

The tabularht package

Heiko Oberdiek
<heiko.oberdiek at gmail.com>

2007/04/11 v2.5

Abstract

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

Contents

| | | |
|----------|---|-----------|
| 1 | Usage | 2 |
| 1.1 | Option vlines | 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 vlines, driver independent stuff | 7 |
| 2.4 | Driver pdftex | 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 |
| 6 | Index | 17 |

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 $\langle list \rangle$. $\langle list \rangle$ is a comma separated list of numbers, $\langle height \rangle$ means the height specification described above with the optional prefixes **to=** or **spread=**.

```
\interrowspace [\langle list \rangle] {\langle height \rangle}
\interrowfill [\langle list \rangle]
\interrowstart [\langle list \rangle] ... \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.

VT_EX: 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 \documentclass{article}
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 \end{example1}

```

1.4.2 Example 2

```

17 \begin{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 \begin{package}

```

Package identification.

```

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

```

2.1 Environments

```

51 \let\toarrayheight\@empty
52 \let\tabH@array@init\@empty
53
54 \toks@={%
55   \begin{group
56     \long\def\x#1\vcenter\fi\fi\bgroup#2\@sharp#3#4\@nil{%
57       \end{group
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{\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@files@
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\pdf@lastxpos}%
283 \def\tabH@lastypos{\the\pdf@lastypos}%
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\@ 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\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@ \@ne
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
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\numexpr #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 CTAN¹:

[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:install/macros/latex/contrib/oberdiek.tds.zip](#)

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

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/
```

¹<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 \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 (`te \TeX` , `mik \TeX` , ...) relies on file name databases, you must refresh these. For example, `te \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 \LaTeX . The `.dtx` chooses its action depending on the format:

plain \TeX : Run `docstrip` and extract the files.

\LaTeX : Generate the documentation.

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

```
latex \let\install=y\input{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 \LaTeX` :

```
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='lppl1.3'>
602         <version number='2.5'>
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 `dvips`.
- `\interrowospace`, `\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.

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 | | |
|---------------------|---|--|
| \@@array | 72, 73 | \@tempwafalse 417 |
| \@addtopreamble | 227 | \@tempwattrue 421 |
| \@addtoreset | 211 | \@toarrayheight 51, 62, 64, 96, 115, 217 |
| \@array | 58, 68, 72, 73 | \@undefined 336, 340, 348 |
| \@arrayrule | 226, 243, 246 | \@width 411 |
| \@auxout | 274, 365, 401 | \\ 8, 10, 12, 26, 32, 37, 41, 94, 615 |
| \@depth | 412 | |
| \@empty | 51, 52, 64, 98, 170, 214, 217, 219, 229, 265, 296, 339, 384, 448, 473, 496, 498 | A |
| \@firstofone | 308, 311 | \a 374, 375, 378 |
| \@for | 419, 497 | \addlinespace 29 |
| \@gobble | 169, 250, 311, 316, 427 | \advance 418 |
| \@gobblefour | 315 | \array 143 |
| \@gobbletwo | 211, 314 | \arrayrulewidth 228, 240, 411, 480, 489, 510 |
| \@ifpackageloaded | 82, 84, 245 | \AtBeginDocument 83, 244, 290, 292 |
| \@ifundefined | 200, 254, 308, 311, 329, 463 | B |
| \@mainaux | 298, 304, 320 | \begin 5, 7, 22, 24, 303 |
| \@nameuse | 129, 131 | C |
| \@ne | 418 | \c@tabH@unique 222, 363 |
| \@nil | 56, 68, 91, 93 | \copy 393 |
| \@onelevel@sanitize | 462 | \count@ 387, 418, 420 |
| \@percentchar | 299, 321 | \csname 234, 261, 330, 338, 339, 351, 375, 378, 380, 438, 439, 444, 478 |
| \@secondoftwo | 308 | \CT@arc@ 236 |
| \@sharp | 56, 65 | |

| | | |
|---|--|--|
| D | | <code>\multicolumn</code> 10 |
| <code>\DeclareOption</code> 185, 188, 189 | | |
| <code>\detokenize</code> 305 | | |
| <code>\dimen@</code> 95, 96, 114, 115 | | |
| <code>\dimexpr</code> 410, 412, 510 | | |
| <code>\do</code> 331, 337, | | |
| 341, 353, 357, 385, 388, 419, 497 | | |
| <code>\documentclass</code> 2, 18 | | |
| <code>\dp</code> 392 | | |
| E | | |
| <code>\e</code> 419, 420 | | |
| <code>\end</code> 13, 15, 43, 45, 292 | | |
| <code>\endarray</code> 145 | | |
| <code>\endcsname</code> | | |
| 234, 261, 330, 338, 339, 351, | | |
| 375, 378, 380, 438, 439, 444, 478 | | |
| <code>\endinput</code> 196, 207, 262, 445, 454, 469 | | |
| <code>\endtabular</code> 124 | | |
| <code>\endtabularx</code> 138 | | |
| <code>\extracolsep</code> 7 | | |
| F | | |
| <code>\f</code> 383, 384, 419 | | |
| <code>\fbox</code> 6 | | |
| <code>\fill</code> 7, 161 | | |
| G | | |
| <code>\gdef</code> 58, 438 | | |
| H | | |
| <code>\hbox</code> 390, 409 | | |
| <code>\hline</code> 25, 27, 31, 34, 35, 38, 40, 42 | | |
| <code>\hskip</code> 228, 240, 410 | | |
| <code>\hss</code> 413 | | |
| I | | |
| <code>\if@filesw</code> 272, 297, 361, 399 | | |
| <code>\if@tempwa</code> 424 | | |
| <code>\ifnum</code> 349, 352, 420 | | |
| <code>\ifpdf</code> 252 | | |
| <code>\ifx</code> 72, 94, | | |
| 99, 101, 194, 217, 229, 234, 340, | | |
| 348, 351, 376, 381, 384, 448, 498 | | |
| <code>\immediate</code> 298, 304, 320 | | |
| <code>\interrowfill</code> 2, 156 | | |
| <code>\interrowsep</code> 2, 39, 148 | | |
| <code>\interrowstart</code> 2, 28, 33, 172 | | |
| <code>\interrowstop</code> 30, 36, 180 | | |
| K | | |
| <code>\kern</code> 484, 491 | | |
| L | | |
| <code>\l</code> 379, 381, 390 | | |
| M | | |
| <code>\meaning</code> 105 | | |
| <code>\MessageBreak</code> 108 | | |
| | N | |
| | <code>\NeedsTeXFormat</code> 48 | |
| | <code>\newcommand</code> 152, 160, 172, 176, 180 | |
| | <code>\newcounter</code> 212 | |
| | <code>\newenvironment</code> 120, 127, 134, 141 | |
| | <code>\noalign</code> 9, 11, 149, 157, 173, 181, 614 | |
| | <code>\number</code> 510 | |
| | <code>\numexpr</code> 440 | |
| | O | |
| | <code>\on@line</code> 265, 473 | |
| | P | |
| | <code>\PackageError</code> 103, 201, 255, 449, 464 | |
| | <code>\PackageInfo</code> 266, 474 | |
| | <code>\pdflastxpos</code> 282 | |
| | <code>\pdflastypos</code> 283 | |
| | <code>\pdfsavepos</code> 258, 273, 364, 400 | |
| | <code>\ProcessOptions</code> 192 | |
| | <code>\protected</code> 271, 328, 431, 434, 480 | |
| | <code>\protected@write</code> 274, 365, 401 | |
| | <code>\providecommand</code> 183 | |
| | <code>\ProvidesPackage</code> 49 | |
| | R | |
| | <code>\renewcommand</code> 226 | |
| | <code>\RequirePackage</code> 251 | |
| | <code>\reserved@a</code> 73, 75, 78 | |
| | S | |
| | <code>\setbox</code> 390 | |
| | <code>\setlength</code> 95, 114 | |
| | <code>\space</code> 258, 349, 352, 501, 510 | |
| | <code>\special</code> 458, 459 | |
| | <code>\stepcounter</code> 221, 362 | |
| | <code>\strip@prefix</code> 105 | |
| | T | |
| | <code>\tabH@</code> 327 | |
| | <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 | |
| | <code>\tabH@aux@v</code> 435, 437 | |
| | <code>\tabH@aux@vrule</code> 277, 286, 314, 328 | |
| | <code>\tabH@aux@vstart</code> 287, 315, 369, 431 | |
| | <code>\tabH@aux@vstop</code> 288, 316, 404, 434 | |
| | <code>\tabH@current@vstart</code> 432, 435 | |
| | <code>\tabH@currentrow</code> 363, 369, 374 | |
| | <code>\tabH@currenttab</code> 214, 219, | |
| | 222, 229, 231, 369, 374, 380, 504 | |
| | <code>\tabH@do@add</code> 337, 347 | |
| | <code>\tabH@do@filter</code> 388, 416 | |
| | <code>\tabH@do@set</code> 385, 408, 425 | |
| | <code>\tabH@driver</code> 183, | |
| | 190, 448, 462, 463, 465, 475, 478 | |

