/` for scripts that need further installation steps. Package `attachfile2` comes with the Perl script `pdflatfi.pl` that should be installed in such a way that it can be called as `pdflatfi`. Example (linux):

```
chmod +x scripts/oberdiek/pdflatfi.pl
cp scripts/oberdiek/pdflatfi.pl /usr/local/bin/
```

¹<http://ctan.org/pkg/tabularht>

3.3 Package installation

Unpacking. The `.dtx` file is a self-extracting `docstrip` archive. The files are extracted by running the `.dtx` through plain `TEX`:

```
tex 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 `TEX` distribution (`teTEX`, `mikTEX`, ...) relies on file name databases, you must refresh these. For example, `teTEX` users run `texhash` or `mktexlsr`.

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 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{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 pdfL^AT_EX:

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

4 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 `tabularht.xml`.

```
593 (*catalogue)
594 <?xml version='1.0' encoding='us-ascii'?>
595 <!DOCTYPE entry SYSTEM 'catalogue.dtd'>
596 <entry datestamp='$Date$' modifier='$Author$' id='tabularht'>
597   <name>tabularht</name>
598   <caption>Tabular environments with height specified.</caption>
599   <authorref id='auth:oberdiek' />
600   <copyright owner='Heiko Oberdiek' year='2005-2007' />
601   <license type='lpp1.3' />
602   <version number='2.6' />
603   <description>
604     The tabularht package defines some environments that add a height
605     specification to tabular and array environments. The default set
606     of new environments take a value for their height in the first
607     argument: defined environments are: <tt>tabularht</tt>,
608     <tt>tabularht*</tt> and <tt>arrayht</tt>. If package
609     <xref refid='tabularx'>tabularx</xref> is also loaded,
610     the package also defines environments <tt>tabularxht</tt> and
611     <tt>tabularxht*</tt>.
612   <p/>
613   The places where stretching is to happen are signalled by<br/>
614   <tt>\noalign{\vfill}</tt><br/>
615   immediately after the <tt>\</tt> that ends a row of the table or
616   array.
617   <p/>
618   The package is part of the <xref refid='oberdiek'>oberdiek</xref> bundle.
619 </description>
620 <documentation details='Package documentation'
621   href='ctan:/macros/latex/contrib/oberdiek/tabularht.pdf' />
622 <ctan file='true' path='/macros/latex/contrib/oberdiek/tabularht.dtx' />
623 <miktex location='oberdiek' />
624 <texlive location='oberdiek' />
625 <install path='/macros/latex/contrib/oberdiek/oberdiek.tds.zip' />
626 </entry>
627 </catalogue>
```

5 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 `dvi`.
- `\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.

[2016/05/16 v2.6]

- Documentation updates.

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; plain numbers refer to the code lines where the entry is used.

Symbols	
<code>\@nil</code>	56, 68, 91, 93
<code>\@onelevel@sanitize</code>	462
<code>\@percentchar</code>	299, 321
<code>\@secondoftwo</code>	308
<code>\@sharp</code>	56, 65
<code>\@tempswafalse</code>	417
<code>\@tempswatrue</code>	421
<code>\@toarrayheight</code>	51, 62, 64, 96, 115, 217
<code>\@undefined</code>	336, 340, 348
<code>\@width</code>	411
<code>\`</code>	8, 10, 12, 26, 32, 37, 41, 94, 615
A	
<code>\a</code>	374, 375, 378
<code>\addlinespace</code>	29
<code>\advance</code>	418
<code>\array</code>	143
<code>\arrayrulewidth</code>	228, 240, 411, 480, 489, 510
<code>\AtBeginDocument</code>	83, 244, 290, 292
B	
<code>\begin</code>	5, 7, 22, 24, 303

C	L
\c@tabH@unique 222, 363	\l 379, 381, 390
\copy 393	
\count@ 387, 418, 420	M
\csname 234, 261, 330, 338, 339, 351, 375, 378, 380, 438, 439, 444, 478	\meaning 105
\CT@arc@ 236	\MessageBreak 108
	\multicolumn 10
D	N
\DeclareOption 185, 188, 189	\NeedsTeXFormat 48
\detokenize 305	\newcommand 152, 160, 172, 176, 180
\dimen@ 95, 96, 114, 115	\newcounter 212
\dimexpr 410, 412, 510	\newenvironment 120, 127, 134, 141
\do 331, 337, 341, 353, 357, 385, 388, 419, 497	\noalign 9, 11, 149, 157, 173, 181, 614
\documentclass 2, 18	\number 510
\dp 392	\numexpr 440
E	O
\e 419, 420	\online 265, 473
\end 13, 15, 43, 45, 292	
\endarray 145	P
\endcsname 234, 261, 330, 338, 339, 351, 375, 378, 380, 438, 439, 444, 478	\PackageError 103, 201, 255, 449, 464
\endinput 196, 207, 262, 445, 454, 469	\PackageInfo 266, 474
\endtabular 124	\pdflastxpos 282
\endtabularx 138	\pdflastypos 283
\extracolsep 7	\pdfsavepos 258, 273, 364, 400
	\ProcessOptions 192
F	\protected 271, 328, 431, 434, 480
\f 383, 384, 419	\protected@write 274, 365, 401
\fbox 6	\providecommand 183
\fill 7, 161	\ProvidesPackage 49
G	R
\gdef 58, 438	\renewcommand 226
	\RequirePackage 251
H	\reserved@a 73, 75, 78
\hbox 390, 409	
\hline 25, 27, 31, 34, 35, 38, 40, 42	S
\hskip 228, 240, 410	\setbox 390
\hss 413	\setlength 95, 114
	\space 258, 349, 352, 501, 510
I	\special 458, 459
\if@filesw 272, 297, 361, 399	\stepcounter 221, 362
\if@tempswa 424	\strip@prefix 105
\ifnum 349, 352, 420	
\ifpdf 252	
\ifx 72, 94, 99, 101, 194, 217, 229, 234, 340, 348, 351, 376, 381, 384, 448, 498	T
\immediate 298, 304, 320	\tabH@ 327
\interrowfill 2, 156	\tabH@setheight 91, 93
\interrowspace 2, 39, 148	\tabH@array@init 52, 59, 216
\interrowstart 2, 28, 33, 172	\tabH@arrayrule 243, 246
\interrowstop 30, 36, 180	\tabH@aux@ 295, 306
	\tabH@aux@done 293, 296
K	\tabH@aux@v 435, 437
\kern 484, 491	\tabH@aux@vrule 277, 286, 314, 328
	\tabH@aux@vstart 287, 315, 369, 431
	\tabH@aux@vstop 288, 316, 404, 434
	\tabH@current@vstart 432, 435
	\tabH@currentrow 363, 369, 374
	\tabH@currenttab 214, 219,
	\tabH@ 222, 229, 231, 369, 374, 380, 504

\tabH@do@add	337, 347	\the .	70, 96, 115, 222, 282, 283, 363, 440
\tabH@do@filter	388, 416	\toks@	54, 70
\tabH@do@set	385, 408, 425		
\tabH@driver	183,		U
	190, 448, 462, 463, 465, 475, 478	\usepackage	3, 19, 20
\tabH@driver@dvips	457		
\tabH@headerps	459, 515		V
\tabH@interrowfill	158, 160	\vcenter	56, 61
\tabH@interrowspace	150, 152	\vfill	9, 11, 614
\tabH@interrowstart	174, 176	\vline	238
\tabH@lastxpos	275, 277, 282, 366, 370	\vrule	411, 480, 489
\tabH@lastypos	283, 367, 370, 402, 404	\vspace	166
\tabH@literalps	458, 485, 490, 504, 508		
\tabH@patch@array	71, 80, 85		W
\tabH@patch@array	70, 77	\wd	391
\tabH@setheight	90, 121, 128, 135, 142	\write	298, 304, 320
\tabH@spread	101, 119		
\tabH@temp	98,		X
	99, 101, 105, 111, 115, 186, 194	\x	56, 68, 335, 341, 349, 352,
\tabH@to	99, 111, 118		353, 375, 376, 410, 497, 499, 501
\tabH@vrule	231, 250, 271, 480		
\tabH@vspace	153, 161, 164		Y
\tabH@vspace@start		\y	336, 340, 348,
	165, 169, 177, 360, 494		378, 412, 496, 498, 499, 501, 504
\tabH@vspace@stop			
	167, 170, 181, 398, 507		Z
\tabular	122	\z@	387, 390, 391, 392, 393, 409
\tabularx	136	\zap@space	98