

The **thumbs** package

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Abstract

This L^AT_EX package allows to create one or more customizable thumb index(es), providing a quick and easy reference methode for large documents. It must be loaded after the page size has been set, when printing the document “shrink to page” should not be used, and a printer capable of printing up to the border of the sheet of paper is needed (or afterwards cutting the paper).

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Save per page about 200 ml water, 2 g CO₂ and 2 g wood:
Therefore please print only if this is really necessary.

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1 Introduction

This package puts running, customizable thumb marks in the outer margin, moving downward as the chapter number (or whatever shall be marked by the thumb marks) increases. Additionally an overview page/table of thumb marks can be added automatically, which gives the respective names of the thumb objects, the page where the object/thumb mark first appears, and the thumb mark itself at the respective position. The thumb marks are probably useful for documents, where a quick and easy way to find e.g. a chapter is needed, for example in reference guides, anthologies, or quite large documents.

`thumbs` must be loaded after the page size has been set, when printing the document “shrink to page” should not be used, a printer capable of printing up to the border of the sheet of paper is needed (or afterwards cutting the paper).

Usage with `\usepackage[landscape]{geometry}`, `\documentclass[landscape]{...}`, `\usepackage[landscape]{geometry}`, `\usepackage{lscape}`, or `\usepackage{pdfscape}` is possible.

There *are* already some packages for creating thumbs, but because none of them did what I wanted, I wrote this new package.¹

2 Usage

2.1 Loading

Load the package placing

```
\usepackage[<options>]{thumbs}
```

in the preamble of your L^AT_EX 2_ε source file.

The `thumbs` package takes the dimensions of the page `\AtBeginDocument` and does not react to changes afterwards. Therefore this package must be loaded *after* the page dimensions have been set, e.g. with package `geometry` (<http://ctan.org/pkg/geometry>). Of course it is also OK to just keep the default page/paper settings, but when anything is changed, it must be done before `thumbs` executes its `\AtBeginDocument` code.

The format of the paper, where the document shall be printed upon, should also be used for creating the document. Then the document can be printed without adapting the size, like e.g. “shrink to page”. That would add a white border around the document and by moving the thumb marks from the edge of the paper they no longer appear at the side of the stack of

¹Probably this holds true for the motivation of the authors of quite a lot of packages.

paper. (Therefore e.g. for printing the example file to A4 paper it is necessary to add `a4paper` option to the document class and recompile it! Then the thumb marks column change will occur at another point, of course.) It is also necessary to use a printer capable of printing up to the border of the sheet of paper. Alternatively it is possible after the printing to cut the paper to the right size. While performing this manually is probably quite cumbersome, printing houses use paper, which is slightly larger than the desired format, and afterwards cut it to format.

Some faulty pdf-viewer adds a white line at the bottom and right side of the document when presenting it. This does not change the printed version. To test for this problem, a page of the example file has been completely coloured. (Probably better exclude that page from printing...)

When using the thumb marks overview page, it is necessary to `\protect` entries like `\pi` (same as with entries in tables of contents, figures,...).

2.2 Options

options The `thumbs` package takes the following options:

2.2.1 pagecolor

pagecolor Option `pagecolor` wants to know the background colour of the pages for use with the `xcolor` package. The default value is `white`.

2.2.2 linefill

linefill Option `linefill` wants to know how the line between object (e.g. chapter name) and page number shall be filled at the overview page. Empty option will result in a blank line, `line` will fill the distance with a line, `dots` will fill the distance with dots.

2.2.3 minheight

minheight Option `minheight` wants to know the minimal vertical extension of each thumb mark. This is only useful in combination with option `height=auto` (see below). When the height is automatically calculated and smaller than the `minheight` value, the height is set equal to the given `minheight` value and a new column/page of thumb marks is used. The default value is 47pt ($\approx 16.5\text{ mm} \approx 0.65\text{ in}$).

2.2.4 height

height Option `height` wants to know the vertical extension of each thumb mark. The default value “`auto`” calculates an appropriate value automatically decreasing with increasing number of thumb marks (but fixed for each document). When the height is smaller than `minheight`, this package deems this as too small and instead uses a new column/page of thumb marks. If smaller thumb marks are really wanted, choose a smaller `minheight` (e.g. 0pt).

2.2.5 width

width Option `width` wants to know the horizontal extension of each thumb mark. The default option-value “`auto`” calculates a width-value automatically: $(\text{\texttt{\textbackslash paperwidth}} - \text{\texttt{\textbackslash textwidth}})$, which is the total width of inner and outer margin, divided by 4. Instead of this, any positive width given by the user is accepted. (Try `width={\texttt{\textbackslash paperwidth}}` in the example!) Option `width={autoauto}` leads to thumb marks, which are just wide enough to fit the widest thumb mark text.

2.2.6 distance

distance Option `distance` wants to know the vertical spacing between two thumb marks. The default value is 2 mm.

2.2.7 tophthumbmargin

topthumbmargin Option `topthumbmargin` wants to know the vertical spacing between the upper page (paper) border and top thumb mark. The default (auto) is 1 inch plus `\th@bmsvoffset` plus `\topmargin`. Dimensions (e.g. 1 cm) are also accepted.

2.2.8 bottomthumbmargin

bottomthumbmargin Option `bottomthumbmargin` wants to know the vertical spacing between the lower page (paper) border and last thumb mark. The default (auto) for the position of the last thumb is $1\text{in} + \text{\texttt{\textbackslash topmargin}} - \text{\texttt{\textbackslash th@mbsdistance}} + \text{\texttt{\textbackslash th@mbheighty}} + \text{\texttt{\textbackslash headheight}} + \text{\texttt{\textbackslash headsep}} + \text{\texttt{\textbackslash textheight}} + \text{\texttt{\textbackslash footskip}} - \text{\texttt{\textbackslash th@mbsdistance}} - \text{\texttt{\textbackslash th@mbheighty}}$. Dimensions (e.g. 1 cm) are also accepted.

2.2.9 thumblink

thumblink Option `thumblink` determines, what is hyperlinked at the thumb marks overview page (when the `hyperref` package is used):

- `none` creates *none* hyperlinks
- `title` hyperlinks the *titles* of the thumb marks
- `page` hyperlinks the *page* numbers of the thumb marks
- `titleandpage` hyperlinks the *title and page* numbers of the thumb marks
- `line` hyperlinks the whole *line*, i.e. title, dots (or line or whatsoever) and page numbers of the thumb marks
- `rule` hyperlinks the whole *rule*.

2.2.10 ignorehoffset, ignorevoffset

ignorehoffset **ignorevoffset** Usually `\hoffset` and `\voffset` should be regarded, but moving the thumb marks away from the paper edge probably makes them useless. Therefore `\hoffset` and `\voffset` are ignored by default, or when option `ignorehoffset` or `ignorehoffset=true` is used (and `ignorevoffset` or `ignorevoffset=true`, respectively). But in case that the user wants to print at one sort of paper but later trim it to another one, regarding the offsets would be necessary. Therefore `ignorehoffset=false` and `ignorevoffset=false` can be used to regard these offsets. (Combinations `ignorehoffset=true`, `ignorevoffset=false` and `ignorehoffset=false`, `ignorevoffset=true` are also possible.)

2.2.11 verbose

verbose Option **verbose=false** (the default) suppresses some messages, which otherwise are presented at the screen and written into the log file. Look for

***** THUMB dimensions *****

in the log file for height and width of the thumb marks as well as top and bottom thumb marks margins.

2.2.12 draft

draft Option **draft** (*not* the default) sets the thumb mark width to 2pt, thumb mark text colour to black and thumb mark background colour to gray. Either do not use this option with the **thumbs** package at all, or use **draft=false**, or **final**, or **final=true** to get the original appearance of the thumb marks.

2.3 Commands to be used in the document

2.3.1 \addthumb

\addthumb To add a thumb mark, use the **\addthumb** command, which has these four parameters:

1. a title for the thumb mark (for the thumb marks overview page, e.g. the chapter title),
2. the text to be displayed in the thumb mark (for example the chapter number: **\thechapter**),
3. the colour of the text in the thumb mark,
4. and the background colour of the thumb mark

(parameters in this order) at the page where you want this thumb mark placed (for the first time).

2.3.2 \addtitlethumb

\addtitlethumb When a thumb mark shall not or cannot be placed on a page, e.g. at the title page or when using **\includepdf** from **pdfpages** package, but the reference in the thumb marks overview nevertheless shall name that page number and hyperlink to that page, **\addtitlethumb** can be used at the following page. It has five arguments. The arguments one to four are identical to the ones of **\addthumb** (see above), and the fifth argument consists of the label of the page, where the hyperlink at the thumb marks overview page shall link to. The **thumbs** package does *not* create that label! But for the first page the label **pagesLTS.0** can be use, which is already placed there by the used **pagesLTS** package.

2.3.3 \stopthumb and \continuethumb

\stopthumb When a page (or pages) shall have no thumb marks, use the **\stopthumb** command (without parameters). Placing another
\continuethumb thumb mark with **\addthumb** or **\addtitlethumb** or using the command **\continuethumb** continues the thumb marks.

2.3.4 `\thumbsoverview`

`\thumbsoverview` The command `\thumbsoverview` is used to place the overview page(s) for the thumb marks. Its single parameter is used to mark this page/these pages (e. g. in the page header). If these marks are not wished, `\thumbsoverview{}` will generate empty marks in the page header(s). `\thumbsoverview` can be used more than once (for example at the beginning and at the end of the document). The overviews have labels `TableOfThumbs1`, `TableOfThumbs2`, and so on, which can be referred to with e. g. `\pageref{TableOfThumbs1}`. The reference `TableOfThumbs` (without number) aims at the last used Table of Thumbs (for compatibility with older versions of this package).

2.3.5 `\thumbnewcolumn`

`\thumbnewcolumn` With the command `\thumbnewcolumn` a new column can be started, even if the current one was not filled. This could be useful e. g. for a dictionary, which uses one column for translations from language A to language B, and the second column for translations from language B to language A. But in that case one probably should increase the size of the thumb marks, so that 26 thumb marks (in case of the latin alphabet) fill one thumb column. Do not use `\thumbnewcolumn` on a page where `\addthumb` was already used, but use `\addthumb` immediately after `\thumbnewcolumn`.

2.3.6 `\addthumbsoverviewtocontents`

`\thumbsoverviewtocontents` `\addthumbsoverviewtocontents` with two arguments is a replacement for `\addcontentsline{toc}{<level>}{<text>}`, where the first argument of `\addthumbsoverviewtocontents` is for `<level>` and the second for `<text>`. If an entry of the thumbs mark overview shall be placed in the table of contents, `\addthumbsoverviewtocontents` with its arguments should be used immediately before `\thumbsoverview`.

3 Alternatives

- chapterthumb, 2005/03/10, v0.1, by MARKUS KOHM, available at <http://mirror.ctan.org/info/examples/KOMA-Script-3/Anhang-B/source/chapterthumb.sty>; unfortunately without documentation, which is probably available in the book:
Kohm, M., & Morawski, J.-U. (2008): KOMA-Script. Eine Sammlung von Klassen und Paketen für L^AT_EX₂ε, 3., überarbeitete und erweiterte Auflage für KOMA-Script 3, Lehmanns Media, Berlin, Edition dante, ISBN-13: 978-3-86541-291-1, <http://www.lob.de/isbn/3865412912>; in German.
- eso-pic, 2010/10/06, v2.0c by ROLF NIEPRASCHK, available at <http://www.ctan.org/pkg/eso-pic>, was suggested as alternative. If I understood its code right, `\AtBeginShipout{\AtBeginShipoutUpperLeft{\put(...` is used there, too. Thus I do not see its advantage. Additionally, while compiling the `eso-pic` test documents with T_EXLive2010 worked, compiling them with *Scientific WorkPlace* 5.50 Build 2960 (© MacKichan Software, Inc.) led to significant deviations of the placements (also changing from one page to the other).
- fancytabs, 2011/04/16 v1.1, by RAPHAËL PINSON, available at <http://www.ctan.org/pkg/fancytabs>, but requires TikZ from the `pgf` bundle.
- thumb, 2001, without file version, by INGO KLÖCKEL, available at <ftp://ftp.dante.de/pub/tex/info/examples/ltt/thumb.sty>, unfortunately without documentation, which is probably available in the book:
Klöckel, I. (2001): L^AT_EX₂ε. Tips und Tricks, Dpunkt.Verlag GmbH, ISBN-13: 978-3-93258-837-2; in German.
- thumb (a completely different one), 1997/12/24, v1.0, by CHRISTIAN HOLM, available at <http://www.ctan.org/pkg/thumb>.
- thumbindex, 2009/12/13, without file version, by HISASHI MORITA, available at <http://hisashim.org/2009/12/13/thumbindex.html>.
- thumb-index, from the fancyhdr package, 2005/03/22 v3.2, by PIET VAN OOSTRUM, available at <http://www.ctan.org/pkg/fancyhdr>.
- thumbpdf, 2010/07/07, v3.11, by HEIKO OBERDIEK, is for creating thumbnails in a pdf document, not thumb marks (and therefore *no* alternative); available at <http://www.ctan.org/pkg/thumbpdf>.
- thumby, 2010/01/14, v0.1, by SERGEY GOLDGABER, “is designed to work with the `memoir` class, and also requires `PerLATEX` and `tikz`” (<http://www.ctan.org/pkg/thumby>), available at <http://www.ctan.org/pkg/thumby>.

(You programmed or found another alternative, which is available at [CTAN](#)?

OK, send an e-mail to me with the name, location at [CTAN](#), and a short notice, and I will probably include it in the list above.)

4 Example

```
1 {\example}
2 \documentclass[twoside,british]{article}[2007/10/19]% v1.4h
3 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
4 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
5 %% When compiling with SWP 5.50. Build 2960 %
6 %% (copyright MacKichan Software, Inc.), %
7 %% these additional packages are needed: %
8 %% \usepackage[T1]{fontenc} %
9 %% \usepackage{amsfonts} %
10 %% \usepackage[math]{cellspace} %
11 %% \usepackage{xcolor} %
12 %% \pagecolor{white} %
13 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
14 \usepackage{lipsum}[2011/04/14]% v1.2
15 \usepackage{eurosym}[1998/08/06]% v1.1
16 \usepackage[extension=pdf,%
17 pdfpagelayout=TwoPageRight,pdfpagemode={UseNone},%
18 plainpages=false,%
19 pdfpagelabels=true,%
20 hyperindex=false,%
21 pdflang={en},%
22 pdftitle={thumbs package example},%
23 pdfauthor={Hans-Martin Muench},%
24 pdfsubject={Example for the thumbs package},%
25 pdfkeywords={LaTeX, thumbs, thumb marks, Hans-Martin Muench},%
26 pdfview=Fit,pdfstartview=Fit,%
27 linktoc=all]{hyperref}[2011/04/17]% v6.82g
28 \usepackage[pagecolor=white,thumbink=rule,linefill=dots,height={auto},minheight={47pt},%
29 width={auto},distance={2mm},topthumbmargin={auto},bottomthumbmargin={auto},%
30 ignorehoffset=true,ignorevoffset=true,verbose=true]{thumbs}[2011/06/24]% v1.0g
31 \gdef\unit#1{\mathord{\thinspace\mathrm{#1}}}%
32 \listfiles
33 \begin{document}
34 \pagenumbering{arabic}
35 \section*{Example for thumbs}
36 \addcontentsline{toc}{section}{Example for thumbs}
37 \markboth{Example for thumbs}{Example for thumbs}
38
39 This example demonstrates the most common uses of package
40 \textsf{thumbs}, v1.0g as of 2011/06/24 (HMM).
41 The used options were \texttt{pagecolor=white},
42 \texttt{thumbink=rule}, \texttt{linefill=dots},
43 \texttt{height=auto}, \texttt{minheight=\{47pt\}},
44 \texttt{width=auto}, \texttt{distance=\{2mm\}}, \texttt{topthumbmargin=\{auto\}},
45 \texttt{bottomthumbmargin=\{auto\}}, \texttt{ignorehoffset=true},
```

```

46 \texttt{ignoreoffset=true},and \texttt{verbose=true}.
47
48 \noindent These are the default options, except \texttt{verbose=true}.
49 For more details please see the documentation!\newline
50
51 \textbf{Hyperlinks or not:} If the \textsf{hyperref} package is loaded,
52 the references in the overview page for the thumb marks are also hyperlinked
53 (except when option \texttt{thumblink=none} is used).\newline
54
55 \bigskip
56
57 {\color{green} Save per page about $200\unit{ml}$ water, $2\unit{g}$ CO$_{2}$
58 and $2\unit{g}$ wood:\newline
59 Therefore please print only if this is really necessary.}\newline
60
61 \bigskip
62
63 \textbf{%
64 For testing purpose page \pageref{greenpage} has been completely coloured!
65 \newline
66 Better exclude it from printing\ldots \newline}
67
68 \bigskip
69
70 Some thumb mark texts are too large for the thumb mark (especially when the
71 paper size and therefore also the thumb mark size is decreased).
72 When option \texttt{width=\{autoauto\}} would be used,
73 the thumb mark width would be automatically increased.
74
75 \bigskip
76
77 For printing this example to another format of paper (e.\,g. A4)
78 it is necessary to add the according option (e.\,g. \verb|a4paper|)
79 to the document class and recompile it! (In that case the
80 thumb marks column change will occur at another point, of course.)
81 With paper format equal to document format the document can be printed
82 without adapting the size, like e.\,g.
83 \textquotedblleft shrink to page\textquotedblright .
84 That would add a white border around the document
85 and by moving the thumb marks from the edge of the paper they no longer appear
86 at the side of the stack of paper. It is also necessary to use a printer
87 capable of printing up to the border of the sheet of paper. Alternatively
88 it is possible after the printing to cut the paper to the right size.
89 While performing this manually is probably quite cumbersome,
90 printing houses use paper, which is slightly larger than the
91 desired format, and afterwards cut it to format.
92

```

```

93 \newpage
94
95 \addtitlethumb{Frontmatter}{0}{white}{gray}{pagesLTS.0}
96
97 At the first page no thumb mark was used, but we want to begin with thumb marks
98 at the first page, therefore a
99 \begin{verbatim}
100 \addtitlethumb{Frontmatter}{0}{white}{gray}{pagesLTS.0}
101 \end{verbatim}
102 was used at the beginning of this page.
103
104 \newpage
105
106 \tableofcontents
107
108 \newpage
109
110 To include an overview page for the thumb marks,
111 \begin{verbatim}
112 \addthumbsoverviewtocontents{section}{Thumb marks overview}%
113 \thumbsoverview{Table of Thumbs}
114 \end{verbatim}
115 is used, where \textbackslash addthumbsoverviewtocontents adds the thumb
116 marks overview page to the table of contents.
117
118 \addthumbsoverviewtocontents{section}{Thumb marks overview}%
119 \thumbsoverview{Table of Thumbs}
120
121 That were the overview pages for the thumb marks.
122
123 \newpage
124
125 \section{The first section}
126 \addthumb{First section}{\space\Huge{\textbf{$1^{\text{st}}$}}}{yellow}{green}
127
128 \begin{verbatim}
129 \addthumb{First section}{\space\Huge{\textbf{$1^{\text{st}}$}}}{yellow}{green}
130 \end{verbatim}
131
132 A thumb mark is added for this section. The parameters are: title for the thumb mark,
133 the text to be displayed in the thumb mark (choose your own format),
134 the colour of the text in the thumb mark,
135 and the background colour of the thumb mark (parameters in this order).\newline
136
137 Now for some pages of \textquotedblleft content\textquotedblright\ldots
138
139 \newpage

```

```

140 \lipsum[1]
141 \newpage
142 \lipsum[1]
143 \newpage
144 \lipsum[1]
145 \newpage
146
147 \section{The second section}
148 \addthumb{Second section}{\Huge{\textbf{\arabic{section}}}}{green}{yellow}
149
150 For this section, the text to be displayed in the thumb mark was set to
151 \begin{verbatim}
152 \Huge{\textbf{\arabic{section}}}
153 \end{verbatim}
154 i.\,e. the number of the section will be displayed (huge \& bold).\newline
155
156 Let us change the thumb mark on a page with an even number:
157
158 \newpage
159
160 \section{The third section}
161 \addthumb{Third section}{\Huge{\textbf{\arabic{section}}}}{blue}{red}
162
163 No problem!
164
165 And you do not need to have a section to add a thumb:
166
167 \newpage
168
169 \addthumb{Still third section}{\Huge{\textbf{\arabic{section}b}}}{red}{blue}
170
171 This is still the third section, but there is a new thumb mark.
172
173 On the other hand, you can even get rid of the the thumb marks
174 for some page(s):
175
176 \newpage
177
178 \stopthumb
179
180 The command
181 \begin{verbatim}
182 \stopthumb
183 \end{verbatim}
184 was used here. Until another addthumb (with parameters) or
185 \begin{verbatim}
186 \continuethumb

```

```

187 \end{verbatim}
188 is used, there will be no more thumb marks.
189
190 \newpage
191
192 Still no thumb marks.
193
194 \newpage
195
196 Still no thumb marks.
197
198 \newpage
199
200 Still no thumb marks.
201
202 \newpage
203
204 \continuethumb
205
206 Thumb mark continued (unchanged).
207
208 \newpage
209
210 Thumb mark continued (unchanged).
211
212 \newpage
213
214 Time for another thumb,
215
216 \addthumb{Another heading}{Small text}{white}{black}
217
218 and another.
219
220 \addthumb{Huge Text}{\Huge{Huge Text}}{yellow}{green}
221
222 \bigskip
223
224 \textquotedblleft {\Huge{Huge Text}}\textquotedblright\ is too large for
225 the thumb mark. When option \texttt{width=\{autoauto\}} would be used,
226 the thumb mark width would be automatically increased.\label{HugeText}
227
228 \addthumb{bold text }{\textbf{Bf Text}}{pink}{blue}
229
230 \addthumb{Huge Bold Text}{\Huge{\textbf{HBT}}}{black}{yellow}
231
232 \bigskip
233

```

234 When there is more than one thumb mark at one page, this is also no problem.
235
236 \newpage
237
238 Some text
239
240 \newpage
241
242 Some text
243
244 \newpage
245
246 Some text
247
248 \newpage
249
250 \section{xcolor}
251 \addthumb{xcolor}{\Huge{\textbf{xcolor}}}{magenta}{cyan}
252
253 It is probably a good idea to have a look at the \textsf{xcolor} package
254 and use other colours than used in this example.
255
256 (About automatically increasing the thumb mark width to the thumb mark text
257 width please see the note at page~\pageref{HugeText}.)
258
259 \newpage
260
261 \addthumb{A mark}{\Huge{\textbf{A}}}{lime}{darkgray}
262
263 I just need to add further thumb marks to get them reaching the bottom of the page.
264
265 Generally the vertical size of the thumb marks is set to the value given in the
266 height option. If it is \texttt{auto}, the size of the thumb marks is decreased,
267 so that they fit all on one page. But when they get smaller than \texttt{minheight},
268 instead of decreasing their size further, a new thumbs column is started
269 (which will happen here).
270
271 \newpage
272
273 \addthumb{B mark}{\Huge{\textbf{B}}}{brown}{pink}
274
275 There! A new thumb column was started automatically!
276
277 \newpage
278
279 \addthumb{C mark}{\Huge{\textbf{C}}}{brown}{pink}
280

281 You can, of course, keep the colour for more than one thumb mark.
282
283 \newpage
284
285 \addthumb{\$1/1.\,955\,83\$, EUR}{\Huge{\textbf{D}}}{orange}{violet}
286
287 I am just adding further thumb marks.
288
289 If you are curious why the thumb mark between
290 \textquotedblleft C mark\textquotedblright\ and \textquotedblleft E mark\textquotedblright\ has
291 not been named \textquotedblleft D mark\textquotedblright\ but
292 \textquotedblleft \$1/1.\,955\,83\$, EUR\textquotedblright :
293
294 \$1\unit{DM}=1\unit{D\ Mark}=1\unit{Deutsche\ Mark}\$\newline
295 \$=\frac{1}{1.\,955\,83}\\$, \euro \\$,=1/1.\,955\,83\unit{Euro}=1/1.\,955\,83\unit{EUR}\$.
296
297 \newpage
298
299 \addthumb{E mark}{\Huge{\textbf{E}}}{lightgray}{black}
300
301 I am just adding further thumb marks.
302
303 \newpage
304
305 \addthumb{F mark}{\Huge{\textbf{F}}}{magenta}{black}
306
307 Some text.
308
309 \newpage
310 \thumbnewcolumn
311 \addthumb{New thumb marks column}{\Huge{\textit{NC}}}{magenta}{black}
312
313 There! A new thumb column was started manually!
314
315 \newpage
316
317 Some text.
318
319 \newpage
320
321 \addthumb{G mark}{\Huge{\textbf{G}}}{orange}{violet}
322
323 I just added another thumb mark.
324

```

325 \newpage
326
327 \pagecolor{green}
328
329 \makeatletter
330 \@ifundefined{Hy@Warning}{% hyperref not loaded
331     \let\url\verb%
332     }{% hyperref loaded
333     \phantomsection%
334     }%
335 \makeatother
336
337 \label{greenpage}
338
339 Some faulty pdf-viewer sometimes (for the same document!)
340 adds a white line at the bottom and right side of the document
341 when presenting it. This does not change the printed version.
342 To test for this problem, this page has been completely coloured.
343 (Probably better exclude this page from printing\ldots{ })
344
345 \textsc{Heiko Oberdiek} wrote at Tue, 26 Apr 2011 14:13:29 +0200
346 in the \newline
347 comp.text.tex newsgroup (see e.\,g. \newline
348 \url{http://groups.google.com/group/de.comp.text.tex/msg/b3aea4a60e1c3737}): \newline
349 \textquotedblleft Der Ursprung ist 0 0,
350 da gibt es nicht viel zu runden; bei den anderen Seiten
351 werden pt als bp in die PDF-Datei geschrieben, d.h.
352 der Balken ist um 72.27/72 zu gro\ss{ }, das
353 sollte auch Rundungsfehler abdecken.\textquotedblright
354
355 (The origin is 0 0, there is not much to be rounded;
356 for the other sides the  $\unit{pt}$  are written as  $\unit{bp}$  into
357 the pdf-file, i.\,e. the rule is too large by  $72.27/72$ , which
358 should cover also rounding errors.)
359
360 The thumb marks are also too large - on purpose! This has been done
361 to assure, that they cover the page up to its (paper) border,
362 therefore they are placed a little bit over the paper margin.
363
364 Now I red somewhere in the net (should have remembered to note the url),
365 that white margins are presented, whenever there is some object outside
366 of the page. Thus, it is a feature, not a bug?!
367 What I do not understand: The same version of the viewer (at same operating
368 system) at one PC shows white margins, and at another one does not. Strange.
369 Even stranger: The same document sometimes is presented with white lines
370 and sometimes without.\newline
371 But at least it does not influence the printed version.

```



```

372
373 \newpage
374
375 \pagecolor{white}
376
377 It is possible to use the Table of Thumbs more than once (for example
378 at the beginning and the end of the document) and to refer to them via e.\,g.
379 \verb|\pageref{TableOfThumbs1}, \pageref{TableOfThumbs2}|,... ,
380 here: page \pageref{TableOfThumbs1}, page \pageref{TableOfThumbs2},
381 and via e.\,g. \verb|\pageref{TableOfThumbs}| it is referred to the last used
382 Table of Thumbs (for compatibility with older package versions).
383 If there is only one Table of Thumbs, this one is also the last one, of course.
384 Here it is at page \pageref{TableOfThumbs}.
385
386 \thumbsoverview{Table of Thumbs again}
387
388 \end{document}
389 \end{example}

```

5 The implementation

We start off by checking that we are loading into L^AT_EX 2_ε and announcing the name and version of this package.

```
390 \*package)
391 \NeedsTeXFormat{LaTeX2e}[2009/09/24]
392 \ProvidesPackage{thumbs}[2011/06/24 v1.0g]
393         Thumb marks and overview page(s) (HMM)]
394
```

A short description of the thumbs package:

```
395 %% This package allows to create a customizable thumb index,
396 %% providing a quick and easy reference method for large documents,
397 %% as well as an overview page.
398
```

For SW(P) users, we issue a warning. Unfortunately, we cannot check for the used software (can we?), and there will be a stack overflow when using `hyperref` even before the `thumbs` package is loaded, thus the warning might not even reach the users. (Thus: Read the manual of the `thumbs` package!) The options for those packages might be changed by the user – I did not test all available options, thus first test, whether the document can be compiled with these options, and then try to change them according to your wishes.

```
399 \message{^^J *** Compiling with SW(P)? ^^J%
400 Please see the sw(p)*.log or \jobname.log-file! *** ^^J}
401 \PackageWarningNoLine{thumbs}{%
402   When compiling with SWP 5.50 Build 2960\MessageBreak%
403   (\copyright\ MacKichan Software, Inc.),\MessageBreak%
404   these additional packages are needed:\MessageBreak%
405   \string\usepackage[T1]{fontenc}\MessageBreak%
406   \string\usepackage{amsfonts}\MessageBreak%
407   \string\usepackage[math]{cellspace}\MessageBreak%
408   \string\usepackage{xcolor}\MessageBreak%
409   \string\pagecolor{white}\MessageBreak%
410   especially before hyperref and thumbs,\MessageBreak%
411   but best right after the \string\documentclass!\MessageBreak%
412 }
413
```

For the handling of the options we need the `kvoptions` package of HEIKO OBERDIEK (see subsection 6.1):

```
414 \RequirePackage{kvoptions}[2010/12/23]% v3.10

415 \RequirePackage{atbegshi}[2011/01/30]% v1.15
416 \RequirePackage{xcolor}[2007/01/21]% v2.11
417 \RequirePackage{picture}[2009/10/11]% v1.3
418 \RequirePackage{alphalph}[2010/04/18]% v2.3
```

For the total number of the current page we need the `pagesLTS` package of myself (see subsection 6.1). It also loads the `undolabl` package, which is needed for `\overridelabel`:

```
419 \RequirePackage{pagesLTS}[2011/03/17]% v1.1o
420 \RequirePackage{rerunfilecheck}[2011/04/15]% v1.7
421 \RequirePackage{infwarerr}[2010/04/08]% v1.3
422 \RequirePackage{atveryend}[2011/04/23]% v1.7
```

A last information for the user:

```
423 %% thumbs may work with earlier versions of LaTeX2e and those packages,
424 %% but this was not tested. Please consider updating your LaTeX contribution
425 %% and packages to the most recent version (if they are not already the most
426 %% recent version).
427
```

See subsection 6.1 about how to get them.

The options are introduced:

```
428 \SetupKeyvalOptions{family=thumbs,prefix=thumbs@}
429 \DeclareStringOption[white]{pagecolor}[white]% \thumbs@pagecolor
430 \DeclareStringOption[linefill]{dots}
431 \DeclareStringOption[rule]{thumbblink}[rule]
432 \DeclareStringOption[47pt]{minheight}[47pt]
433 \DeclareStringOption{height}[auto]
434 \DeclareStringOption{width}[auto]
435 \DeclareStringOption{distance}[2mm]
436 \DeclareStringOption{topthumbmargin}[auto]
437 \DeclareStringOption{bottomthumbmargin}[auto]
438 \DeclareBoolOption[true]{ignorehoffset}
439 \DeclareBoolOption[true]{ignorevoffset}
440 \DeclareBoolOption[true]{verbose}
441 \DeclareComplementaryOption{silent}{verbose}
442 \DeclareBoolOption{draft}
443 \DeclareComplementaryOption{final}{draft}
444
445 \ProcessKeyvalOptions*
446
```

`ignorehoffset` Usually `\hoffset` and `\voffset` should be regarded, but moving the thumb marks away from the paper edge probably makes them useless. Therefore `\hoffset` and `\voffset` are ignored by default, or when option `ignorehoffset` or `ignorehoffset=true` is used (and `ignorevoffset` or `ignorevoffset=true`, respectively). But in case that the user wants to print at one sort of paper but later trim it to another one, regarding the offsets would be necessary. Therefore `ignorehoffset=false` and `ignorevoffset=false` can be used to regard these offsets. (Combinations `ignorehoffset=true`, `ignorevoffset=false` and `ignorehoffset=false`, `ignorevoffset=true` are also possible.)

```
447 \ifthumbs@ignorehoffset
448 \PackageWarningNoLine{thumbs}{%
449   Option ignorehoffset NOT =false:\MessageBreak%
```

```

450   hoffset will be ignored.\MessageBreak%
451   To make thumbs regard hoffset use option\MessageBreak%
452   ignorehoffset=false}
453   \gdef\th@bmshoffset{Opt}
454 \else
455   \PackageWarningNoLine{thumbs}{%
456     Option ignorehoffset=false:\MessageBreak%
457     hoffset will be regarded.\MessageBreak%
458     This might move the thumb marks away from the paper edge}
459   \gdef\th@bmshoffset{\hoffset}
460 \fi
461
462 \ifthumbs@ignorevoffset
463   \PackageWarningNoLine{thumbs}{%
464     Option ignorevoffset NOT =false:\MessageBreak%
465     voffset will be ignored.\MessageBreak%
466     To make thumbs regard voffset use option\MessageBreak%
467     ignorevoffset=false}
468   \gdef\th@bmsovffset{-\voffset}
469 \else
470   \PackageWarningNoLine{thumbs}{%
471     Option ignorevoffset=false:\MessageBreak%
472     voffset will be regarded.\MessageBreak%
473     This might move the thumb mark outside of the printable area}
474   \gdef\th@bmsovffset{\voffset}
475 \fi
476

```

pagecolor We set the (background) page colour to \thumbs@pagecolor, because the xcolour package needs a defined colour here (it can be changed later).

```

477 \pagecolor{\thumbs@pagecolor}
478

```

linefill We process the linefill option value:

```

479 \ifx\thumbs@linefill\empty%
480   \gdef\th@mb@linefill{\hspace*{\fill}}
481 \else
482   \def\th@mbstest{line}%
483   \ifx\thumbs@linefill\th@mbstest%
484     \gdef\th@mb@linefill{\hrulefill}
485   \else
486     \def\th@mbstest{dots}%
487     \ifx\thumbs@linefill\th@mbstest%
488       \gdef\th@mb@linefill{\dotfill}
489     \else
490       \PackageError{thumbs}{Option linefill with invalid value}{%
491         Option linefill has value '\thumbs@linefill'.\MessageBreak%
492         Valid values are '' (empty), 'line', or 'dots'.\MessageBreak%

```

```

493      '' (empty) will be used now.\MessageBreak%
494    }
495    \gdef\th@mb@linefill{\hspace*{\fill}}
496    \fi
497  \fi
498 \fi
499

```

We introduce new dimensions for width, height, position of and vertical distance between the thumb marks and some helper dimensions.

```

500 \newdimen\th@mbwidthx
501
502 \newdimen\th@mbheighty% Thumb height y
503 \setlength{\th@mbheighty}{\z@}
504
505 \newdimen\th@mbposx
506 \newdimen\th@mbposy
507 \newdimen\th@mbposyA
508 \newdimen\th@mbposytop
509 \newdimen\th@mbposybottom
510 \newdimen\th@mbwidthxtoc
511 \newdimen\th@mbposytcy
512 \newdimen\th@mbposytcyy
513
514 \newdimen\th@mb@distance% vertical distance between thumb marks
515 \ifx\thumbs@distance\empty%
516   \setlength{\th@mb@distance}{1mm}
517 \else
518   \setlength{\th@mb@distance}{\thumbs@distance}
519 \fi
520
521 \ifthumbs@verbose% \relax
522 \else
523   \PackageWarningNoLine{thumbs}{%
524     Option verbose=false (or silent=true) found:\MessageBreak%
525     You will lose some information}
526 \fi
527

```

We create a new Box for the thumbs, a temporary counter and make some global definitions.

```

528 \newbox\ThumbsBox
529

```

Generally it is not necessary to initialise a counter, because this is done automatically. But some packages change the handling of counters (e.g. the `lualloc` package as of 1995/09/24, v1.1b), and then a new counter might have a value different from zero (or the register might even contain something which is not a number value at all but some other string).

```

530 \newcounter{th@mb@tmpA}

```

```

531 \setcounter{th@mbs@tmpA}{0}
532
533 \gdef\th@mbs{0}
534 \gdef\th@mbsmax{0}
535 \gdef\th@umbsperpage{0}% will be set via aux file
536 \gdef\th@umbsperpagecount{0}
537
538 \gdef\th@mbtitle{}
539 \gdef\th@mbtext{}
540 \gdef\th@mbtextcolour{\thumbs@pagecolor}
541 \gdef\th@mbackgroundcolour{\thumbs@pagecolor}
542 \gdef\th@mbcolumn{0}
543
544 \gdef\th@mbtextA{}
545 \gdef\th@mbtextcolourA{\thumbs@pagecolor}
546 \gdef\th@mbackgroundcolourA{\thumbs@pagecolor}
547
548 \gdef\th@mbprinting{1}
549 \gdef\th@mbtoprint{0}
550 \gdef\th@mbonpage{0}
551 \gdef\th@mbonpagemax{0}
552
553 \gdef\th@mbcolumnnew{0}
554
555 \gdef\thumb@two{2}% There is no \pagesLTS@two (yet).
556
557 \gdef\th@mbs@toc@level{}
558 \gdef\th@mbs@toc@text{}
559
560 \gdef\th@mbmaxwidth{Opt}
561
562 \gdef\th@mb@titlelabel{}
563
564 \gdef\th@mbstable{0}% number of thumb marks overview tables
565

```

It is checked whether writing to thumbs.tmb is allowed.

```

566 \if@files% \relax
567 \else
568   \PackageWarningNoLine{thumbs}{No auxiliary files allowed!\MessageBreak%
569     It was not allowed to write to files.\MessageBreak%
570     A lot of packages do not work without access to files\MessageBreak%
571     like the .aux one. The thumbs package needs to write\MessageBreak%
572     to the \jobname.tmb file. To exit press\MessageBreak%
573     Ctrl+Z\MessageBreak%
574     .\MessageBreak%
575   }
576 \fi

```

In `\setth@mbheight` the height of a thumb mark (for automatically thumb heights) is computed as “((Thumbs extension) / (Number of Thumbs)) - (2 × distance between Thumbs)”.

```

578 \newcommand{\setth@mbheight}{%
579   \setlength{\th@mbheighty}{\z@}
580   \advance\th@mbheighty+\headheight
581   \advance\th@mbheighty+\headsep
582   \advance\th@mbheighty+\textheight
583   \advance\th@mbheighty+\footskip
584   \setcounter{th@mbs@tmpA}{\th@mbsmax}
585   \ifnum\value{th@mbs@tmpA}>1
586     \divide\th@mbheighty\th@mbsmax
587   \fi
588   \advance\th@mbheighty-\th@mbsdistance
589   \advance\th@mbheighty-\th@mbsdistance
590 }
591
```

At the beginning of the document `\AtBeginDocument` is executed. `\th@bmshoffset` and `\th@bmsvoffset` are set again, because `\hoffset` and `\voffset` could have been changed.

```

592 \AtBeginDocument{%
593   \ifthumbs@ignorehoffset
594     \gdef\th@bmshoffset{0pt}
595   \else
596     \gdef\th@bmshoffset{\hoffset}
597   \fi
598   \ifthumbs@ignorevoffset
599     \gdef\th@bmsvoffset{-\voffset}
600   \else
601     \gdef\th@bmsvoffset{\voffset}
602   \fi
603   \global\edef\th@mbpaperwidth{\the\paperwidth}
604   \setlength{\th@mbposyA}{1pt}
605   \ifdim \thumbs@minheight < \th@mbposyA% too small
606     \setlength{\thumbs@minheight}{1pt}
607   \else
608     \ifdim \thumbs@minheight = \th@mbposyA% small, but ok
609   \else
610     \ifdim \thumbs@minheight > \th@mbposyA% ok
611   \else
612     \PackageError{thumbs}{Option minheight has invalid value}{%
613       Please use a number and a length unit (e.g. mm, cm, pt)\MessageBreak%
614       and no space between as value for option minheight\MessageBreak%
615       and include this value+unit combination in curly brackets\MessageBreak%
616       (please see the thumbs-example.tex file).\MessageBreak%
617       When pressing return, minheight will now be set to 47pt.\MessageBreak%

```

```

618     }
619     \setlength{\thumbs@minheight}{47pt}
620     \fi
621     \fi
622     \fi
623     \setlength{\th@mbposyA}{\thumbs@minheight}

```

This should be a temporary dimension, but we do not want to waste a `newdimension`, and `\th@mbposyA` is not used here yet and will be set later.

Thumb height `\th@mbheighty` is treated. If the value is empty, it is set to `\th@mbposyA`, which was just defined to be 47 pt (by default, or to the value chosen by the user with package option `minheight={...}`):

```

624     \ifx\thumbs@height\empty%
625         \setlength{\th@mbheighty}{\th@mbposyA}
626     \else
627         \def\th@mbstest{auto}
628         \ifx\thumbs@height\th@mbstest%

```

If it is not empty but `auto(matic)`, the value is computed via `\setth@mbheight` (see above).

```

629         \setth@mbheight

```

When the height is smaller than `\thumbs@minheight` (default: 47 pt), this is too small, and instead a new column/page of thumb marks is used.

```

630         \ifdim \th@mbheighty < \thumbs@minheight
631             \PackageWarningNoLine{thumbs}{Thumbs not high enough:\MessageBreak%
632             Option height has value 'auto'. For \th@mbsmax\space thumbs per page\MessageBreak%
633             this results in a thumb height of \the\th@mbheighty.\MessageBreak%
634             This is lower than the minimal thumb height, \thumbs@minheight,\MessageBreak%
635             therefore another thumbs column will be opened.\MessageBreak%
636             If you do not want this, choose a smaller value\MessageBreak%
637             for option 'minheight'%
638         }
639         \setlength{\th@mbheighty}{\z@}
640         \advance\th@mbheighty+\th@mbposyA% = \thumbs@minheight
641     \fi
642 \else

```

When a value has been given for the thumb marks' height, this fixed value is used.

```

643     \ifthumbs@verbose
644         \edef\thumbsinfo{\the\th@mbheighty}
645         \PackageInfo{thumbs}{Now setting thumbs' height to \thumbsinfo .}
646     \fi
647     \setlength{\th@mbheighty}{\thumbs@height}
648 \fi
649 \fi

```

Read in the `\jobname.tmb`-file:

```

650 \newread\@instreamthumb%

```


Inform the users about the dimensions of the thumb marks (look in the log file):

```
651 \ifthumbs@verbose
652   \message{^^J}
653   \@PackageInfoNoLine{thumbs}{***** THUMB dimensions *****}
654   \edef\thumbsinfo{\the\th@mbheighty}
655   \@PackageInfoNoLine{thumbs}{The height of the thumb marks is \thumbsinfo}
656 \fi
```

Setting the thumb mark width (\th@mbwidthx):

```
657 \ifthumbs@draft
658   \setlength{\th@mbwidthx}{2pt}
659 \else
660   \setlength{\th@mbwidthx}{\paperwidth}
661   \advance\th@mbwidthx-\textwidth
662   \divide\th@mbwidthx4
663   \setlength{\th@mbposyA}{0sp}
664   \ifx\thumbs@width\empty%
665   \else
666     \def\th@mbstest{auto}
667     \ifx\thumbs@width\th@mbstest%
668     \else
669       \def\th@mbstest{autoauto}
670       \ifx\thumbs@width\th@mbstest%
671         \@ifundefined{th@mbmaxwidtha}{%
672           \if@files%
673             \gdef\th@mbmaxwidtha{0pt}
674             \setlength{\th@mbwidthx}{\th@mbmaxwidtha}
675             \AtVeryVeryEnd{
676               \PackageWarningNoLine{thumbs}{%
677                 \string\th@mbmaxwidtha\space undefined.\MessageBreak%
678                 Rerun to get the thumb marks width right%
679               }
680             }
681           \else
682             \PackageError{thumbs}{%
683               You cannot use option autoauto without \jobname.aux file.%
684             }
685           \fi
686         }{%\else
687           \setlength{\th@mbwidthx}{\th@mbmaxwidtha}
688         }%\fi
689       \else
690         \ifdim \thumbs@width > \th@mbposyA% OK
691         \setlength{\th@mbwidthx}{\thumbs@width}
692       \else
```

```

693         \PackageError{thumbs}{Thumbs not wide enough}{%
694             Option width has value '\thumbs@width'.\MessageBreak%
695             This is not a valid dimension larger than zero.\MessageBreak%
696             Width will be set automatically.\MessageBreak%
697         }
698     \fi
699 \fi
700 \fi
701 \fi
702 \fi
703 \ifthumbs@verbose
704     \edef\thumbsinfo{\the\th@mbwidthx}
705     \@PackageInfoNoLine{thumbs}{The width of the thumb marks is \thumbsinfo}
706 \ifthumbs@draft
707     \@PackageInfoNoLine{thumbs}{because thumbs package is in draft mode}
708 \fi
709 \fi

```

Setting the position of the first/top thumb mark. Vertical (y) position is a little bit complicated, because option `\thumbs@topthumbmargin` must be handled:

```

710 % Thumb position x \th@mbposx
711 \setlength{\th@mbposx}{\paperwidth}
712 \advance\th@mbposx-\th@mbwidthx
713 \ifthumbs@ignorehoffset
714     \advance\th@mbposx-\hoffset
715 \fi
716 \advance\th@mbposx+1pt
717 % Thumb position y \th@mbposy
718 \ifx\thumbs@topthumbmargin\empty%
719     \def\thumbs@topthumbmargin{auto}
720 \fi
721 \def\th@mbstest{auto}
722 \ifx\thumbs@topthumbmargin\th@mbstest%
723     \setlength{\th@mbposy}{1in}
724     \advance\th@mbposy+\th@bmsvoffset
725     \advance\th@mbposy+\topmargin
726     \advance\th@mbposy-\th@mbdistance
727     \advance\th@mbposy+\th@mbheighty
728 \else
729     \setlength{\th@mbposyA}{-1pt}
730     \ifdim \thumbs@topthumbmargin > \th@mbposyA% OK
731     \else
732         \PackageWarning{thumbs}{Thumbs column starting too high.\MessageBreak%
733             Option topthumbmargin has value '\thumbs@topthumbmargin'.\MessageBreak%
734             topthumbmargin will be set to -1pt.\MessageBreak%
735         }
736     \gdef\thumbs@topthumbmargin{-1pt}

```

```

737 \fi
738 \setlength{\th@mbposy}{\thumbs@topthumbmargin}
739 \advance\th@mbposy-\th@mbsdistance
740 \advance\th@mbposy+\th@mbheighty
741 \fi
742 \setlength{\th@mbposytop}{\th@mbposy}
743 \ifthumbs@verbose%
744 \setlength{\@tempdimc}{\th@mbposytop}
745 \advance\@tempdimc-\th@mbheighty
746 \advance\@tempdimc+\th@mbsdistance
747 \edef\thumbsinfo{\the\@tempdimc}
748 \@PackageInfoNoLine{thumbs}{The top thumb margin is \thumbsinfo}
749 \fi

```

Setting the lowest position of a thumb mark, according to option \thumbs@bottomthumbmargin:

```

750 % Max. thumb position y \th@mbposybottom
751 \ifx\thumbs@bottomthumbmargin\empty%
752 \gdef\thumbs@bottomthumbmargin{auto}
753 \fi
754 \def\th@mbstest{auto}
755 \ifx\thumbs@bottomthumbmargin\th@mbstest%
756 \setlength{\th@mbposybottom}{1in}
757 \ifthumbs@ignorevoffset% \relax
758 \else \advance\th@mbposybottom+\th@bmsvoffset
759 \fi
760 \advance\th@mbposybottom+\topmargin
761 \advance\th@mbposybottom-\th@mbsdistance
762 \advance\th@mbposybottom+\th@mbheighty
763 \advance\th@mbposybottom+\headheight
764 \advance\th@mbposybottom+\headsep
765 \advance\th@mbposybottom+\textheight
766 \advance\th@mbposybottom+\footskip
767 \advance\th@mbposybottom-\th@mbsdistance
768 \advance\th@mbposybottom-\th@mbheighty
769 \else
770 \setlength{\th@mbposyA}{\paperheight}
771 \advance\th@mbposyA-\thumbs@bottomthumbmargin
772 \advance\th@mbposyA-\th@mbposytop
773 \advance\th@mbposyA-\th@mbsdistance
774 \advance\th@mbposyA-\th@mbheighty
775 \advance\th@mbposyA-\th@mbsdistance
776 \ifdim \th@mbposyA > 0sp%ok
777 \else
778 \setlength{\th@mbposyA}{\paperheight}
779 \advance\th@mbposyA-\th@mbposytop
780 \advance\th@mbposyA-\th@mbsdistance
781 \advance\th@mbposyA-\th@mbheighty
782 \advance\th@mbposyA-\th@mbsdistance

```

```

783 \advance\th@mbposyA-1pt
784 \PackageWarning{thumbs}{Thumbs column ending too high.\MessageBreak%
785 Option bottomthumbmargin has value '\thumbs@bottomthumbmargin'.\MessageBreak%
786 bottomthumbmargin will be set to '\the\th@mbposyA'.\MessageBreak%
787 }
788 \global\edef\thumbs@bottomthumbmargin{\the\th@mbposyA}
789 \fi
790 \setlength{\th@mbposyA}{\thumbs@bottomthumbmargin}
791 \setlength{\@tempdimc}{-1pt}
792 \ifdim \th@mbposyA < \@tempdimc%
793 \PackageWarning{thumbs}{Thumbs column ending too low.\MessageBreak%
794 Option bottomthumbmargin has value '\thumbs@bottomthumbmargin'.\MessageBreak%
795 bottomthumbmargin will be set to -1pt.\MessageBreak%
796 }
797 \gdef\thumbs@bottomthumbmargin{-1pt}
798 \fi
799 \setlength{\th@mbposybottom}{\paperheight}
800 \advance\th@mbposybottom-\thumbs@bottomthumbmargin
801 \fi
802 \ifthumbs@verbose%
803 \setlength{\@tempdimc}{\paperheight}
804 \advance\@tempdimc-\th@mbposybottom
805 \edef\thumbsinfo{\the\@tempdimc}
806 \@PackageInfoNoLine{thumbs}{The bottom thumb margin is \thumbsinfo}
807 \@PackageInfoNoLine{thumbs}{*****}
808 \message{^^J}
809 \fi

```

`\th@mbposyA` is no longer used as temporary dimension here, but set to the top-most vertical thumb position (y). Because it will be increased (i. e. the thumb positions will move downwards on the page), `\th@mbposybottom` is used to remember this position unchanged.

```

810 \advance\th@mbposy-\th@mbheighty% because it will be advanced also for the first thumb
811 \setlength{\th@mbposyA}{\th@mbposy}% \th@mbposyA will change.
812 \setlength{\th@mbposybottom}{\th@mbposy}% \th@mbposybottom shall not be changed.
813 }
814

```

`\th@mb@dadvance` The internal command `\th@mb@dadvance` is used to advance the position of the current thumb by `\th@mbheighty` and `\th@mbdistance`. If the resulting position of the thumb is lower than the `\th@mbposybottom` position (i. e. `\th@mbposy` *higher* than `\th@mbposybottom`), a new thumb column will be started by the next `\addthumb`, otherwise a blank thumb is created and `\th@mb@dadvance` is calling itself again. This loop continues until a new thumb column is ready to be started.

```

815 \newcommand{\th@mb@dadvance}{%
816 \advance\th@mbposy+\th@mbheighty%
817 \advance\th@mbposy+\th@mbdistance%
818 \ifdim\th@mbposy>\th@mbposybottom%
819 \advance\th@mbposy-\th@mbheighty%
820 \advance\th@mbposy-\th@mbdistance%

```

```

821 \else%
822 \advance\th@mbposy-\th@mbheighty%
823 \advance\th@mbposy-\th@mbdistance%
824 \thumborigaddthumb{}{}{\thumbs@pagecolor}{\thumbs@pagecolor}%
825 \th@mb@dvance%
826 \fi%
827 }
828

```

`\thumbnewcolumn` With the command `\thumbnewcolumn` a new column can be started, even if the current one was not filled. This could be useful e.g. for a dictionary, which uses one column for translations from language A to language B, and the second column for translations from language B to language A. But in that case one probably should increase the size of the thumb marks, so that 26 thumb marks (in case of the latin alphabet) fill one thumb column. Do not use `\thumbnewcolumn` on a page where `\addthumb` was already used, but use `\addthumb` immediately after `\thumbnewcolumn`.

```

829 \newcommand{\thumbnewcolumn}{%
830 \ifx\th@mbtoprint\pagesLTS@one%
831 \PackageError{thumbs}{\string\thumbnewcolumn\space after \string\addthumb }{%
832 On page \thepage\space (approx.) \string\addthumb\space was used and *afterwards* \string\thumbnewcolumn .\MessageBreak%
833 When you want to use \string\thumbnewcolumn , do not use an \string\addthumb\space on the same\MessageBreak%
834 page before \string\thumbnewcolumn . Thus, either remove the \string\addthumb , or use a\MessageBreak%
835 \string\pagebreak , \string\newpage\space etc. before \string\thumbnewcolumn .\MessageBreak%
836 (And remember to use an \string\addthumb\space*after* \string\thumbnewcolumn .)\MessageBreak%
837 Your command \string\thumbnewcolumn\space will be ignored now.%
838 }%
839 \else%
840 \PackageWarning{thumbs}{%
841 Starting of another column requested by command\MessageBreak%
842 \string\thumbnewcolumn.\space Only use this command directly\MessageBreak%
843 before an \string\addthumb\space - did you?!\MessageBreak%
844 }%
845 \gdef\th@mbcolumnnew{1}%
846 \th@mb@dvance%
847 \gdef\th@mbprinting{0}%
848 \gdef\th@mbcolumnnew{2}%
849 \fi%
850 }
851

```

`\addtitlethumb` When a thumb mark shall not or cannot be placed on a page, e.g. at the title page or when using `\includepdf` from `pdfpages` package, but the reference in the thumb marks overview nevertheless shall name that page number and hyperlink to that page, `\addtitlethumb` can be used at the following page. It has five arguments. The arguments one to four are identical to the ones of `\addthumb` (see immediately below), and the fifth argument consists of the label of the page, where the hyperlink at the thumb marks overview page shall link to. For the first page the label `pagesLTS.0` can be use, which is already placed there by the used `pagesLTS` package.

```

852 \newcommand{\addtitlethumb}[5]{%
853 \global\edef\th@mb@titlelabel{#5}%
854 \addthumb{#1}{#2}{#3}{#4}%

```

```

855 \global\edef\th@mb@titlelabel{}%
856 }
857

```

\addthumb Now the \addthumb command is defined, which is used to add a new thumb mark to the document.

```

858 \newcommand{\addthumb}[4]{%
859   \gdef\th@mbprinting{1}%
860   \advance\th@mbposy\th@mbheighty%
861   \advance\th@mbposy\th@mbdistance%
862   \ifdim\th@mbposy>\th@mbposybottom%
863     \PackageWarning{thumbs}{%
864       Thumbs column full, starting another column.\MessageBreak%
865     }%
866   \setlength{\th@mbposy}{\th@mbposytop}%
867   \advance\th@mbposy\th@mbdistance%
868   \ifx\th@mbcolumn\pagesLTS@zero%
869     \global\edef\th@umbsperpagecount{\th@mb}%
870     \gdef\th@mbcolumn{1}%
871   \fi%
872 \fi%
873 \setcounter{th@mb@tmpA}{\th@mb}%
874 \addtocounter{th@mb@tmpA}{+1}%
875 \global\edef\th@mb{\arabic{th@mb@tmpA}}%

```

The \addthumb command has four parameters:

1. a title for the thumb mark (for the thumb marks overview page, e. g. the chapter title),
2. the text to be displayed in the thumb mark (for example a chapter number),
3. the colour of the text in the thumb mark,
4. and the background colour of the thumb mark

(parameters in this order).

```

876 \gdef\th@mbtitle{#1}%
877 \gdef\th@mbtext{#2}%
878 \gdef\th@mbtextcolour{#3}%
879 \gdef\th@mbbackgroundcolour{#4}%

```

The width of the thumb mark text is determined and compared to the width of the thumb mark (rule). When the text is wider than the rule, this has to be changed (either automatically with option `width={autoauto}` in the next compilation run or manually by changing `width={...}` by the user).

```

880 \edef\th@mbstmpwidth{\the\th@mbposyA}%
881 \settowidth{\th@mbposyA}{\th@mbtext\space}%
882 \ifdim\th@mbposyA>\th@mbmaxwidth%
883   \global\edef\th@mbmaxwidth{\the\th@mbposyA}%
884 \fi%

```

```

885 \ifdim\th@mbposyA>\th@mbwidthx%
886 \ifthumbs@draft% \relax
887 \else%
888 \edef\thumbsinfoa{\the\th@mbwidthx}
889 \edef\thumbsinfob{\the\th@mbposyA}
890 \PackageWarning{thumbs}{%
891     Thumb mark too small (width: \thumbsinfoa)\MessageBreak%
892     or its text too wide (width: \thumbsinfob)\MessageBreak%
893 }%
894 \fi%
895 \fi%
896 \setlength{\th@mbposyA}{\th@mbstmpwidth}%

```

\@ifpackageloaded cannot be used after \AtBeginDocument, so here it is not checked for the hyperref package, but for its \Hy@Warning command. If some other package or user is defining \Hy@Warning, thumbs will falsely assume, that hyperref has been loaded, but by my humble opinion, defining \Hy@Warning does not make sense and is bad style (except definition by the hyperref package itself, of course). Into the \jobname.tmb file a \thumbcontents entry is written. If hyperref is found, a \phantomsection is placed, a label for the thumb mark created, and the \thumbcontents entry will be hyperlinked to that label (except when \addtitlethumb was used, then the label reported from the user is used – the thumbs package does *not* create that label!).

```

897 \@ifundefined{Hy@Warning}{% hyperref not loaded
898 }{% hyperref loaded
899     \phantomsection%
900 }%
901 \label{thumbs.\th@mbs}%
902 \if@files%
903     \ifx\th@mb@titlelabel\empty%
904         \addtocontents{tmb}{\string\thumbcontents{#1}{#2}{#3}{#4}{\thepage}{thumbs.\th@mbs}{\th@mbcolumnnew}}%
905     \else%
906         \addtocounter{page}{-1}%
907         \edef\th@mb@page{\thepage}%
908         \addtocontents{tmb}{\string\thumbcontents{#1}{#2}{#3}{#4}{\th@mb@page}{\th@mb@titlelabel}{\th@mbcolumnnew}}%
909         \addtocounter{page}{+1}%
910     \fi%
911 %\else there is a problem, but the according warning message was already given earlier.
912 \fi%

```

Maybe there is a rare case, where more than one thumb mark will be placed at one page. Probably a \pagebreak, \newpage or something similar would be advisable, but nevertheless we should prepare for this case. We save the properties of the thumb mark(s).

```

913 \ifx\th@mbcolumnnew\pagesLTS@one%
914 \else%
915     \setcounter{th@mbs@tmpA}{\th@mbonpage}%
916     \addtocounter{th@mbs@tmpA}{+1}%
917     \global\edef\th@mbonpage{\arabic{th@mbs@tmpA}}%
918 \fi%

```

```

919 \ifx\th@mbtoprint\pagesLTS@zero%
920 \else%
921   \ifx\th@mbcolumnnew\pagesLTS@zero%
922     \PackageWarning{thumbs}{More than one thumb at one page:\MessageBreak%
923       You placed more than one thumb mark (at least \th@mbonpage)\MessageBreak%
924       on page \thepage \space (page is approximately).\MessageBreak%
925       Maybe insert a pagebreak?\MessageBreak%
926   }%
927   \fi%
928 \fi%
929 \ifnum\th@mbonpage=1%
930   \ifnum\th@mbonpagemax>0% \relax
931   \else \gdef\th@mbonpagemax{1}%
932   \fi%
933   \gdef\th@mbtextA{#2}%
934   \gdef\th@mbtextcolourA{#3}%
935   \gdef\th@mbackgroundcolourA{#4}%
936   \setlength{\th@mbposyA}{\th@mbposy}%
937 \else%
938   \ifx\th@mbcolumnnew\pagesLTS@zero%
939     \setcounter{th@mbs@tmpA}{1}%
940     \edef\th@mbonpagetest{\arabic{th@mbs@tmpA}}%
941     \@whilenum\th@mbonpagetest<\th@mbonpage\do{%
942       \addtocounter{th@mbs@tmpA}{1}%
943       \global\edef\th@mbonpagetest{\arabic{th@mbs@tmpA}}%
944       \ifnum\th@mbonpage=\th@mbonpagetest%
945         \ifnum\th@mbonpagemax<\th@mbonpage%
946           \global\edef\th@mbonpagemax{\th@mbonpage}%
947         \fi%
948         \edef\th@mbtmpdef{\csname th@mbtext\Alpha\arabic{th@mbs@tmpA}}\endcsname}%
949         \expandafter\gdef\th@mbtmpdef{#2}%
950         \edef\th@mbtmpdef{\csname th@mbtextcolour\Alpha\arabic{th@mbs@tmpA}}\endcsname}%
951         \expandafter\gdef\th@mbtmpdef{#3}%
952         \edef\th@mbtmpdef{\csname th@mbackgroundcolour\Alpha\arabic{th@mbs@tmpA}}\endcsname}%
953         \expandafter\gdef\th@mbtmpdef{#4}%
954       \fi%
955     }%
956   \else%
957     \ifnum\th@mbonpagemax<\th@mbonpage%
958       \global\edef\th@mbonpagemax{\th@mbonpage}%
959     \fi%
960   \fi%
961 \fi%
962 \ifx\th@mbcolumnnew\thumb@two% There is no \pagesLTS@two (yet).
963   \gdef\th@mbcolumnnew{0}%
964 \fi%
965 \gdef\th@mbtoprint{1}%

```



```

966   }
967
\stopthumb    When a page (or pages) shall have no thumb marks, \stopthumb stops the issuing of thumb marks (until another thumb
mark is placed or \continuethumb is used).
968 \newcommand{\stopthumb}{\gdef\th@mbprinting{0}}
969
\continuethumb    \continuethumb continues the issuing of thumb marks (equal to the one before this was stopped by \stopthumb).
970 \newcommand{\continuethumb}{\gdef\th@mbprinting{1}}
971
\thumbcontents    The internal command \thumbcontents (which will be read in from the \jobname.tmb file) creates a thumb mark entry on
the overview page(s). Its seven parameters are
    1. the title for the thumb mark,
    2. the text to be displayed in the thumb mark,
    3. the colour of the text in the thumb mark,
    4. the background colour of the thumb mark,
    5. the first page of this thumb mark,
    6. the label where it should hyperlink to
    7. and an indicator, whether \thumbnewcolumn is just issueing blank thumbs to fill a column
(parameters in this order). Without hyperref the 6th parameter is just ignored.
972 \newcommand{\thumbcontents}[7]{%
973   \advance\th@mbposy\th@mbheighty%
974   \advance\th@mbposy\th@mbsdistance%
975   \ifdim\th@mbposy>\th@mbposybottom%
976     \setlength{\th@mbposy}{\th@mbposytop}%
977     \advance\th@mbposy\th@mbsdistance%
978   \fi%
979   \def\th@mb@tmp@title{#1}%
980   \def\th@mb@tmp@text{#2}%
981   \def\th@mb@tmp@textcolour{#3}%
982   \def\th@mb@tmp@backgroundcolour{#4}%
983   \def\th@mb@tmp@page{#5}%
984   \def\th@mb@tmp@label{#6}%
985   \def\th@mb@tmp@column{#7}%
986   \ifx\th@mb@tmp@column\thumb@two%
987     \def\th@mb@tmp@column{0}%
988   \fi%
989   \setlength{\th@mbwidthxtoc}{\paperwidth}%
990   \advance\th@mbwidthxtoc-1in%
991   \advance\th@mbwidthxtoc-\hoffset%
992   \advance\th@mbwidthxtoc-\oddsidemargin%

```

```

993 \put(1in+\oddsidemargin,-\th@mbposy){%
994 \begin{picture}(0,0)%

```

When the option `thumblink=rule` was choosen, the whole rule is made into a hyperlink. Otherwise the rule is created without hyperlink (here).

```

995 \def\th@mbstest{rule}%
996 \ifx\thumbs@thumblink\th@mbstest%
997 \ifx\th@mb@tmp@column\pagesLTS@zero%
998 {\color{\th@mb@tmp@backgroundcolour}\hyperref[\th@mb@tmp@label]{\rule{\th@mbwidthxtoc}{\th@mbheighty}}}%
999 \else%

```

When `\th@mb@tmp@column` is not zero, then this is a blank thumb mark from `thumbnewcolumn`.

```

1000 {\color{\th@mb@tmp@backgroundcolour}\rule{\th@mbwidthxtoc}{\th@mbheighty}}%
1001 \fi%
1002 \else%
1003 {\color{\th@mb@tmp@backgroundcolour}\rule{\th@mbwidthxtoc}{\th@mbheighty}}%
1004 \fi%
1005 \end{picture}%

```

When `\th@mb@tmp@column` is zero, then this is **not** a blank thumb mark from `thumbnewcolumn`, and we need to fill it with some content. If it is not zero, it is a blank thumb mark, and nothing needs to be done here.

```

1006 \ifx\th@mb@tmp@column\pagesLTS@zero%
1007 \setlength{\th@mbwidthxtoc}{\paperwidth}%
1008 \advance\th@mbwidthxtoc-1in%
1009 \advance\th@mbwidthxtoc-\hoffset%
1010 \advance\th@mbwidthxtoc-\oddsidemargin%
1011 \advance\th@mbwidthxtoc-\th@mbwidthx%
1012 \advance\th@mbwidthxtoc-20pt%
1013 \ifdim\th@mbwidthxtoc>\textwidth%
1014 \setlength{\th@mbwidthxtoc}{\textwidth}
1015 \fi
1016 \begin{picture}(0,0)(0,-0.5\th@mbheighty+384930sp)%
1017 \bgroup%
1018 \setlength{\parindent}{0pt}%
1019 \vbox%
1020 {\hsize=\th@mbwidthxtoc}%

```

Depending on the value of option `thumblink`, parts of the text are made into hyperlinks:

- `none` creates *none* hyperlink

```

1021 \def\th@mbstest{none}
1022 \ifx\thumbs@thumblink\th@mbstest%
1023 {\color{\th@mb@tmp@textcolour}\noindent \th@mb@tmp@title%
1024 \leaders\box \ThumbsBox {\th@mbs@linefill \th@mb@tmp@page}%
1025 }%
1026 \else%

```

- **title** hyperlinks the *titles* of the thumb marks

```
1027          \def\th@mbstest{title}%
1028          \ifx\thumbs@thumblink\th@mbstest%
1029              {\color{\th@mb@tmp@textcolour}\noindent%
1030                  \hyperref[\th@mb@tmp@label]{\th@mb@tmp@title}%
1031                  \leaders\box \ThumbsBox {\th@mbs@linefill \th@mb@tmp@page}%
1032              }%
1033          \else%
```

- **page** hyperlinks the *page* numbers of the thumb marks

```
1034          \def\th@mbstest{page}%
1035          \ifx\thumbs@thumblink\th@mbstest%
1036              {\color{\th@mb@tmp@textcolour}\noindent%
1037                  \th@mb@tmp@title%
1038                  \leaders\box \ThumbsBox {\th@mbs@linefill \pageref{\th@mb@tmp@label}}%
1039              }%
1040          \else%
```

- **titleandpage** hyperlinks the *title and page* numbers of the thumb marks

```
1041          \def\th@mbstest{titleandpage}%
1042          \ifx\thumbs@thumblink\th@mbstest%
1043              {\color{\th@mb@tmp@textcolour}\noindent%
1044                  \hyperref[\th@mb@tmp@label]{\th@mb@tmp@title}%
1045                  \leaders\box \ThumbsBox {\th@mbs@linefill \pageref{\th@mb@tmp@label}}%
1046              }%
1047          \else%
```

- **line** hyperlinks the whole *line*, i.e. title, dots (or line or whatsoever) and page numbers of the thumb marks

```
1048          \def\th@mbstest{line}%
1049          \ifx\thumbs@thumblink\th@mbstest%
1050              {\color{\th@mb@tmp@textcolour}\noindent%
1051                  \hyperref[\th@mb@tmp@label]{\th@mb@tmp@title%
1052                  \leaders\box \ThumbsBox {\th@mbs@linefill \th@mb@tmp@page}}%
1053              }%
1054          \else%
```

- **rule** hyperlinks the whole *rule*, but that was already done above, so here no linking is done

```
1055          \def\th@mbstest{rule}%
1056          \ifx\thumbs@thumblink\th@mbstest%
1057              {\color{\th@mb@tmp@textcolour}\noindent%
1058                  \th@mb@tmp@title%
1059                  \leaders\box \ThumbsBox {\th@mbs@linefill \th@mb@tmp@page}%
1060              }%
1061          \else%
```

Another value for \thumbs@thumblink should never be encountered here.

```

1062      \PackageError{thumbs}{\string\thumbs@thumblink\space invalid}{%
1063      \string\thumbs@thumblink\space has an invalid value,\MessageBreak%
1064      although it did not have an invalid value before,\MessageBreak%
1065      and the thumbs package did not change it.\MessageBreak%
1066      Therefore some other package (or the user)\MessageBreak%
1067      manipulated it.\MessageBreak%
1068      Now setting it to 'none' as last resort.\MessageBreak%
1069      }%
1070      \gdef\thumbs@thumblink{none}%
1071      {\color{\th@mb@tmp@textcolour}\noindent%
1072      \th@mb@tmp@title%
1073      \leaders\box \ThumbsBox {\th@mb@linefill \th@mb@tmp@page}%
1074      }%
1075      \fi%
1076      \fi%
1077      \fi%
1078      \fi%
1079      \fi%
1080      \fi%
1081      }%
1082      }%
1083      \egroup%
1084      \end{picture}%

```

The thumb mark (with text) as set in the document outside of the thumb marks overview page(s) is also presented here.

```

1085      \begin{picture}(0,0)(1in+\th@bmshoffset+\oddsidemargin-\th@mbxpos+20pt,-0.5\th@mbheighty+384930sp)%
1086      \bgroup%
1087      \setlength{\parindent}{0pt}%
1088      \makebox[\th@mbwidthx][r]{\color{\th@mb@tmp@textcolour}\th@mb@tmp@text}}%
1089      \egroup%
1090      \end{picture}%
1091      \fi%
1092      }%
1093  }
1094

```

\th@mb@yA \th@mb@yA sets the y-position to be used in \th@mbprint.

```

1095 \newcommand{\th@mb@yA}{%
1096   \advance\th@mbposyA\th@mbheighty%
1097   \advance\th@mbposyA\th@mbdistance%
1098   \ifdim\th@mbposyA>\th@mbposybottom%
1099     \PackageWarning{thumbs}{You are not only using more than one thumb mark at one\MessageBreak%
1100     single page, but also thumb marks from different thumb\MessageBreak%
1101     columns. May I suggest the use of a \string\pagebreak\space or\MessageBreak%
1102     \string\newpage ?}%
1103   }%

```

```

1104 \setlength{\th@mbposyA}{\th@mbposytop}%
1105 \fi%
1106 }
1107

```

`\th@mbprint` `\th@mbprint` places a picture containing the thumb mark on the page.

```

1108 \newcommand{\th@mbprint}[3]{%
1109 \put(\th@mbxpos,-\th@mbposyA){%
1110 \begin{picture}(0,0)%
1111 {\color{#3}\rule{\th@mbwidthx}{\th@mbheighty}}%
1112 \end{picture}%
1113 \begin{picture}(0,0)(0,-0.5\th@mbheighty+384930sp)%
1114 \bgroup%
1115 \setlength{\parindent}{0pt}%
1116 \ifodd\c@CurrentPage%
1117 \if@twoside%
1118 \makebox[\th@mbwidthx][l]{\color{#2}\hspace*{1pt}\space #1}}%
1119 \else%
1120 \makebox[\th@mbwidthx][r]{\color{#2}#1\space}}%
1121 \fi%
1122 \else%
1123 \makebox[\th@mbwidthx][r]{\color{#2}#1\space}}%
1124 \fi%
1125 \egroup%
1126 \end{picture}%
1127 }%
1128 }
1129

```

`\AtBeginShipout` `\AtBeginShipoutUpperLeft` calls the `\th@mbprint` macro for each thumb mark which shall be placed on that page. When `\stopthumb` was used, the thumb mark is omitted.

```

1130 \AtBeginShipout{%
1131 \ifx\th@mbcolumnnew\pagesLTS@zero% ok
1132 \else%
1133 \PackageError{thumbs}{Missing \string\addthumb\space after \string\thumbnewcolumn }{%
1134 Command \string\thumbnewcolumn\space was used, but no new thumb placed with \string\addthumb\MessageBreak%
1135 (at least not at the same page). After \string\thumbnewcolumn\space please always use an\MessageBreak%
1136 \string\addthumb . Until the next \string\addthumb , there will be no thumb marks on the\MessageBreak%
1137 pages. Starting a new column of thumb marks and not putting a thumb mark into\MessageBreak%
1138 that column does not make sense. If you just want to get rid of column marks,\MessageBreak%
1139 do not abuse \string\thumbnewcolumn\space but use \string\stopthumb .\MessageBreak%
1140 (This error message will be repeated at all following pages,\MessageBreak%
1141 \space until \string\addthumb\space is used.)\MessageBreak%
1142 }%
1143 \fi%
1144 \setcounter{th@mbst@tmpA}{\value{CurrentPage}}%
1145 \addtocounter{th@mbst@tmpA}{-1}% because CurrentPage is already the one of the next page

```

Changing the paper size mid-document will probably cause some problems. But if it works, we try to cope with it. (When the change is performed without changing `\paperwidth`, we cannot detect it. Sorry.)

```

1146 \edef\th@bstmpwidth{\the\paperwidth}%
1147 \ifdim\th@mbpaperwidth=\th@bstmpwidth% OK
1148 \else%
1149   \PackageWarningNoLine{thumbs}{%
1150     Paperwidth has changed. Thumb mark positions become now adapted%
1151   }%
1152   \setlength{\th@mbposx}{\paperwidth}%
1153   \advance\th@mbposx-\th@mbwidthx%
1154   \ifthumbs@ignorehoffset%
1155     \advance\th@mbposx-\hoffset%
1156   \fi%
1157   \advance\th@mbposx+1pt%
1158   \global\edef\th@mbpaperwidth{\the\paperwidth}%
1159 \fi%

```

Determining the correct `\th@mbxpos`:

```

1160 \def\th@mbxpos{\th@mbposx}%
1161 \ifodd\c@th@mbs@tmpA% \relax
1162 \else%
1163   \if@twoside%
1164     \ifthumbs@ignorehoffset%
1165       \def\th@mbxpos{-1pt-\hoffset}%
1166     \else%
1167       \def\th@mbxpos{-1pt}%
1168     \fi%
1169   \else \relax%
1170   \fi%
1171 \AtBeginShipoutUpperLeft{%
1172   \ifx\th@mbprinting\pagesLTS@one%
1173     \th@mbprint{\th@mbtextA}{\th@mbtextcolourA}{\th@mbbackgroundcolourA}%
1174     \setcounter{th@mbs@tmpA}{1}%
1175     \edef\th@mbonpagetest{\arabic{th@mbs@tmpA}}%
1176     \@whilenum\th@mbonpagetest<\th@mbonpage\do{%
1177       \addtocounter{th@mbs@tmpA}{1}%
1178       \edef\th@mbonpagetest{\arabic{th@mbs@tmpA}}%
1179       \th@mb@yA%
1180       \def\th@mbtmpdeftext{\csname th@mbtext\Alpha\Arabic{th@mbs@tmpA}\endcsname}%
1181       \def\th@mbtmpdefcolour{\csname th@mbtextcolour\Alpha\Arabic{th@mbs@tmpA}\endcsname}%
1182       \def\th@mbtmpdefbackgroundcolour{\csname th@mbbackgroundcolour\Alpha\Arabic{th@mbs@tmpA}\endcsname}%
1183       \th@mbprint{\th@mbtmpdeftext}{\th@mbtmpdefcolour}{\th@mbtmpdefbackgroundcolour}%
1184     }%
1185   \fi%

```

```
1186 \setcounter{th@mbs@tmpA}{\th@mbonpage}%
```

When more than one thumb mark was placed at that page, on the following pages only the last issued thumb mark shall appear.

```
1187 \ifnum\value{th@mbs@tmpA}<2% \relax
1188 \else%
1189 \gdef\th@mbtextA{\th@mbtext}%
1190 \gdef\th@mbtextcolourA{\th@mbtextcolour}%
1191 \gdef\th@mmbbackgroundcolourA{\th@mmbbackgroundcolour}%
1192 \gdef\th@mbposyA{\th@mbposy}%
1193 \fi%
1194 \gdef\th@mbonpage{0}%
1195 \gdef\th@mbtoprint{0}%
1196 }%
1197 }
1198
```

`\AfterLastShipout` `\AfterLastShipout` is executed after the last page has been shipped out. It is still possible to e.g. write to the `aux` file at this time.

```
1199 \AfterLastShipout{%
1200 \ifx\th@mbcolumnnew\pagesLTS@zero% ok
1201 \else
1202 \PackageWarningNoLine{thumbs}{%
1203 Still missing \string\addthumb\space after \string\thumbnewcolumn\space after\MessageBreak%
1204 last shipout: Command \string\thumbnewcolumn\space was used,\MessageBreak%
1205 but no new thumb placed with \string\addthumb\space anywhere in the\MessageBreak%
1206 rest of the document. Starting a new column of thumb\MessageBreak%
1207 marks and not putting a thumb mark into that column\MessageBreak%
1208 does not make sense. If you just want to get rid of\MessageBreak%
1209 thumb marks, do not abuse \string\thumbnewcolumn\space but use\MessageBreak%
1210 \string\stopthumb %
1211 }
1212 \fi
```

`\AfterLastShipout` the number of thumb marks per overview page, the total number of thumb marks, and the maximal thumb mark text width are determined and saved for the next `LATEX` run via the `.aux` file.

```
1213 \ifx\th@mbcolumn\pagesLTS@zero% if there is only one column of thumbs
1214 \global\edef\th@umbsperpagecount{\th@mbs}
1215 \gdef\th@mbcolumn{1}
1216 \fi
1217 \ifx\th@umbsperpagecount\pagesLTS@zero
1218 \gdef\th@umbsperpagecount{\th@mbs}% \th@mbs was increased with each \addthumb
1219 \fi
1220 \ifdim\th@mbmaxwidth>\th@mbwidthx
1221 \ifthumbs@draft% \relax
1222 \else
```

```

1223 \def\th@mbstest{autoauto}
1224 \ifx\thumbs@width\th@mbstest%
1225 \AtVeryVeryEnd{%
1226 \PackageWarningNoLine{thumbs}{%
1227 Rerun to get the thumb marks width right%
1228 }
1229 }
1230 \else
1231 \AtVeryVeryEnd{%
1232 \edef\thumbsinfoa{\th@mbmaxwidth}
1233 \edef\thumbsinfob{\the\th@mbwidthx}
1234 \PackageWarningNoLine{thumbs}{%
1235 Thumb mark too small or its text too wide:\MessageBreak%
1236 The widest thumb mark text is \thumbsinfoa\space wide,\MessageBreak%
1237 but the thumb marks are only \space\thumbsinfob\space wide.\MessageBreak%
1238 Either shorten or scale down the text,\MessageBreak%
1239 or increase the thumb mark width,\MessageBreak%
1240 or use option width=autoauto%
1241 }
1242 }
1243 \fi
1244 \fi
1245 \fi
1246 \if@filesw
1247 \immediate\write\@auxout{\string\gdef\string\th@mbmaxwidth{\th@mbmaxwidth}}
1248 \immediate\write\@auxout{\string\gdef\string\th@umbsperspage{\th@umbsperspagecount}}
1249 \immediate\write\@auxout{\string\gdef\string\th@mbmax{\th@mbmax}}
1250 \expandafter\newwrite\csname tf@tmb\endcsname

```

And a rerun check is performed: Did the \jobname.tmb file change?

```

1251 \RerunFileCheck{\jobname.tmb}{%
1252 \immediate\closeout \csname tf@tmb\endcsname
1253 }{Warning: Rerun to get list of thumbs right!%
1254 }
1255 \immediate\openout \csname tf@tmb\endcsname = \jobname.tmb\relax
1256 %\else there is a problem, but the according warning message was already given earlier.
1257 \fi
1258 }
1259

```

`\thumbsoverviewtocontents` with two arguments is a replacement for `\addcontentsline{toc}{<level>}{<text>}`, where the first argument of `\thumbsoverviewtocontents` is for `<level>` and the second for `<text>`. If an entry of the thumbs mark overview shall be placed in the table of contents, `\thumbsoverviewtocontents` with its arguments should be used immediately before `\thumbsoverview`.

```

1260 \newcommand{\addthumbsoverviewtocontents}[2]{%
1261 \gdef\th@mbstoc@level{#1}
1262 \gdef\th@mbstoc@text{#2}

```



```
1263 }
1264
```

`\thumbsoverview` `\thumbsoverview` is used to place the overview page(s) for the thumb marks. Its parameter is used to mark this page/these pages (e.g. in the page header). If these marks are not wished, `\thumbsoverview{}` will generate empty marks in the page header(s). `\thumbsoverview` can be used more than once (for example at the beginning and at the end of the document). The overviews have labels `TableOfThumbs1`, `TableOfThumbs2` and so on, which can be referred to with e.g. `\pageref{TableOfThumbs1}`. The reference `TableOfThumbs` (without number) aims at the last used Table of Thumbs (for compatibility with older versions of this package).

`\thumbsoverview` works by calling the internal command `\th@mbs@verview` (see below), repeating this until all thumb marks have been processed.

```
1265 \newcommand{\thumbsoverview}[1]{%
```

Option `\thumbs@thumblink` is checked for a valid and resonable value here.

```
1266 \def\th@mbstest{none}%
1267 \ifx\thumbs@thumblink\th@mbstest% OK
1268 \else%
1269   \@ifundefined{Hy@Warning}{% hyperref not loaded
1270     \PackageError{thumbs}{Option thumblink != none, but hyperref not loaded}{%
1271       The option thumblink of the thumbs package was not set to 'none',\MessageBreak%
1272       but to some kind of hyperlinks, without using package hyperref.\MessageBreak%
1273       Either choose option 'thumblink=none', or load package hyperref.\MessageBreak%
1274       When pressing return, 'thumblink=none' will be set now.\MessageBreak%
1275     }%
1276     \gdef\thumbs@thumblink{none}%
1277   }{% hyperref loaded
1278     \def\th@mbstest{title}%
1279     \ifx\thumbs@thumblink\th@mbstest% OK
1280     \else%
1281       \def\th@mbstest{page}%
1282       \ifx\thumbs@thumblink\th@mbstest% OK
1283       \else%
1284         \def\th@mbstest{titleandpage}%
1285         \ifx\thumbs@thumblink\th@mbstest% OK
1286         \else%
1287           \def\th@mbstest{line}%
1288           \ifx\thumbs@thumblink\th@mbstest% OK
1289           \else%
1290             \def\th@mbstest{rule}%
1291             \ifx\thumbs@thumblink\th@mbstest% OK
1292             \else%
1293               \PackageError{thumbs}{Option thumblink with invalid value}{%
1294                 Option thumblink has value '\thumbs@thumblink'.\MessageBreak%
1295                 Valid values are 'none', 'title', 'page',\MessageBreak%
1296                 'titleandpage', 'line', or 'rule'.\MessageBreak%
1297                 'rule' will be used now.\MessageBreak%
1298               }%

```

```

1299         \gdef\thumbs@thumblink{rule}%
1300         \fi%
1301     \fi%
1302     \fi%
1303     \fi%
1304     \fi%
1305 }%
1306 \fi%

```

When the thumb overview is printed and there is already a thumb mark set, for example for the frontmatter (e. g. title page, bibliographic information, acknowledgements, dedication, preface, abstract, tables of content, tables, and figures, lists of symbols and abbreviations, and the thumbs overview itself, of course) or when the overview is placed near the end of the document, the current y-position of the thumb mark must be remembered (and later restored) and the printing of that thumb mark must be stopped (and later continued).

```

1307 \edef\th@mbprintingovertoc{\th@mbprinting}%
1308 \ifnum \th@mbsmax > \pagesLTS@zero%
1309     \if@twoside \cleardoublepage%
1310     \else \clearpage%
1311     \fi%
1312     \stopthumb%
1313     \markboth{\MakeUppercase #1 }{\MakeUppercase #1 }%
1314 \fi%
1315 \setlength{\th@mbsposytocy}{\th@mbposy}%
1316 \setlength{\th@mbposy}{\th@mbsposytocyy}%
1317 \ifx\th@mbstable\pagesLTS@zero%
1318     \newcounter{th@mblinea}%
1319     \newcounter{th@mblineb}%
1320     \newcounter{FileLine}%
1321     \newcounter{thumbsstop}%
1322 \fi%
1323 \setcounter{th@mblinea}{\th@mbstable}%
1324 \addtocounter{th@mblinea}{+1}%
1325 \global\edef\th@mbstable{\arabic{th@mblinea}}%
1326 \setcounter{th@mblinea}{1}%
1327 \setcounter{th@mblineb}{\th@umbsperpage}%
1328 \setcounter{FileLine}{1}%
1329 \setcounter{thumbsstop}{1}%
1330 \addtocounter{thumbsstop}{\th@mbsmax}%

```

We do not want any labels or index or glossary entries confusing the table of thumb marks entries, but the commands must work outside of it:

```

1331 \let\thumbsoriglabel\label%
1332 \let\thumbsorigindex\index%
1333 \let\thumbsorigglossary\glossary%
1334 \let\label@gobble%
1335 \let\index@gobble%
1336 \let\glossary@gobble%

```

```

1337 \@whilenum\value{FileLine}<\value{thumbsstop}\do%
1338 {\if@twoside \cleardoublepage%
1339 \else \clearpage%
1340 \fi%

```

When the `hyperref` package is used, one might like to refer to the thumb overview page(s), therefore a `phantomsection` is added. With or without `hyperref` a label `TableOfThumbs1` (or `TableOfThumbs2` or ...) is placed here. For compatibility with older versions of this package also the label `TableOfThumbs` is created. Equal to older versions it aims at the last used Table of Thumbs, but since version 1.0g **without** Error: Label `TableOfThumbs` multiply defined - thanks to `\overridelabel` from the `undobl` package (which is automatically loaded by the `pagesLTS` package).

When `\addthumbsoverviewtocontents` was used, the entry is placed into the table of contents.

```

1341 \ifnum\value{FileLine}=1%
1342 \@ifundefined{Hy@Warning}{}{\phantomsection}%
1343 \let\label\thumbsoriglabel%
1344 \ifx\th@mbstable\pagesLTS@one%
1345 \label{TableOfThumbs}%
1346 \label{TableOfThumbs1}%
1347 \else%
1348 \overridelabel{TableOfThumbs}%
1349 \label{TableOfThumbs\th@mbstable}%
1350 \fi%
1351 \let\label\@gobble%
1352 \ifx\th@mbs@toc@level\empty%\relax
1353 \else \addcontentsline{toc}{\th@mbs@toc@level}{\th@mbs@toc@text}%
1354 \fi%
1355 \fi%
1356 \null%
1357 \th@mbs@overview%
1358 \pagebreak%
1359 \ifthumbs@verbose%
1360 \message{THUMBS: Fileline: \arabic{FileLine}, a: \arabic{th@mblinea}, %
1361 b: \arabic{th@mblineb}, per page: \th@umbsperpage, max: \th@mbsmax.^J}%
1362 \fi%
1363 }%

```

After the overview, the current thumb mark (if there is any) is restored,

```

1364 \setlength{\th@mbposy}{\th@mbsposytcy}%
1365 \ifx\th@mbprintingovertoc\pagesLTS@one%
1366 \continuethumb%
1367 \fi%

```

as well as the `\label`, `\index`, and `\glossary` commands:

```

1368 \let\label\thumbsoriglabel%
1369 \let\index\thumbsorigindex%
1370 \let\glossary\thumbsorigglossary%
1371 }
1372

```

\th@mbs@verview The internal command \th@mbs@verview reads a line from file \jobname.tmb and executes the content of that line – if that line has not been processed yet, in which case it is just ignored (see \@unused).

```

1373 \newcommand{\th@mbs@verview}{%
1374   \ifthumbs@verbose%
1375     \message{^^JPackage thumbs Info: Processing line \arabic{th@mblinea} to \arabic{th@mblineb} of \jobname.tmb.}%
1376   \fi%
1377   \setcounter{FileLine}{1}%
1378   \AtBeginShipoutNext{%
1379     \AtBeginShipoutUpperLeftForeground{%
1380       \IfFileExists{\jobname.tmb}{% then
1381         \openin\@instreamthumb=\jobname.tmb %
1382         \@whilenum\value{FileLine}<\value{th@mblineb}\do%
1383         {\ifthumbs@verbose%
1384           \message{THUMBS: Processing \jobname.tmb line \arabic{FileLine}.}%
1385           \fi%
1386           \ifnum \value{FileLine}<\value{th@mblinea}%
1387             \read\@instreamthumb to \@unused%
1388             \ifthumbs@verbose%
1389               \message{Can be skipped.^^J}%
1390             \fi%
1391             % NIRVANA: ignore the line by not executing it,
1392             % i.e. not executing \@unused.
1393             % % \@unused
1394           \else%
1395             \ifnum \value{FileLine}=\value{th@mblinea}%
1396               \read\@instreamthumb to \@thumbsout% execute the code of this line
1397               \ifthumbs@verbose%
1398                 \message{Executing \jobname.tmb line \arabic{FileLine}.^^J}%
1399               \fi%
1400               \@thumbsout%
1401             \else%
1402               \ifnum \value{FileLine}>\value{th@mblinea}%
1403                 \read\@instreamthumb to \@thumbsout% execute the code of this line
1404                 \ifthumbs@verbose%
1405                   \message{Executing \jobname.tmb line \arabic{FileLine}.^^J}%
1406                 \fi%
1407                 \@thumbsout%
1408               \else% THIS SHOULD NEVER HAPPEN!
1409                 \PackageError{thumbs}{Unexpected error! (Really!)}{%
1410                   ! You are in trouble here.\MessageBreak%
1411                   ! Type X \string<return\string> to quit.\MessageBreak%
1412                   ! Delete temporary auxiliary files.\MessageBreak%
1413                   ! (like \jobname.aux, \jobname.tmb, \jobname.out).\MessageBreak%
1414                   ! and retry the compilation.\MessageBreak%
1415                   ! If the error persists, cross your fingers.\MessageBreak%
1416                   ! and try typing \string<return\string> to proceed.\MessageBreak%
1417                   ! If that does not work,\MessageBreak%

```

```

1418             ! you might contact the maintainer of the thumbs package.\MessageBreak%
1419         }%
1420     \fi%
1421 \fi%
1422 \fi%
1423     \stepcounter{FileLine}%
1424 }%
1425 \ifnum \value{FileLine}=\value{th@mblineb}
1426     \ifthumbs@verbose%
1427         \message{THUMBS: Processing \jobname.tmb line \arabic{FileLine}.}%
1428     \fi%
1429     \read\@instreamthumb to \@thumbsout% Execute the code of that line.
1430     \ifthumbs@verbose%
1431         \message{Executing \jobname.tmb line \arabic{FileLine}.^^J}%
1432     \fi%
1433     \@thumbsout% Well, really execute it here.
1434     \stepcounter{FileLine}%
1435 \fi%
1436 \closein\@instreamthumb%

```

And on to the next overview page of thumb marks (if there are so many thumb marks):

```

1437     \addtocounter{th@mblinea}{\th@umbsperpage}%
1438     \addtocounter{th@mblineb}{\th@umbsperpage}%
1439     \setcounter{th@mbs@tmpA}{\th@mbsmax}%
1440     \ifnum \value{th@mblineb}>\value{th@mbs@tmpA}
1441         \setcounter{th@mblineb}{\value{th@mbs@tmpA}}%
1442     \fi%
1443 }{% else

```

When \jobname.tmb was not found, we cannot read from that file, therefore the FileLine is set to thumbsstop, stopping the calling of \th@mbs@overview in \thumbsoverview. (And we issue a warning, of course).

```

1444     \setcounter{FileLine}{\arabic{thumbsstop}}%
1445     \AtVeryVeryEnd{%
1446         \PackageWarningNoLine{thumbs}{%
1447             File \jobname.tmb not found.\MessageBreak%
1448             Rerun to get thumbs overview page(s) right.\MessageBreak%
1449         }%
1450     }%
1451 }%
1452 }%
1453 }%
1454 }
1455

```

When we are in **draft** mode, the thumb marks are “de-coloured”, their width is reduced, and a warning is given.

```
1456 \let\thumborigaddthumb\addthumb%
1457
1458 \ifthumbs@draft
1459   \setlength{\th@mbwidthx}{2pt}
1460   \renewcommand{\addthumb}[4]{\thumborigaddthumb{#1}{#2}{black}{gray}}
1461   \PackageWarningNoLine{thumbs}{thumbs package in draft mode:\MessageBreak%
1462     Thumb mark width is set to 2pt,\MessageBreak%
1463     thumb mark text colour to black, and\MessageBreak%
1464     thumb mark background colour to gray.\MessageBreak%
1465     Use package option final to get the original values.\MessageBreak%
1466   }
1467 \fi
1468
1469 \end{package}
```

6 Installation

6.1 Downloads

Everything is available on **CTAN**: <http://www.ctan.org/tex-archive/>, but may need additional packages themselves.

thumbs.dtx For unpacking the **thumbs.dtx** file and constructing the documentation it is required:

- T_EXFormat L^AT_EX 2_ε: <http://www.CTAN.org/>
- document class ltxdoc, 2007/11/11, v2.0u, [CTAN:macros/latex/base/ltxdoc.dtx](#)
- package geometry, 2010/09/12, v5.6, [CTAN:macros/latex/contrib/geometry/geometry.dtx](#)
- package holtxdoc, 2011/02/04, v0.21, [CTAN:macros/latex/contrib/oberdiek/holtxdoc.dtx](#)
- package hypdoc, 2010/03/26, v1.9, [CTAN:macros/latex/contrib/oberdiek/hypdoc.dtx](#)

thumbs.sty The **thumbs.sty** for L^AT_EX 2_ε (i.e. all documents using the thumbs package) requires:

- T_EXFormat L^AT_EX 2_ε, <http://www.CTAN.org/>
- package xcolor, 2007/01/21, v2.11, [CTAN:macros/latex/contrib/xcolor/xcolor.dtx](#)
- package pagesLTS, 2011/03/17, v1.1o, [CTAN:macros/latex/contrib/pageslts/pagesLTS.dtx](#)
- package alphas, 2010/04/18, v2.3, [CTAN:macros/latex/contrib/oberdiek/alphas.dtx](#)
- package atbegshi, 2011/01/30, v1.15, [CTAN:macros/latex/contrib/oberdiek/atbegshi.dtx](#)
- package atveryend, 2011/04/23, v1.7, [CTAN:macros/latex/contrib/oberdiek/atveryend.dtx](#)
- package infwarerr, 2010/04/08, v1.3, [CTAN:macros/latex/contrib/oberdiek/infwarerr.dtx](#)
- package kvoptions, 2010/12/23, v3.10, [CTAN:macros/latex/contrib/oberdiek/kvoptions.dtx](#)
- package picture, 2009/10/11, v1.3, [CTAN:macros/latex/contrib/oberdiek/picture.dtx](#)
- package rerunfilecheck, 2011/04/15, v1.7, [CTAN:macros/latex/contrib/oberdiek/rerunfilecheck.dtx](#)

SW/SWP When compiling with SWP 5.50 Build 2960 (© MacKichan Software, Inc.), these additional packages are needed:

```
\usepackage[T1]{fontenc}
\usepackage{amsfonts}
\usepackage[math]{cellspace}
\usepackage{xcolor}
\pagecolor{white}
```

especially before hyperref and thumbs, but best right after the `\documentclass`! (The options for those packages might be changed by the user – I did not test all available options, thus first test, whether the document can be compiled with these options, and then try to change them according to your wishes.)

thumb-example.tex

The thumb-example.tex requires the same files as all documents using the thumbs package and additionally:

- package eurosym, 1998/08/06, v1.1, [CTAN:fonts/eurosym.zip](#)
- package lipsum, 2011/04/14, v1.2, [CTAN:macros/latex/contrib/lipsum/lipsum.dtx](#)
- package hyperref, 2011/04/17, v6.82g, [CTAN:macros/latex/contrib/hyperref/hyperref.dtx](#)
- package thumbs, 2011/06/24, v1.0g, [CTAN:macros/latex/contrib/thumbs/thumbs.dtx](#)
(Well, it is the example file for this package, and because you are reading the documentation for the thumbs package, it can be assumed that you already have some version of it – is it the current one?)

Alternatives

As possible alternatives in section 3 there are listed

- chapterthumb, 2005/03/10, v0.1, [CTAN:info/examples/KOMA-Script-3/Anhang-B/source/chapterthumb.sty](#)
- eso-pic, 2010/10/06, v2.0c, [CTAN:macros/latex/contrib/eso-pic/eso-pic.dtx](#)
- fancytabs, 2011/04/16 v1.1, [CTAN:macros/latex/contrib/fancytabs/fancytabs.dtx](#)
- thumb, 2001, without file version, <ftp://ftp.dante.de/pub/tex/info/examples/ltt/thumb.sty>
- thumb (a completely different one), 1997/12/24, v1.0, [CTAN:macros/latex/contrib/thumb/thumb.dtx](#)
- thumbindex, 2009/12/13, without file version, <http://hisashim.org/2009/12/13/thumbindex.html>.
- thumb-index, from the fancyhdr package, 2005/03/22 v3.2, [CTAN:macros/latex/contrib/fancyhdr/fancyhdr.pdf](#)
- thumbpdf, 2010/07/07, v3.11, [CTAN:support/thumbpdf/thumbpdf.sty](#)
- thumby, 2010/01/14, v0.1, [CTAN:macros/latex/contrib/thumby/thumby.sty](#)

Oberdiek

holtxdoc

alphalph

atbegshi

atveryend

infwarerr

kvoptions

picture

rerunfilecheck

All packages of Heiko Oberdiek's bundle 'oberdiek' (especially holtxdoc, alphalph, atbegshi, infwarerr, kvoptions, picture, and rerunfilecheck) are also available in a TDS compliant ZIP archive:

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

It is probably best to download and use this, because the packages in there should be both recent and compatible.

hyperref

Heiko Oberdiek's hyperref package is not included in that bundle but needs to be downloaded separately, <http://mirror.ctan.org/install/macros/latex/contrib/hyperref.tds.zip>.

Münch

A hyperlinked list of my (other) packages can be found at <http://www.Uni-Bonn.de/~uzs5pv/LaTeX.html>.

6.2 Package, unpacking TDS

Package. This package should be available on `CTAN::`

`CTAN:macros/latex/contrib/thumbs/thumbs.dtx`

The source file.

`CTAN:macros/latex/contrib/thumbs/thumbs.pdf`

The documentation.

`CTAN:macros/latex/contrib/thumbs/thumbs-example.pdf`

The compiled example file, as it should look like.

`CTAN:macros/latex/contrib/thumbs/README`

The README file.

`CTAN:install/macros/latex/contrib/thumbs.tds.zip`

Everything in TDS compliant, compiled format,

which additionally contains

<code>thumbs.ins</code>	The installation file.
<code>thumbs.drv</code>	The driver to generate the documentation.
<code>thumbs.sty</code>	The <code>.style</code> file.
<code>thumbs-example.tex</code>	The example file.

For required other packages, see the preceding subsection.

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

```
tex thumbs.dtx
```

About generating the documentation see paragraph 6.4 below.

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

<code>thumbs.sty</code>	→ <code>tex/latex/thumbs.sty</code>
<code>thumbs.pdf</code>	→ <code>doc/latex/thumbs.pdf</code>
<code>thumbs-example.tex</code>	→ <code>doc/latex/thumbs-example.tex</code>
<code>thumbs-example.pdf</code>	→ <code>doc/latex/thumbs-example.pdf</code>
<code>thumbs.dtx</code>	→ <code>source/latex/thumbs.dtx</code>

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`.

6.3 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`.

6.4 Some details for the interested

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{thumbs.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 a 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 thumbs.drv
makeindex -s gind.ist thumbs.idx
pdflatex thumbs.drv
makeindex -s gind.ist thumbs.idx
pdflatex thumbs.drv
```

6.5 Compiling the example

The example file, `thumbs-example.tex`, can be compiled via

```
latex thumbs-example.tex
```

or (recommended)

```
pdflatex thumbs-example.tex
```

and will need probably at least four (!) compiler runs to get everything right.

7 Acknowledgements

I would like to thank HEIKO OBERDIEK (heiko dot oberdiek at googlemail dot com) for providing the `hyperref` as well as a lot (!) of other useful packages (from which I also got everything I know about creating a file in `.dtx` format, ok, say it: copying), and the `news:comp.text.tex` and `news:de.comp.text.tex` newsgroups for their help in all things \TeX . Thanks for bug reports go to VERONICA BRANDT.

8 History

[2010/04/01 v0.01 – 2011/05/13 v0.46]

- Diverse β -versions during the creation of this package.

[2011/05/14 v1.0a]

- Upload to <http://www.ctan.org/pkg/thumbs>.

[2011/05/18 v1.0b]

- When more than one thumb mark is places at one single page, the variables containing the values (text, colour, backgroundcolour) of those thumb marks are now created dynamically. Theoretically, one can now have 2 147 483 647 thumb marks at one page instead of six thumb marks (as with **thumbs** version 1.0a), but I am quite sure that some other limit will be reached before the 2 147 483 647th thumb mark.
- Bug fix: When a document using the **thumbs** package was compiled, and the **.aux** and **.tmb** files were created, and the **.tmb** file was deleted (or renamed or moved), while the **.aux** file was not deleted (or renamed or moved), and the document was compiled again, and the **.aux** file was reused, then reading from the then empty **.tmb** file resulted in an endless loop. Fixed.
- Minor details.

[2011/05/20 v1.0c]

- The thumb mark width is written to the **log** file (in **verbose** mode only). The knowledge of the value could be helpful for the user, when option **width={auto}** was used, and one wants the thumb marks to be half as big, or with double width, or a little wider, or a little smaller... Also thumb marks' height, top thumb margin and bottom thumb margin are given. Look for
***** THUMB dimensions *****
in the **log** file.
- Bug fix: There was a
 `\advance\th@mbheighty-\th@mbdistance,`
where
 `\advance\th@mbheighty-\th@mbdistance`
 `\advance\th@mbheighty-\th@mbdistance`
should have been, causing wrong thumb marks' height, thereby wrong number of thumb marks per column, and thereby another endless loop. Fixed.
- The **ifthen** package is no longer required for the **thumbs** package, removed from its **\RequirePackage** entries.
- The **infwarerr** package is used for its **\@PackageInfoNoLine** command.
- The **warning** package is no longer used by the **thumbs** package, removed from its **\RequirePackage** entries. Instead, the **atveryend** package is used, because it is loaded anyway when the **hyperref** package is used.

- Minor details.

[2011/05/26 v1.0d]

- Bug fix: labels or index or glossary entries were gobbled for the thumb marks overview page, but gobbling leaked to the rest of the document; fixed.
- New option `silent`, complementary to old option `verbose`.
- New option `draft` (and complementary option `final`), which “de-coloures” the thumb marks and reduces their width to 2 pt.

[2011/06/02 v1.0e]

- Gobbling of labels or index or glossary entries improved.
- Dimension `\thumbsinfodimen` no longer needed.
- Internal command `\thumbs@info` no longer needed, removed.
- New value `autoauto` (not default!) for option `width`, setting the thumb marks width to fit the widest thumb mark text.
- When `width={autoauto}` is not used, a warning is issued, when the thumb marks width is smaller than the thumb mark text.
- Bug fix: Since version v1.0b as of 2011/05/18 the number of thumb marks at one single page was no longer limited to six, but the example still stated this. Fixed.
- Minor details.

[2011/06/08 v1.0f]

- Bug fix: `\th@mb@titlelabel` should be defined `\empty` at the beginning of the package: fixed. (Bug reported by VERONICA BRANDT. Thanks!)
- Bug fix: `\thumbs@distance` versus `\th@mbsdistance`: There should be only two times `\thumbs@distance`, the value of option `distance`, otherwise it should be the length `\th@mbsdistance`: fixed. (Also this bug reported by VERONICA BRANDT. Thanks!)
- `\hoffset` and `\voffset` are now ignored by default, but can be regarded using the options `ignorehoffset=false` and `ignorevoffset=false`. (Pointed out again by VERONICA BRANDT. Thanks!)
- Added to documentation: The package takes the dimensions `\AtBeginDocument`, thus later the page dimensions should not be changed. Now explicitly stated this in the documentation. `\paperwidth` changes are probably possible.
- Documentation and example now give a lot more details.
- Changed diverse details.

- Bug fix: When `hyperref` was *not* used, then some labels were not set at all - fixed.
- Bug fix: When more than one Table of Tumbs was created with the `\thumbsoverview` command, there were some `counter ... already defined-errors` - fixed.
- Bug fix: When more than one Table of Tumbs was created with the `\thumbsoverview` command, there was a `Label TableofTumbs multiply defined-error` and it was not possible to refer to any but the last Table of Tumbs. Fixed with labels `TableofTumbs1`, `TableofTumbs2`,... (`TableofTumbs` still aims at the last used Table of Thumbs for compatibility.)
- Bug fix: Sometimes the thumb marks were stoped one page too early before the Table of Thumbs - fixed.
- Some details changed.

When you find a mistake or have a suggestion for an improvement of this package, please send an e-mail to the maintainer, thanks! (Please see BUG REPORTS in the README.)

Note: Q, X, and Y are not missing in the following index, but no command *beginning* with any of these letters has been used in this `thumbs` package.

9 Index

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