The \texttt{thumbs} package

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2014/03/09 v1.0q

Abstract

This \LaTeX\ package allows to create one or more customizable thumb index(es), providing a quick and easy reference method 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 CO$_2$ and 2 g wood:
Therefore please print only if this is really necessary.
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   [2010/04/01 v0.01 – 2011/05/13 v0.46]
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   [2011/05/26 v1.0d]
   [2011/06/02 v1.0e]
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   [2012/02/25 v1.0n]
   [2013/08/22 v1.0o, not released to the general public]
   [2013/09/17 v1.0p, not released to the general public]
   [2014/03/09 v1.0q]

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1 Introduction

This LATEX 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 thumbed 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{pdflscape} is possible.

There are already some packages for creating thumbs, but because none of them did what I wanted, I wrote this new package.\footnote{1Probably this holds true for the motivation of the authors of quite a lot of packages.}

2 Usage

2.1 Loading

Load the package placing

\usepackage[<options>]{thumbs}

in the preamble of your LATEX 2\alpha 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 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, tables,...).
2.2 Options

The `thumbs` package takes the following options:

2.2.1 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.

2.2.2 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 47 pt (≈ 16.5 mm ≈ 0.65 in).

2.2.3 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. 0 pt).

2.2.4 width

Option `width` wants to know the horizontal extension of each thumb mark. The default option-value “auto” calculates a width-value automatically: (\`paperwidth` minus \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=\paperwidth` in the example!) Option `width=autoauto` leads to thumb marks, which are just wide enough to fit the widest thumb mark text.

2.2.5 distance

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

2.2.6 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 \@bmsvoffset plus \topmargin. Dimensions (e.g. 1 cm) are also accepted.
2.2.7 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 1in+\topmargin-th@mbdistance+\th@mbheighty+\headheight+\headsep+\textheight+\footskip-th@mbdistance-th@mbheighty. Dimensions (e. g. 1 cm) are also accepted.

2.2.8 eventxtindent

Option eventxtindent expects a dimension (default value: 5 pt, negative values are possible, of course), by which the text inside of thumb marks on even pages is moved away from the page edge, i.e. to the right. Probably using the same or at least a similar value as for option oddtxtexdent makes sense.

2.2.9 oddtxtexdent

Option oddtxtexdent expects a dimension (default value: 5 pt, negative values are possible, of course), by which the text inside of thumb marks on odd pages is moved away from the page edge, i.e. to the left. Probably using the same or at least a similar value as for option eventxtindent makes sense.

2.2.10 evenmarkindent

Option evenmarkindent expects a dimension (default value: 0 pt, negative values are possible, of course), by which the thumb marks (background and text) on even pages are moved away from the page edge, i.e. to the right. This might be useful when the paper, onto which the document is printed, is later cut to another format. Probably using the same or at least a similar value as for option oddmarkexdent makes sense.

2.2.11 oddmarkexdent

Option oddmarkexdent expects a dimension (default value: 0 pt, negative values are possible, of course), by which the thumb marks (background and text) on odd pages are moved away from the page edge, i.e. to the left. This might be useful when the paper, onto which the document is printed, is later cut to another format. Probably using the same or at least a similar value as for option oddmarkexdent makes sense.

2.2.12 evenprintvoffset

Option evenprintvoffset expects a dimension (default value: 0 pt, negative values are possible, of course), by which the thumb marks (background and text) on even pages are moved downwards. This might be useful when a duplex printer shifts recto and verso pages against each other by some small amount, e.g. a millimeter or two, which is not uncommon. Please do not use this option with another value than 0 pt for files which you submit to other persons. Their printer probably shifts the pages by another amount, which might even lead to increased mismatch if both printers shift in opposite directions. Ideally the pdf viewer would correct the shift depending on printer (or at least give some option similar to “shift verso pages by x mm”).
2.2.13 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`.

2.2.14 nophantomsection

Option `nophantomsection` globally disables the automatical placement of a `\phantomsection` before the thumb marks. Generally it is desirable to have a hyperlink from the thumbs overview page to lead to the thumb mark and not to some earlier place. Therefore automatically a `\phantomsection` is placed before each thumb mark. But for example when using the thumb mark after a `\chapter{...}` command, it is probably nicer to have the link point at the top of that chapter’s title (instead of the line below it). When automatical placing of the `\phantomsection`s has been globally disabled, nevertheless manual use of `\phantomsection` is still possible. The other way round: When automatical placing of the `\phantomsection`s has not been globally disabled, it can be disabled just for the following thumb mark by the command `\thumbsnophantom`.

2.2.15 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.)

2.2.16 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.
2.2.17 draft

Option draft (not the default) sets the thumb mark width to 2 pt, thumb mark text colour to black and thumb mark background colour to grey (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.

2.2.18 hidethumbs

Option hidethumbs (not the default) prevents thumbs to create thumb marks (or thumb marks overview pages). This could be useful when thumb marks were placed, but for some reason no thumb marks (and overview pages) shall be placed. Removing \usepackage[...]{thumbs} would not work but create errors for unknown commands (e.g. \addthumb, \addtitlethumb, \thumbnewcolumn, \stopthumb, \continuethumb, \addthumbsoverviewtocontents, \thumbsoverview, \thumbsoverviewback, \thumbsoverviewverso, and \thumbsoverviewdouble). (A \jobname.tmb file is created nevertheless.) – Either do not use this option with the thumbs package at all, or use hidethumbs=false to get the original appearance of the thumb marks.

2.2.19 pagecolor (obsolete)

Option pagecolor is obsolete. Instead the pagecolor package is used. Use \pagecolor{...} after \usepackage[...]{thumbs} and before \begin{document} to define a background colour of the pages.

2.2.20 evenindent (obsolete)

Option evenindent is obsolete and was replaced by eventxtindent.

2.2.21 oddindent (obsolete)

Option oddindent is obsolete and was replaced by oddtxtindent.
2.3 Commands to be used in the document

2.3.1 \addthumb

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

\continuethumb

2.3.4 \thumbsoverview/back/verso/double

\thumbsoverview\quad The commands \thumbsoverview, \thumbsoverviewback, \thumbsoverviewverso, and/or \thumbsoverviewdouble is/are used to place the overview page(s) for the thumb marks. Their 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, or \thumbsoverview at the beginning and \thumbsoverviewback at the end). 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 prints the thumb marks at the right side and (in twoside mode) skips left sides (useful e.g. at the beginning of a document)

- \thumbsoverviewback prints the thumb marks at the left side and (in twoside mode) skips right sides (useful e.g. at the end of a document)
- \thumbsoverviewverso prints the thumb marks at the right side and (in twoside mode) repeats them at the next left side and so on (useful anywhere in the document and when one wants to prevent empty pages)

- \thumbsoverviewdouble prints the thumb marks at the left side and (in twoside mode) repeats them at the next right side and so on (useful anywhere in the document and when one wants to prevent empty pages)

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

\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.

2.3.7 \thumbsnophantom

\thumbsnophantom When automatical placing of the \phantomsections has not been globally disabled by using option nophantomsection (see subsection 2.2.14), it can be disabled just for the following thumb mark by the command \thumbsnophantom.
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](http://mirror.ctan.org/info/examples/KOMA-Script-3/Anhang-B/source/chapterthumb.sty);
  unfortunately without documentation, which is probably available in the book:

- `eso-pic`, 2010/10/06, v2.0c by ROLF NIEPRASCHK, available at [http://www.ctan.org/pkg/eso-pic](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 \TeXLive2010 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).


- `thumb`, 2001, without file version, by INGO KLÖCKEL, available at
  [ftp://ftp.dante.de/pub/tex/info/examples/ltt/thumb.sty](ftp://ftp.dante.de/pub/tex/info/examples/ltt/thumb.sty), unfortunately without documentation, which is probably available in the book:


- `thumbindex`, 2009/12/13, without file version, by HISASHI MORITA, available at


- `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](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 Perl\TeX and tikz” ([http://www.ctan.org/pkg/thumby](http://www.ctan.org/pkg/thumby)), available at [http://www.ctan.org/pkg/thumby](http://www.ctan.org/pkg/thumby).

Newer versions might be available (and better suited). You programmed or found another alternative, which is available at CTAN.org? OK, send an e-mail to me with the name, location at CTAN.org, and a short notice, and I will probably include it in the list above.
This example demonstrates the most common uses of package \texttt{thumbs}, v1.0q as of 2014/03/09 (HMM).

The used options were \texttt{thumblink=rule}, \texttt{linefill=dots}, \texttt{height=auto}, \texttt{minheight=\{47pt\}}, \texttt{width=auto}, \texttt{distance=\{2mm\}}, \texttt{topthumbmargin=\{auto\}}, \texttt{bottomthumbmargin=\{auto\}}, \texttt{eventxtindent=\{5pt\}}, \texttt{oddtxtexdent=\{0pt\}}, \texttt{nophantomssection=\{false\}}, \texttt{ignorehoffset=\{true\}}, \texttt{ignorevoffset=\{true\}}, \texttt{evenmarkindent=\{0pt\}}, \texttt{evenprintvoffset=\{0pt\}}, \texttt{eventxtindent=\{5pt\}},
\texttt{nophantomsection=false},
\texttt{ignorehoffset=true}, \texttt{ignorevoffset=true}, \texttt{final=true}, \texttt{hidethumbs=false}, and \texttt{verbose=true}.
\noindent These are the default options, except \texttt{verbose=true}.
\texttt{\textbf{Hyperlinks or not:}} If the \texttt{hyperref} package is loaded, the references in the overview page for the thumb marks are also hyperlinked (except when option \texttt{thumblink=none} is used).
\textbf{\color{teal} Save per page about $200\unit{ml}$ water, $2\unit{g}$ CO$_2$, and $2\unit{g}$ wood:
Therefore please print only if this is really necessary.}
\bigskip
For testing purpose page \pageref{greenpage} has been completely coloured!
Better exclude it from printing\ldots
\bigskip
Some thumb mark texts are too large for the thumb mark by intention (especially when the paper size and therefore also the thumb mark size is decreased). When option \texttt{width=\{autoauto\}} would be used, the thumb mark width would be automatically increased. Please see page~\pageref{HugeText} for details!
\bigskip
For printing this example to another format of paper (e.\,g. A4) it is necessary to add the according option (e.\,g. \texttt{\verb|a4paper|}) to the document class and recompile it! (In that case the thumb marks column change will occur at another point, of course.) With paper format equal to document format the document can be printed without adapting the size, like e.\,g. \texttt{\textquotedblleft shrink to page\textquotedblright}.
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 paper. 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.

\addtitlethumb{Frontmatter}{0}{white}{gray}{pagesLTS.0}

At the first page no thumb mark was used, but we want to begin with thumb marks
at the first page, therefore a
\begin{verbatim}
\addtitlethumb{Frontmatter}{0}{white}{gray}{pagesLTS.0}
\end{verbatim}
was used at the beginning of this page.

\addtableofcontents

To include an overview page for the thumb marks,
\begin{verbatim}
\addthumbsoverviewtocontents{section}{Thumb marks overview}\
\thumbsoverview{Table of Thumbs}
\end{verbatim}
is used, where \verb|\addthumbsoverviewtocontents| adds the thumb
marks overview page to the table of contents.

\smallskip

Generally it is desirable to have a hyperlink from the thumbs overview page
to lead to the thumb mark and not to some earlier place. Therefore automatically
a \verb|\phantomsection| is placed before each thumb mark. But for example when
using the thumb mark after a \verb|\chapter{...}| command, it is probably nicer
to have the link point at the top of that chapter’s title (instead of the line
below it). The automatical placing of the \verb|\phantomsection| can be disabled
either globally by using option \texttt{nophantomsection}, or locally for the next
thumb mark by the command \verb|\thumbsnophantom|. (When disabled globally,
still manual use of \verb|\phantomsection| is possible.)
That were the overview pages for the thumb marks.

A thumb mark is added for this section. The parameters are: title for the thumb mark, the text to be displayed in the thumb mark (choose your own format), the colour of the text in the thumb mark, and the background colour of the thumb mark (parameters in this order).

Now for some pages of “content”…

For this section, the text to be displayed in the thumb mark was set to

\begin{verbatim}
\Huge{\textbf{\arabic{section}}}\end{verbatim}

\textit{i.e.} the number of the section will be displayed (huge \& bold).

Let us change the thumb mark on a page with an even number:

No problem!
And you do not need to have a section to add a thumb:
\addthumb{Still third section}{\Huge{\textbf{arabic{section}b}}}{red}{blue}
This is still the third section, but there is a new thumb mark.
On the other hand, you can even get rid of the thumb marks for some page(s):
\stopthumb
The command \begin{verbatim}
\stopthumb\end{verbatim}
was used here. Until another \verb|\addthumb| (with parameters) or
\begin{verbatim}
\continuethumb\end{verbatim}
is used, there will be no more thumb marks.
\newpage
Still no thumb marks.
\newpage
Still no thumb marks.
\newpage
Still no thumb marks.
Time for another thumb,
\addthumb{Another heading}{Small text}{white}{black}
and another.
\addthumb{Huge Text paragraph}{\Huge{Huge \ Text}}{yellow}{green}
\bigskip
\textquotedblleft \Huge{Huge Text}\textquotedblright \ is too large for the thumb mark. When option \texttt{width=\{auto\}} would be used, the thumb mark width would be automatically increased. Now the text is either split over two lines (try \verb|Huge \ Text| for another format) or (in case \verb|Huge~Text| is used) is written over the border of the thumb mark. When the text is too wide for the thumb mark and cannot be split, \LaTeX{} might nevertheless place the text into the next line. By this the text is placed too low. Adding a \verb|\hbox{\verb|\protect\vspace*{-| some length \verb|}|}| to the text could help, for example:\\ \verb|\addthumb{Huge Text}{\protect\vspace*{-3pt}Huge\Text}|...|.
\label{HugeText}
\addthumb{Huge Text}{\Huge{Huge~Text}}{red}{blue}
\addthumb{Huge Bold Text}{\Huge{\textbf{HBT}}}{black}{yellow}
\bigskip
When there is more than one thumb mark at one page, this is also no problem.
It is probably a good idea to have a look at the \textsf{xcolor} package
and use other colours than used in this example.

(About automatically increasing the thumb mark width to the thumb mark text
width please see the note at page \pageref{HugeText}.)

I just need to add further thumb marks to get them reaching the bottom of the page.

Generally the vertical size of the thumb marks is set to the value given in the
height option. If it is \texttt{auto}, the size of the thumb marks is decreased,
so that they fit all on one page. But when they get smaller than \texttt{minheight},
instead of decreasing their size further, a new thumbs column is started
(which will happen here).

I just need to add further thumb marks.

You can, of course, keep the colour for more than one thumb mark.

I am just adding further thumb marks.

If you are curious why the thumb mark between
\texttt{C mark} and \texttt{E mark} has not been named \texttt{D mark} but
\texttt{\$1/1.\,955\,83\,\text{EUR}} has:

\begin{verbatim}
1 unit{DM}=1 unit{D\ Mark}=1 unit{Deutsche\ Mark} \\
$1/1.\,955\,83$ \text{Euro}=$1/1.\,955\,83\text{EUR}$.
\end{verbatim}
Let us have a look at \verb|\thumbreviewverso|:
\addthumbreviewtocontents{section}{Table of Thumbs, verso mode}%
\thumbreviewverso{Table of Thumbs, verso mode}
\newpage

And, of course, also at \verb|\thumbreviewdouble|:
\addthumbreviewtocontents{section}{Table of Thumbs, double mode}%
\thumbreviewdouble{Table of Thumbs, double mode}
\newpage
\addthumb{E mark}{\Huge{\textbf{E}}}{lightgray}{black}
I am just adding further thumb marks.
\newpage
\addthumb{F mark}{\Huge{\textbf{F}}}{magenta}{black}
Some text.
\newpage
\thumbnewcolumn
\addthumb{New thumb marks column}{\Huge{\textit{NC}}}{magenta}{black}
There! A new thumb column was started manually!
\newpage
\addthumb{G mark}{\Huge{\textbf{G}}}{orange}{violet}
I just added another thumb mark.
\newpage
\pagecolor{green}
\makeatletter
Some faulty pdf-viewer sometimes (for the same document!) 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, this page has been completely coloured. (Probably better exclude this page from printing!)

\textsc{Heiko Oberdiek} wrote at Tue, 26 Apr 2011 14:13:29 +0200 in the \newline comp.text.tex newsgroup (see e.g. \newline \url{http://groups.google.com/group/de.comp.text.tex/msg/b3aeb4a60e1c3737}):\newline \textquotedblleft Der Ursprung ist 0 0, da gibt es nicht viel zu runden; bei den anderen Seiten werden pt als bp in die PDF-Datei geschrieben, d.h. der Balken ist um 72.27/72 zu gross, das sollte auch Rundungsfehler abdecken.\textquotedblright

(The origin is 0 0, there is not much to be rounded; for the other sides the $\unit{pt}$ are written as $\unit{bp}$ into the pdf-file, i.e. the rule is too large by $72.27/72$, which should cover also rounding errors.)

The thumb marks are also too large - on purpose! This has been done to assure, that they cover the page up to its (paper) border, therefore they are placed a little bit over the paper margin.

Now I read somewhere in the net (should have remembered to note the url), that white margins are presented, whenever there is some object outside of the page. Thus, it is a feature, not a bug?!

What I do not understand: The same document sometimes is presented with white lines and sometimes without (same viewer, same PC).\newline But at least it does not influence the printed version.

It is possible to use the Table of Thumbs more than once (for example at the beginning and the end of the document) and to refer to them via e.g. \verb|\pageref{TableOfThumbs1}, \pageref{TableOfThumbs2}|,... , here: page \pageref{TableOfThumbs1}, page \pageref{TableOfThumbs2}, and via e.g. \verb|\pageref{TableOfThumbs}| it is referred to the last used Table of Thumbs (for compatibility with older package versions). If there is only one Table of Thumbs, this one is also the last one, of course. Here it is at page \pageref{TableOfThumbs}.
Now let us have a look at `\thumbsoverviewback`:

`\addthumbsoverviewtocontents{section}{Table of Thumbs, back mode}`

`\thumbsoverviewback{Table of Thumbs, back mode}`

Text can be placed after any of the Tables of Thumbs, of course.
5 The implementation

We start off by checking that we are loading into $\LaTeX$ and announcing the name and version of this package.

\begin{verbatim}
(*package*)
\NeedsTeXFormat{LaTeX2e}[2011/06/27]
\ProvidesPackage{thumbs}[2014/03/09 v1.0q]
  Thumb marks and overview page(s) (HMM)]
\end{verbatim}

A short description of the thumbs package:

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

For possible SW(P) users, we issue a warning. Unfortunately, we cannot check for the used software (Can we? tcilatex.tex is probably exactly there when SW(P) is used, but it could also be there without SW(P) for compatibility reasons.), 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. The options for those packages might be changed by the user – I neither tested all available options nor the current thumbs package, thus first test, whether the document can be compiled with these options, and then try to change them according to your wishes (or just get a current $\TeX$ distribution instead!).

\IfFileExists{tcilatex.tex}{%
  Quite probably SWP/SW/SN
  \PackageWarningNoLine{thumbs}{%
    When compiling with SWP 5.50 Build 2960\MessageBreak%
    (copyright MacKichan Software, Inc.\MessageBreak%
    and using an older version of the thumbs package\MessageBreak%
    these additional packages were needed:\MessageBreak%
    \string\usepackage[T1]{fontenc}\MessageBreak%
    \string\usepackage{amsfonts}\MessageBreak%
    \string\usepackage{cellspace}\MessageBreak%
    \string\usepackage{xcolor}\MessageBreak%
    \string\pagecolor{white}\MessageBreak%
    \string\providecommand{\QTO}[2]{\string##2}\MessageBreak%
    especially before hyperref and thumbs,\MessageBreak%
    but best right after the \string\documentclass\MessageBreak%
  }%
  }{%
    Probably not SWP/SW/SN
}

For the handling of the options we need the kvoptions package of Heiko Oberdiek (see subsection 6.1):

\RequirePackage{kvoptions}[2011/06/30] v3.11

as well as some other packages:

\RequirePackage{atbegshi}[2011/10/05] v1.16
\RequirePackage{xcolor}[2007/01/21] v2.11

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

\begin{verbatim}
\RequirePackage{picture}[2009/10/11]\% v1.3
\RequirePackage{alphalph}[2011/05/13]\% v2.4
\RequirePackage{pageslts}[2014/01/19]\% v1.2c
\RequirePackage{pagecolor}[2012/02/23]\% v1.0e
\RequirePackage{rerunfilecheck}[2011/04/15]\% v1.7
\RequirePackage{infwarerr}[2010/04/08]\% v1.3
\RequirePackage{ltxcmds}[2011/11/09]\% v1.22
\RequirePackage{atveryend}[2011/06/30]\% v1.8
\end{verbatim}

A last information for the user:

\begin{verbatim}
\% thumbs may work with earlier versions of LaTeX2e and those packages,
\% but this was not tested. Please consider updating your LaTeX contribution
\% and packages to the most recent version (if they are not already the most
\% recent version).
\% See subsection 6.1 about how to get them.
\end{verbatim}

\LaTeX{} 2e 2011/06/27 changed the \texttt{\enddocument} command and thus broke the \texttt{atveryend} package, which was then fixed. If new \LaTeX{} 2e and old \texttt{atveryend} are combined, \texttt{\AtVeryVeryEnd} will never be called. \texttt{\@ifl@t@r\fmtversion} is from \texttt{\@needsf@rmat} as in File L: \texttt{ltclass.dtx} Date: 2007/08/05 Version v1.1h, line 259, of The \LaTeX{} 2e Sources by Johannes Braams, David Carlisle, Alan Jeffrey, Leslie Lamport, Frank Mittelbach, Chris Rowley, and Rainer Schöpf as of 2011/06/27, p. 464.

\begin{verbatim}
\@ifl@t@r\fmtversion{2011/06/27}\% or possibly even newer
{\@ifpackagelater{atveryend}{2011/06/29}\%
 {\% 2011/06/30, v1.8, or even more recent: OK
 }{% else: older package version, no \AtVeryVeryEnd
}\PackageError{thumbs}{Outdated atveryend package version}{LaTeX 2011/06/27 has changed \string\enddocument\space and thus broken the\MessageBreak}
\string\AtVeryVeryEnd\space command/hooking of atveryend package as of\MessageBreak}
\safe@name\string\AtVeryVeryEnd\space command\% 
\safe@name\string\AtVeryVeryEnd\space command\% 
2011/04/23, v1.7. Package versions 2011/06/30, v1.8, and later work with\MessageBreak}
\safe@name\string\AtVeryVeryEnd\space command\% 
the new \LaTeX{} command, but some older package version was loaded.\MessageBreak}
\safe@name\string\AtVeryVeryEnd\space command\% 
Please update to the newer atveryend package.\MessageBreak}
\safe@name\string\AtVeryVeryEnd\space command\% 
For fixing this problem until the updated package is installed,\MessageBreak}
\safe@name\string\AtVeryVeryEnd\space command\% 
\let\string\AtVeryVeryEnd\string\AtEndAfterFileList\MessageBreak\%
\let\string\AtVeryVeryEnd\string\AtEndAfterFileList\MessageBreak\%
\let\string\AtVeryVeryEnd\string\AtEndAfterFileList\MessageBreak\%
\let\string\AtVeryVeryEnd\string\AtEndAfterFileList\MessageBreak\%
is used now, fingers crossed.\%
\%
\let\AtVeryVeryEnd\AtEndAfterFileList\%
\AtEndAfterFileList{% if there is \AtVeryVeryEnd inside \AtEndAfterFileList
  \let\AtEndAfterFileList\ltx@firstofone%
}
\%
{% else: older fmtversion: OK
\end{verbatim}

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In this case the used \TeX format is outdated, but when
\NeedsTeXFormat{LaTeX2e}[2011/06/27]
is executed at the beginning of \texttt{regstats} package, the appropriate warning message is issued automatically (and \texttt{thumbs} probably also works with older versions).

The options are introduced:

\begin{verbatim}
\SetupKeyvalOptions{family=thumbs,prefix=thumbs@}
\DeclareStringOption{linefill}[dots]\thumbs@linefill
\DeclareStringOption{rule}\thumbs@rule
\DeclareStringOption{minheight}[47pt]\thumbs@minheight
\DeclareStringOption{height}[auto]\thumbs@height
\DeclareStringOption{width}[auto]\thumbs@width
\DeclareStringOption{distance}[2mm]\thumbs@distance
\DeclareStringOption{topthumbmargin}[auto]\thumbs@topthumbmargin
\DeclareStringOption{bottomthumbmargin}[auto]\thumbs@bottomthumbmargin
\DeclareStringOption{eventxtindent}[5pt]\thumbs@eventxtindent
\DeclareStringOption{oddtxtindent}[5pt]\thumbs@oddtxtindent
\DeclareStringOption{eventxtindent}[0pt]\thumbs@eventtxtindent
\DeclareStringOption{oddtxtindent}[0pt]\thumbs@oddtxtindent
\DeclareStringOption{eventxtindent}[0pt]\thumbs@eventprintvoffset
\DeclareStringOption{oddtxtindent}[0pt]\thumbs@oddmarkexdent
\DeclareBoolOption{draft}\thumbs@draft
\DeclareComplementaryOption{final}{draft}
\DeclareBoolOption{hidethumbs}\thumbs@hidethumbs
\end{verbatim}

The options \texttt{pagecolor}, \texttt{evenindent}, and \texttt{oddexdent} are obsolete now, but for compatibility with older documents they are still provided at the time being (will be removed in some future version).

\begin{verbatim}
%% Obsolete options:
\DeclareStringOption{pagecolor}
\DeclareStringOption{evenindent}
\DeclareStringOption{oddexdent}
\end{verbatim}

The options \texttt{pagecolor}, \texttt{evenindent}, and \texttt{oddexdent} are obsolete now, but for compatibility with older documents they are still provided at the time being (will be removed in some future version).

\begin{verbatim}
%% Obsolete options:
\DeclareStringOption{pagecolor}
\DeclareStringOption{evenindent}
\DeclareStringOption{oddexdent}
\end{verbatim}
The (background) page colour is set to \texttt{\thepagecolor} (from the \texttt{pagecolor} package), because the \texttt{xcolour} package needs a defined colour here (it can be changed later).

\begin{verbatim}
527 \ifx\thumbs@pagecolor\empty\relax
528 \pagecolor{\thepagecolor}
529 \else
530 \PackageError{thumbs}{Option pagecolor is obsolete}{% 
531 Instead the pagecolor package is used.\MessageBreak% 
532 Use \texttt{\string\pagecolor{...}}/\texttt{\string\usepackage[...]{thumbs}}/\texttt{\string\begin{document}}/\texttt{\string\space to define a background colour\MessageBreak% 
533 of the pages}\MessageBreak% 
534 \pagecolor{\thumbs@pagecolor}
535 \fi
536
537 \ifx\thumbs@evenindent\empty\relax
538 \else
539 \PackageError{thumbs}{Option evenindent is obsolete}{% 
540 Option "evenindent" was renamed to "eventxtindent",\MessageBreak% 
541 the obsolete "evenindent" is no longer regarded.\MessageBreak% 
542 Please change your document accordingly\MessageBreak% 
543 \fi
544
545 \ifx\thumbs@oddexdent\empty\relax
546 \else
547 \PackageError{thumbs}{Option oddexdent is obsolete}{% 
548 Option "oddexdent" was renamed to "oddtxtexdent",\MessageBreak% 
549 the obsolete "oddexdent" is no longer regarded.\MessageBreak% 
550 Please change your document accordingly\MessageBreak% 
551 \fi
552
553 \if\thumbs@ignorehoffset\relax
554 \PackageInfo{thumbs}{% 
555 Option ignorehoffset NOT =false:\MessageBreak% 
556 hoffset will be ignored.\MessageBreak% 
557 To make thumbs regard hoffset use option\MessageBreak% 
558 ignorehoffset=false\MessageBreak% 
559 \gdef\th@bmshoffset{0pt}
560 \else
561 \PackageInfo{thumbs}{% 
562 Option ignorehoffset=false:\MessageBreak% 
563 hoffset will be regarded.\MessageBreak% 
564 \fi
\end{verbatim}

\textbf{ignorehoffset} and \textbf{ignorevoffset} usually \texttt{hoffset} and \texttt{voffset} should be regarded, but moving the thumb marks away from the paper edge probably makes them useless. Therefore \texttt{hoffset} and \texttt{voffset} are ignored by default, or when option \texttt{ignorehoffset} or \texttt{ignorehoffset=true} is used (and \texttt{ignorevoffset} or \texttt{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 \texttt{ignorehoffset=false} and \texttt{ignorevoffset=false} can be used to regard these offsets. (Combinations \texttt{ignorehoffset=true, ignorevoffset=false} and \texttt{ignorehoffset=false, ignorevoffset=true} are also possible.)

\begin{verbatim}
554 \if\thumbs@ignorehoffset
555 \PackageInfo{thumbs}{% 
556 Option ignorehoffset NOT =false:\MessageBreak% 
557 hoffset will be ignored.\MessageBreak% 
558 To make thumbs regard hoffset use option\MessageBreak% 
559 ignorehoffset=false\MessageBreak% 
560 \gdef\th@bmshoffset{0pt}
561 \else
562 \PackageInfo{thumbs}{% 
563 Option ignorehoffset=false:\MessageBreak% 
564 hoffset will be regarded.\MessageBreak% 
565 \fi
\end{verbatim}
This might move the thumb marks away from the paper edge}
\gdef\th@bmshoffset\hoffset
\fi
\fi
\ifthumbs@ignorevoffset
\PackageInfo{thumbs}{%
  Option ignorevoffset NOT =false:\MessageBreak%
  voffset will be ignored.\MessageBreak%
  To make thumbs regard voffset use option\MessageBreak%
  ignorevoffset=false}
\gdef\th@bmsvoffset{-\voffset}
\else
\PackageInfo{thumbs}{%
  Option ignorevoffset=false:\MessageBreak%
  voffset will be regarded.\MessageBreak%
  This might move the thumb mark outside of the printable area}
\gdef\th@bmsvoffset{\voffset}
\fi
\fi

\PackageInfo{thumbs}{%
linefill  We process the linefill option value:
\ifx\thumbs@linefill\empty%
\gdef\th@mbs@linefill{\hspace*{\fill}}
\else
\def\th@mbstest{line}%
\ifx\thumbs@linefill\th@mbstest%
\gdef\th@mbs@linefill{\hrulefill}
\else
\def\th@mbstest{dots}%
\ifx\thumbs@linefill\th@mbstest%
\gdef\th@mbs@linefill{\dotfill}
\else
\PackageError{thumbs}{Option linefill with invalid value}{%
  Option linefill has value "\thumbs@linefill .\MessageBreak%
  Valid values are "" (empty), "line", or "dots".\MessageBreak%
  "" (empty) will be used now.\MessageBreak%
  }
\gdef\th@mbs@linefill{\hspace*{\fill}}
\fi
\fi
\fi
We introduce new dimensions for width, height, position of and vertical distance between the thumb marks and some helper dimensions.

\newdimen\th@mbwidthx
\newdimen\th@mbheighty% Thumb height y
\setlength{\th@mbheighty}{\z@}
\newdimen\th@mbposx
\newdimen\th@mbposy
\newdimen\th@mbposyA
\newdimen\th@mbposyB
\newdimen\th@mbposytop
\newdimen\th@mbposybottom
\newdimen\th@mbwidthxtoc
\newdimen\th@mbsposytocy
\newdimen\th@mbsposytocyy

Horizontal indention of thumb marks text on odd/even pages according to the chosen options:

\newdimen\th@mbHitO
\setlength{\th@mbHitO}{\thumbs@oddtxtexdent}
\newdimen\th@mbHitE
\setlength{\th@mbHitE}{\thumbs@eventxtindent}

Horizontal indention of whole thumb marks on odd/even pages according to the chosen options:

\newdimen\th@mbHimO
\setlength{\th@mbHimO}{\thumbs@oddmarkexdent}
\newdimen\th@mbHimE
\setlength{\th@mbHimE}{\thumbs@evenmarkindent}

Vertical distance between thumb marks on odd/even pages according to the chosen option:

\ifx\thumbs@distance\empty%
  \setlength{\th@mbsdistance}{1mm}
\else
  \setlength{\th@mbsdistance}{\thumbs@distance}
\fi
\if\thumbs@verbose\relax
\else
  \PackageInfo{thumbs}{Option verbose=false (or silent=true) found: You will lose some information}
\fi
We create a new Box for the thumbs and make some global definitions.

\newbox\ThumbsBox
\gdef\th@mb{}% will be set via .aux file
\gdef\th@mbmax{}% will be set via .aux file
\gdef\th@mbperpage{}% will be set via .aux file
\gdef\th@mbperpagecount{}% will be set via .aux file
\gdef\th@mbtitle{}
\gdef\th@mbtext{}
\gdef\th@mbtextcolour{\thepagecolor}
\gdef\th@mbbackgroundcolour{\thepagecolor}
\gdef\th@mbcolumn{}% will be set via .aux file
\gdef\th@mbtextA{}
\gdef\th@mbtextcolourA{\thepagecolor}
\gdef\th@mbbackgroundcolourA{\thepagecolor}
\gdef\th@mbprinting{}% will be set via .aux file
\gdef\th@mbtoprint{}% will be set via .aux file
\gdef\th@mbon{}% will be set via .aux file
\gdef\th@mbonpagemax{}% will be set via .aux file
\gdef\th@mbcolumnnew{}% will be set via .aux file
\gdef\th@mb@titlelabel{}
\gdef\th@mbstable{}% number of thumb marks overview tables

It is checked whether writing to thumbs.tmb is allowed.
\if@filesw
\relax
\else
\PackageWarningNoLine{thumbs}{No auxiliary files allowed!\MessageBreak%
It was not allowed to write to files.\MessageBreak%
A lot of packages do not work without access to files\MessageBreak%
like the .aux one. The thumbs package needs to write\MessageBreak%
to the \jobname.tmb file. To exit press\MessageBreak%
Ctrl+Z\MessageBreak%
.\MessageBreak%
}
\th@mb@txtBox \th@mb@txtBox writes its second argument (most likely \th@mb@tmp@text) in normal text size. Sometimes another text size could “leak” from the respective page, \normalsize prevents this. If another text size is wished for, it can always be changed inside \th@mb@tmp@text. The colour given in the first argument (most likely \th@mb@tmp@textcolour) is used and either \centering (depending on the txtcentered option) or \raggedleft or \raggedright (depending on the third argument). The forth argument determines the width of the \parbox.

\newcommand{\th@mb@txtBox}{4}{% 
\parbox[c]{\th@mb@heighty}[c]{#4}{% 
\settowidth{\th@mb@widthtmp}{\normalsize #2}% 
\addtolength{\th@mb@widthtmp}{-#4}% 
\ifthumbs@txtcentered% 
{\centering{\color{#1}\normalsize #2}}% 
\else% 
{\def\th@mbstest{#3}% 
{\def\th@mbstestb{r}% 
{\ifx\th@mbstest\th@mbstestb% 
{\ifdim\th@mb@widthtmp >0sp\relax\hspace*{-\th@mb@widthtmp}\fi% 
{\raggedleft\leftskip 0sp minus \textwidth{\hfill\color{#1}\normalsize{#2}}}% 
\else% \th@mbstest = 1 
{\raggedright{\color{#1}\normalsize\hspace*{1pt}\space{#2}}}% 
\fi% 
\fi% 
\fi} 
\fi

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

\newcommand{\sett@mb@height}{% 
\setlength{\th@mb@heighty}{\z@} 
\advance\th@mb@heighty\headheight 
\advance\th@mb@heighty\headsep 
\advance\th@mb@heighty\textheight 
\advance\th@mb@heighty\footskip 
\@tempcnta=\th@mbsmax\relax 
\ifnum\@tempcnta>1 
\divide\th@mb@heighty\th@mbsmax 
\fi 
\advance\th@mb@heighty\th@mbsmax 
\advance\th@mb@heighty-\th@mbsdistance 
} 

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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.

\begin{verbatim}
\AtBeginDocument{\th@bmshoffset}
\gdef\th@bmshoffset{0pt}
\else
\gdef\th@bmshoffset{\hoffset}
\fi
\ifthumbs@ignorevoffset
\gdef\th@bmsvoffset{-\voffset}
\else
\gdef\th@bmsvoffset{\voffset}
\fi
\xdef\th@mbpaperwidth{\the\paperwidth}
\setlength{\@tempdima}{1pt}
\ifdim \thumbs@minheight < \@tempdima% too small
\setlength{\thumbs@minheight}{1pt}
\else
\ifdim \thumbs@minheight = \@tempdima% small, but ok
\else
\ifdim \thumbs@minheight > \@tempdima% ok
\PackageError{thumbs}{Option minheight has invalid value}{% As value for option minheight please use a number and a length unit (e.g. mm, cm, pt) and no space between them (please see the thumbs-example.tex file). When pressing Return, minheight will now be set to 47pt.}
\setlength{\thumbs@minheight}{47pt}
\else
\setlength{\thumbs@minheight}{\@tempdima}{47pt}
\fi
\fi
\fi
\setlength{\@tempdima}{\thumbs@minheight}
\setth@mbheight
\end{verbatim}

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

\begin{verbatim}
\ifx\thumbs@height\empty%
\setlength{\th@mbheighty}{\@tempdima}
\else
\def\th@mbstest{auto}
\ifx\thumbs@height\th@mbstest%
\setth@mbheight (see above).
\end{verbatim}

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

\verbatiminput{page31}

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

\verbatiminput{page32}

Read in the \texttt{\jobname.tmb}-file:

\verbatiminput{page33}

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

\verbatiminput{page34}

Setting the thumb mark width (\texttt{\th@mbwidthx}):
\def\th@mbstest{auto}
\ifx\thumbs@width\th@mbstest%
\else
  \def\th@mbstest{autoauto}
  \ifx\thumbs@width\th@mbstest%
    \ifundef\th@mbmaxwidtha{%
      \if@filesw%
        \gdef\th@mbmaxwidtha{0pt}
        \setlength{\th@mbwidthx}{\th@mbmaxwidtha}
        \AtEndAfterFileList{
          \PackageWarningNoLine{thumbs}{% string\th@mbmaxwidtha\space undefined.\MessageBreak%
            Rerun to get the thumb marks width right%}
        }
      \else
        \PackageError{thumbs}{% You cannot use option autoauto without \jobname.aux file.%}
      \fi
    \else
      \PackageError{thumbs}{%}
    \fi
  \}{%\else
  \setlength{\th@mbwidthx}{\th@mbmaxwidtha}
}\fi
\else
  \ifdim\thumbs@width > \@tempdima% OK
    \setlength{\th@mbwidthx}{\thumbs@width}
  \else
    \PackageError{thumbs}{Thumbs not wide enough}{% Option width has value "\thumbs@width".\MessageBreak%
      This is not a valid dimension larger than zero.\MessageBreak%
      Width will be set automatically.\MessageBreak%
    }
  \fi
\fi
\fi
\ifthumbs@verbose
  \edef\thumbsinfo{\the\th@mbwidthx}
\PackageInfoNoLine{thumbs}{The width of the thumb marks is \thumbsinfo}
\ifthumbs@draft
  \PackageInfoNoLine{thumbs}{because thumbs package is in draft mode}
\fi
\fi
Setting the position of the first/top thumb mark. Vertical (y) position is a little bit complicated, because option \texttt{thumbs@topthumbmargin} must be handled:

\begin{verbatim}
  \setlength{\th@mbposx}{\paperwidth}
  \advance\th@mbposx-\th@mbwidthx
  \ifthumbs@ignorehoffset
    \advance\th@mbposx-\hoffset
  \fi
  \advance\th@mbposx+1pt
  % Thumb position y \th@mbposy
  \ifx\thumbs@topthumbmargin\empty%
    \def\thumbs@topthumbmargin{auto}
  \fi
  \def\th@mbstest{auto}
  \ifx\thumbs@topthumbmargin\th@mbstest%
    \setlength{\th@mbposy}{1in}
    \advance\th@mbposy+\th@bmsvoffset
    \advance\th@mbposy+\topmargin
    \advance\th@mbposy-\th@mbsdistance
    \advance\th@mbposy+\th@mbheighty
  \else
    \setlength{\@tempdima}{-1pt}
    \ifdim \thumbs@topthumbmargin > \@tempdima% OK
      \PackageWarning{thumbs}{Thumbs column starting too high.\MessageBreak%
      Option topthumbmargin has value "\thumbs@topthumbmargin ".\MessageBreak%
      tophumbmargin will be set to -1pt.\MessageBreak%}
    \else
      \gdef\thumbs@topthumbmargin{-1pt}
    \fi
    \setlength{\th@mbposy}{\thumbs@topthumbmargin}
    \advance\th@mbposy-\th@mbsdistance
    \advance\th@mbposy+\th@mbheighty
  \fi
  \setlength{\@tempdimc}{\th@mbposytop-	h@mbheighty}
  \advance\@tempdimc+\th@mbsdistance
  \edef\thumbsinfo{\the\@tempdimc}
  \PackageInfoNoLine{thumbs}{The top thumb margin is \thumbsinfo}
\end{verbatim}

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Setting the lowest position of a thumb mark, according to option $\texttt{\textbackslash thumbs@bottomthumbmargin}$:

```latex
% Max. thumb position y \th@mbposybottom
\ifx\thumbs@bottomthumbmargin\empty%
  \gdef\thumbs@bottomthumbmargin\texttt{auto}
\fi
\def\th@mbstest\texttt{auto}
\ifx\thumbs@bottomthumbmargin\th@mbstest%
  \setlength{\th@mbposybottom}\texttt{1in}
  \ifthumbs@ignorevoffset\relax
    \else \advance\th@mbposybottom+\th@mbvoffset\fi
  \else \setlength{\th@mbposybottom}{\texttt{1in}}
    \ifthumbs@ignorevoffset\relax
      \else \advance\th@mbposybottom+\th@mbvoffset\fi
  \fi
  \advance\th@mbposybottom+\topmargin
  \advance\th@mbposybottom-\th@mbsdistance
  \advance\th@mbposybottom+\th@mbheighty
  \advance\th@mbposybottom+\headheight
  \advance\th@mbposybottom+\headsep
  \advance\th@mbposybottom+\textheight
  \advance\th@mbposybottom+\footskip
  \else
    \setlength{\@tempdima}{\paperheight}
    \advance\@tempdima by -\thumbs@bottomthumbmargin
    \advance\@tempdima by -\th@mbposytop
    \advance\@tempdima by -\th@mbsdistance
    \advance\@tempdima by -\th@mbheighty
    \advance\@tempdima by -\th@mbsdistance
    \ifdim\@tempdima > 0sp \relax
      \else
        \setlength{\@tempdima}{\paperheight}
        \advance\@tempdima by -\th@mbposytop
        \advance\@tempdima by -\th@mbsdistance
        \advance\@tempdima by -\th@mbheighty
        \advance\@tempdima by -\th@mbsdistance
        \advance\@tempdima by -1pt
        \PackageWarning{thumbs}{Thumbs column ending too high.\MessageBreak%
          Option bottomthumbmargin has value \texttt{\textbackslash thumbs@bottomthumbmargin}.\MessageBreak%
          bottomthumbmargin will be set to \texttt{the}\@tempdima.\MessageBreak%
        }
        \xdef\thumbs@bottomthumbmargin\texttt{\the\@tempdima}
      \fi
    \fi\fi
\fi
```

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\setlength{\@tempdima}{\thumbs@bottomthumbmargin}
\setlength{\@tempdimc}{-1pt}
\ifdim \@tempdima < \@tempdimc%
\PackageWarning{thumbs}{Thumbs column ending too low.\MessageBreak%
Option bottomthumbmargin has value "\thumbs@bottomthumbmargin "\MessageBreak%
bottomthumbmargin will be set to -1pt.\MessageBreak%
\}
\gdef\thumbs@bottomthumbmargin{-1pt}
\fi
\setlength{\th@mbposybottom}{\paperheight}
\advance\th@mbposybottom-\thumbs@bottomthumbmargin
\fi
\ifthumbs@verbose%
\setlength{\@tempdimc}{\paperheight}
\advance\@tempdimc by -\th@mbposybottom
\edef\thumbsinfo{\the\@tempdimc}
\@PackageInfoNoLine{thumbs}{The bottom thumb margin is \thumbsinfo}
\@PackageInfoNoLine{thumbs}{**********************************************}
\message{^^J}
\fi

\th@mbposyA is 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@mbsposytocyy is used to remember this position unchanged.
\advance\th@mbsposytocyy-\th@mbheighty% because it will be advanced also for the first thumb
\setlength{\th@mbposyA}{\th@mbposy}% \th@mbposyA will change.
\setlength{\th@mbsposytocyy}{\th@mbposy}% \th@mbsposytocyy shall not be changed.
\}
\newcommand{\th@mb@dvance}{% 
\advance\th@mbposy+\th@mbheighty% 
\advance\th@mbposy+\th@mbsdistance% 
\ifdim\th@mbposy<\th@mbposybottom%
\advance\th@mbsposytocyy-\th@mbheighty% 
\advance\th@mbsposytocyy-\th@mbsdistance% 
\else%
\advance\th@mbposy-\th@mbheighty% 
\advance\th@mbposy-\th@mbsdistance% 
\thumborigaddthumb{}{}{\string\thepagecolor}{\string\thepagecolor}\
\th@mb@dvance%
\fi%
}

\th@mb@dvance The internal command \th@mb@dvance is used to advance the position of the current thumb by \th@mbheighty and
\th@mbsdistance. 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@dvance is calling itself again. This loop continues until a new thumb column is ready to be started.
With the command \texttt{\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 \texttt{\thumbnewcolumn} on a page where \texttt{\addthumb} was already used, but use \texttt{\addthumb} immediately after \texttt{\thumbnewcolumn}.

When a thumb mark shall not or cannot be placed on a page, e.g. at the title page or when using \texttt{\includepdf} from \texttt{pdfpages} package, but the reference in the thumb marks overview nevertheless shall name that page number and hyperlink to that page, \texttt{\addtitlethumb} can be used at the following page. It has five arguments. The arguments one to four are identical to the ones of \texttt{\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 \texttt{pagesLTS.0} can be use, which is already placed there by the used \texttt{pageslts} package.
To locally disable the setting of a `\phantomsection` before a thumb mark, the command `\thumbsnophantom` is provided. (But at first it is not disabled.)

```latex
993 \gdef\th@mbphantom{1}
994 \newcommand{\thumbsnophantom}{\gdef\th@mbphantom{0}}
996
```

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

```latex
997 \newcommand{\addthumb}[4]{%
998 \gdef\th@mbprinting{1}%
999 \advance\th@mbposy\th@mbheighty%
1000 \advance\th@mbposy\th@mbdistance%
1001 \ifdim\th@mbposy>\th@mbposybottom%
1002 \PackageInfo{thumbs}{%
1003 Thumbs column full, starting another column.\MessageBreak%
1004 }%
1005 \setlength{\th@mbposy}{\th@mbposytop}%
1006 \advance\th@mbposy\th@mbdistance%
1007 \ifx\th@mbcolumn\pagesLTS@zero%
1008 \xdef\th@umbsperpagecount{\th@mbs}%
1009 \gdef\th@mbcolumn{1}%
1010 \gdef\th@mbcolumn{1}%
1011 \fi%
1012 \@tempcnta=\th@mbs\relax%
1013 \advance\@tempcnta by 1%
1014 \xdef\th@mbs{the@tempcnta}%
1015 \gdef\th@mbtitle{#1}%
1016 \gdef\th@mbtext{#2}%
1017 \gdef\th@mbtextcolour{#3}%
1018 \gdef\th@mbbackgroundcolour{#4}%
```

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).

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). It could be acceptable to have a thumb mark text consisting of more than one line, of course, in which case nothing needs to be changed. Possible horizontal movement (`\th@mbHitO`, `\th@mbHitE`) has to be taken into account.
Into the \jobname.tmb file a \thumbcontents entry is written. If hyperref is found, a \phantomsection is placed (except when globally disabled by option nophantomsection or locally by \thumbsnophantom), 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!).

\ltx@ifpackageloaded{hyperref}{% hyperref loaded
\ltx@ifpackageloaded{hyperref}{\thumbsnophantomsection} % hyperref not loaded
\label{thumbs.	h@mbs}%
\if@filesw%
\ifx\th@mb@titlelabel\empty%
\addtocontents{tmb}{\string\thumbcontents{#1}{#2}{#3}{#4}{\thepage}{thumbs.	h@mbs}{\th@mbcolumnnew}}%
\else%
\addtocommand{tmb}{\string\thumbcontents{#1}{#2}{#3}{#4}{\thepage}{thumbs.	h@mbs}{\th@mbcolumnnew}}%
\else%
\addtocounter{page}{-1}%
\edef\th@mbsphantom{1}%
\addtocommand{tmb}{\string\thumbcontents{#1}{#2}{#3}{#4}{\thepage}{thumbs.	h@mbs}{\th@mbcolumnnew}}%
\addtocounter{page}{+1}%
\fi%
\fi%
\else there is a problem, but the according warning message was already given earlier.
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).
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).

\newcommand{\stopthumb}{\gdef\th@mbprinting{0}}

\continuethumb \continuethumb continues the issuing of thumb marks (equal to the one before this was stopped by \stopthumb).

\newcommand{\continuethumb}{\gdef\th@mbprinting{1}}
The \texttt{internal} command \texttt{\thumbcontents} (which will be read in from the \texttt{\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 \texttt{\thumbnewcolumn} is just issuing blank thumbs to fill a column

(parameters in this order). Without hyperref the 6th parameter is just ignored.

```latex
\newcommand{\thumbcontents}{%  
\advance\th@mbposy\th@mbheighty%  
\advance\th@mbposy\th@mbsdistance%  
\ifdim\th@mbposy>\th@mbposybottom%  
\setlength{\th@mbposy}{\th@mbposytop}%  
\advance\th@mbposy\th@mbsdistance%  
\def\th@mb@tmp@title{#1}%  
\def\th@mb@tmp@text{#2}%  
\def\th@mb@tmp@textcolour{#3}%  
\def\th@mb@tmp@backgroundcolour{#4}%  
\def\th@mb@tmp@page{#5}%  
\def\th@mb@tmp@label{#6}%  
\def\th@mb@tmp@column{#7}%  
\ifx\th@mb@tmp@column\pagesLTS@two%  
\def\th@mb@tmp@column{0}%  
\fi%  
\setlength{\th@mbwidthxtoc}{\paperwidth}%  
\advance\th@mbwidthxtoc-1in%  
\def\th@mbstest{r}%  
\ifx\th@mbstest\th@mbsprintpage% r  
\advance\th@mbwidthxtoc-\th@mbHimO%  
\advance\th@mbwidthxtoc-\oddsidemargin%  
\setlength{\@tempdimc}{1in}%  
\else% l  
\advance\th@mbwidthxtoc-\th@mbHimE%  
\advance\th@mbwidthxtoc-\evensidemargin%  
\fi%  
\setlength{\th@mbwidthxtoc}{\paperwidth}%  
\advance\th@mbwidthxtoc-1in%  
\def\th@mbstest{r}%  
\ifx\th@mbstest\th@mbsprintpage% r  
\advance\th@mbwidthxtoc-\th@mbHimO%  
\advance\th@mbwidthxtoc-\oddsidemargin%  
\setlength{\@tempdimc}{1in}%  
\else% l  
\advance\th@mbwidthxtoc-\th@mbHimE%  
\advance\th@mbwidthxtoc-\evensidemargin%  
\\end{verbatim}
```

Depending on which side the thumb marks should be placed the according dimensions have to be adapted.
\setlength{\@tempdimc}{\th@bmshoffset}\
\advance\@tempdimc-\hoffset
\fi\
\setlength{\th@mbposyB}{-\th@mbposy}\
\if@twoside\
\ifodd\c@CurrentPage\
\ifx\th@mbtikz\pagesLTS@zero\
\else\
\setlength{\@tempdimb}{-\th@mbposy}\
\advance\@tempdimb-\thumbs@evenprintvoffset\
\setlength{\th@mbposyB}{\@tempdimb}\
\fi\
\else\
\ifx\th@mbtikz\pagesLTS@zero\
\setlength{\@tempdimb}{-\th@mbposy}\
\advance\@tempdimb-\thumbs@evenprintvoffset\
\setlength{\th@mbposyB}{\@tempdimb}\
\fi\
\fi\
\def\th@mbstest{l}\
\ifx\th@mbstest\th@mbsprintpage l\fi\
\put(\@tempdimc,\th@mbposyB){%\
\ifx\th@mbstest\th@mbsprintpage l\fi\begin{picture}(0,0)\
\Advance\th@mbwidthxtoc by the absolute value of \evensidemargin.\
With the bigintcalc package it would also be possible to use:
\setlength{\@tempdimb}{\evensidemargin}\
\@settopoint\@tempdimb%\
\Advance\th@mbwidthxtoc+\bigintcalcSgn{\expandafter\strip@pt \@tempdimb}\evensidemargin%\
\ifdim\evensidemargin <0sp\relax%\
\Advance\th@mbwidthxtoc-\evensidemargin%\
\else% >=0sp\
\Advance\th@mbwidthxtoc+\evensidemargin%\
\fi\fi\begin{picture}(0,0)\
When the option thumblink=rule was chosen, the whole rule is made into a hyperlink. Otherwise the rule is created without hyperlink (here).\
\def\th@mbtest{rule}%\
\ifx\thumbs@thumblink\th@mbtest%
\ifx\th@mb@tmp@column\pagesLTS@zero%
\ifcolor{\th@mb@tmp@backgroundcolour}%
\hyperref[\th@mb@tmp@label]{\rule{\th@mbwidthxtoc}{\th@mbheighty}}%
When \texttt{\th@mb@tmp@column} is not zero, then this is a blank thumb mark from \texttt{thumbnewcolumn}.

\begin{picture}
\ifx\th@mb@tmp@backgroundcolour\relax
\color{\th@mb@tmp@backgroundcolour}ule{\th@mbwidthxtoc}{\th@mbheighty}
\else
{\color{\th@mb@tmp@backgroundcolour}ule{\th@mbwidthxtoc}{\th@mbheighty}}
\fi
\else
{\color{\th@mb@tmp@backgroundcolour}ule{\th@mbwidthxtoc}{\th@mbheighty}}
\fi
\end{picture}

When \texttt{\th@mb@tmp@column} is zero, then this is not a blank thumb mark from \texttt{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.

\begin{picture}
\ifx\th@mb@tmp@column\relax
\setlength{\th@mbwidthxtoc}{\paperwidth}
\else
{\setlength{\th@mbwidthxtoc}{\paperwidth}}
\fi
\advance\th@mbwidthxtoc-1\in
\advance\th@mbwidthxtoc-\hoffset
\ifx\th@mbstest\th@mb@tmp@column\relax
\advance\th@mbwidthxtoc-\evensidemargin
\else
\advance\th@mbwidthxtoc-\oddsidemargin
\fi
\advance\th@mbwidthxtoc-\th@mbwidthx
\advance\th@mbwidthxtoc-20\pt
\ifdim\th@mbwidthxtoc>\textwidth
{\setlength{\th@mbwidthxtoc}{\textwidth}}
\fi
\end{picture}
Depending on which side the thumb marks should be placed the according dimensions have to be adapted here, too.
Depending on the value of option `thumblink`, parts of the text are made into hyperlinks:

- **none** creates *none* hyperlink

\[
def\text{\th@mbtest\{}none\}\%
\text{\th@mb\thumblink\th\mbtest\%}
\\text{\color{\th\mb@textcolour}\noindent \th\mb@tmp@title}\%
\leaders\text{\box \ThumbsBox \th\mb@linefill \th\mb@tmp@page}\%
\]

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

\[
def\text{\th@mbtest\{}title\}\%
\text{\th@mb\thumblink\th\mbtest\%}
\\text{\color{\th\mb@textcolour}\noindent\hyperref{\th\mb@tmp@label}{\th\mb@tmp@title}\%}
\leaders\text{\box \ThumbsBox \th\mb@linefill \th\mb@tmp@page}\%
\]

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

\[
def\text{\th@mbtest\{}page\}\%
\text{\th@mb\thumblink\th\mbtest\%}
\\text{\color{\th\mb@textcolour}\noindent\th\mb@tmp@title\%}
\leaders\text{\box \ThumbsBox \th\mb@linefill \pageref{\th\mb@tmp@label}}\%
\]

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

\[
def\text{\th@mbtest\{}titleandpage\}\%
\text{\th@mb\thumblink\th\mbtest\%}
\\text{\color{\th\mb@textcolour}\noindent\hyperref{\th\mb@tmp@label}{\th\mb@tmp@title}\%}
\leaders\text{\box \ThumbsBox \th\mb@linefill \pageref{\th\mb@tmp@label}}\%
\]

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

\[
def\text{\th@mbtest\{}line\}\%
\text{\th@mb\thumblink\th\mbtest\%}
\\text{\color{\th\mb@textcolour}\noindent\hyperref{\th\mb@tmp@label}{\th\mb@tmp@title}\%}
\leaders\text{\box \ThumbsBox \th\mb@linefill \th\mb@tmp@page}\%
\]

\[
def\text{\th@mbtest\{}\else\}\%}
\]

\[
def\text{\th@mbtest\{}\else\}\%}
\]

\[
def\text{\th@mbtest\{}\else\}\%}
\]

\[
def\text{\th@mbtest\{}\else\}\%}
\]

\[
def\text{\th@mbtest\{}\else\}\%}
\]

\[
def\text{\th@mbtest\{}\else\}\%}
\]

\[
def\text{\th@mbtest\{}\else\}\%}
\]

\[
def\text{\th@mbtest\{}\else\}\%}
\]

\[
def\text{\th@mbtest\{}\else\}\%}
\]

\[
def\text{\th@mbtest\{}\else\}\%}
\]

\[
def\text{\th@mbtest\{}\else\}\%}
\]
The thumb mark (with text) as set in the document outside of the thumb marks overview page(s) is also presented here, except when we are printing at the left side.

The thumb mark (with text) as set in the document outside of the thumb marks overview page(s) is also presented here, except when we are printing at the left side.

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

The thumb mark (with text) as set in the document outside of the thumb marks overview page(s) is also presented here, except when we are printing at the left side.
\th@mb@yA  \th@mb@yA sets the y-position to be used in \th@mbprint.

\newcommand{\th@mb@yA}{% 
  \advance\th@mbposyA\th@mbheighty%
  \advance\th@mbposyA\th@mbsdistance%
  \ifdim\th@mbposyA>\th@mbposybottom%
    \PackageWarning{thumbs}{You are not only using more than one thumb mark at one单 page, but also thumb marks from different thumb\MessageBreak columns. May I suggest the use of a $\textit{string}$ pagebreak$\textit{space}$ or$\MessageBreak{\textit{string}}\textit{newpage}$ ?% 
  \setlength{\th@mbposyA}{\th@mbposytop}%
  \fi%
  \fi%
}\fi%
To determine whether to place the thumb marks at the left or right side of a two-sided paper, `thumbs` must determine whether the page number is odd or even. Because `\thepage` can be set to some value, the `currentPage` counter of the `pageslts` package is used instead. When the current page number is determined `\AtBeginShipout`, it is usually the number of the next page to be put out. But when the `tikz` package has been loaded before `thumbs`, it is not the next page number but the real one. But when the `hyperref` package has been loaded before the `tikz` package, it is the next page number. (When first `tikz` and then `hyperref` and then `thumbs` was loaded, it is the real page, not the next one.) Thus it must be checked which package was loaded and in what order.

\begin{verbatim}
ltx@ifpackageloaded{tikz}{{% tikz loaded before thumbs
ltx@ifpackageloaded{hyperref}{{% hyperref loaded before thumbs,
  \%\% but tikz and hyperref in which order? To be determined now:
  \%\% Code similar to the one from David Carlisle:
  \%\% http://tex.stackexchange.com/a/45654/6865
http://tex.stackexchange.com/a/45654/6865
  \ltx@ifpackageloaded{tikz}{% tikz loaded before hyperref,
  \%\% check for opposite case:
  \ltx@ifpackageloaded{hyperref}{% hyperref loaded before thumbs,
  \\let\th@mbstest\@empty
  \\@for\@th@mbsfl:=\@filelist\do{\%
  \\\ifx\@th@mbsfl\th@mbstest
  \\\\def\th@mbtikz{-1}% assume tikz loaded after hyperref,
  \\\\\def\th@mbstest{tikz.sty}
  \\\\let\th@mbstestb\@empty
  \\\\@for\@th@mbsfl:=\@filelist\do{\%
  \\\\\ifx\@th@mbsfl\th@mbstest
  \\\\\xdef\th@mbstestb{hyperref.sty}
  \\\\\fi}
  \\\\\fi\fi\fi\fi\fi}
  \\% End of code similar to the one from David Carlisle
  \\{\% tikz loaded before thumbs and hyperref loaded afterwards or not at all
  \\xdef\th@mbtikz{0}%
  \\}
  \\{\% tikz not loaded before thumbs
  \\xdef\th@mbtikz{-1}
  \\}
\end{verbatim}
\texttt{\th@mbprint} places a picture containing the thumb mark on the page.
\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.

because \texttt{CurrentPage} is already the number of the next page, except if \texttt{tikz} was loaded before thumbs, then it is still the \texttt{CurrentPage}.

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 \texttt{paperwidth}, we cannot detect it. Sorry.)
Determining the correct \texttt{\th@mbxpos}:

```latex
\edef\th@mbxpos{\the\th@mbposx}
\ifodd\@tempcnta\relax
\else\if@twoside\ifthumbs@ignorehoffset
\setlength{\@tempdimc}{-\hoffset}
\advance\@tempdimc-1pt
\edef\th@mbxpos{\the\@tempdimc}
\else
\def\th@mbxpos{-1pt}
\fi\else\fi\setlength{\@tempdimc}{\th@mbxpos}
\if@twoside\ifodd\@tempcnta\advance\@tempdimc-\th@mbHimO\else\advance\@tempdimc+\th@mbHimE\fi\else\advance\@tempdimc-\th@mbHimO\fi\edef\th@mbxpos{\the\@tempdimc}
\AtBeginShipoutUpperLeft{%
\ifx\th@mbprinting\pagesLTS@one\th@mbprint{\th@mbtextA}{\th@mbtextcolourA}{\th@mbbackgroundcolourA}\@tempcnta=1\relax\edef\th@mbonpagetest{\the\@tempcnta}\@whilenum\th@mbonpagetest<\th@mbonpage\do{%\advance\@tempcnta by 1\edef\th@mbonpagetest{\the\@tempcnta}\th@mb@yA\def\th@mbtmpdeftext{\csname th@mbtext\AlphAlph{\the\@tempcnta}\endcsname}\def\th@mbtmpdefcolour{\csname th@mbtextcolour\AlphAlph{\the\@tempcnta}\endcsname}\def\th@mbtmpdefbackgroundcolour{\csname th@mbbackgroundcolour\AlphAlph{\the\@tempcnta}\endcsname}\th@mbprint{\th@mbtmpdeftext}{\th@mbtmpdefcolour}{\th@mbtmpdefbackgroundcolour}}\fi}
\fi\fi\setlength{\@tempdimc}{\th@mbxpos}
\if@twoside\ifodd\@tempcnta\advance\@tempdimc-\th@mbHimO\else\advance\@tempdimc+\th@mbHimE\fi\else\advance\@tempdimc-\th@mbHimO\fi\edef\th@mbxpos{\the\@tempdimc}
\AtBeginShipoutUpperLeft{%
\ifx\th@mbprinting\pagesLTS@one\th@mbprint{\th@mbtextA}{\th@mbtextcolourA}{\th@mbbackgroundcolourA}\@tempcnta=1\relax\edef\th@mbonpagetest{\the\@tempcnta}\@whilenum\th@mbonpagetest<\th@mbonpage\do{%\advance\@tempcnta by 1\edef\th@mbonpagetest{\the\@tempcnta}\th@mb@yA\def\th@mbtmpdeftext{\csname th@mbtext\AlphAlph{\the\@tempcnta}\endcsname}\def\th@mbtmpdefcolour{\csname th@mbtextcolour\AlphAlph{\the\@tempcnta}\endcsname}\def\th@mbtmpdefbackgroundcolour{\csname th@mbbackgroundcolour\AlphAlph{\the\@tempcnta}\endcsname}\th@mbprint{\th@mbtmpdeftext}{\th@mbtmpdefcolour}{\th@mbtmpdefbackgroundcolour}}\fi}
```

52
When more than one thumb mark was placed at that page, on the following pages only the last issued thumb mark shall appear.

\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.

\AfterLastShipout{% 
  \ifx\th@mbcolumnnew\pagesLTS@zero% ok 
  \else 
    \PackageWarningNoLine{thumbs}{Still missing \string\addthumb\space after \string\thumbnewcolumn\space after\MessageBreak% 
    \string\thumbnewcolumn\space was used,\MessageBreak% 
    but no new thumb placed with \string\addthumb\space anywhere in the\MessageBreak% 
    rest of the document. Starting a new column of thumb\MessageBreak% 
    marks and not putting a thumb mark into that column\MessageBreak% 
    does not make sense. If you just want to get rid of\MessageBreak% 
    thumb marks, do not abuse \string\thumbnewcolumn\space but use\MessageBreak% 
    \string\stopthumb \MessageBreak% 
  \} 
  \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.

\ifx\th@mbcolumn\pagesLTS@zero% if there is only one column of thumbs 
  \edef\th@umbsperpagecount{\th@mbs} 
  \gdef\th@mbcolumn{1} 
\fi 
\ifx\th@umbsperpagecount\pagesLTS@zero 
  \gdef\th@umbsperpagecount{\th@mbs}% \th@mbs was increased with each \addthumb 
\fi 
\ifdim\th@mbmaxwidth>\th@mbwidthx 
  \iftumbs@draft\relax 
  \else 

53
\def\th@mbstest{autoauto}
\ifx\thumbs@width\th@mbstest%
  \AtEndAfterFileList{%
    \PackageWarningNoLine{thumbs}{% 
      Rerun to get the thumb marks width right%
    }
  }
\else
  \AtEndAfterFileList{%
    \edef\thumbsinfoa{\th@mbmaxwidth}
    \edef\thumbsinfob{\the\th@mbwidthx}
    \PackageWarningNoLine{thumbs}{% 
      Thumb mark too small or its text too wide:\MessageBreak%
      The widest thumb mark text is \thumbsinfoa\space wide,\MessageBreak%
      but the thumb marks are only \space\thumbsinfob\space wide.\MessageBreak%
      Either shorten or scale down the text,\MessageBreak%
      or increase the thumb mark width,\MessageBreak%
      or use option width=autoauto%
    }
  }
\fi
\fi
\if@filesw
  \immediate\write\@auxout{\string\gdef\string\th@mbmaxwidtha{\th@mbmaxwidth}}
  \immediate\write\@auxout{\string\gdef\string\th@umbsperpage{\th@umbsperpagecount}}
  \immediate\write\@auxout{\string\gdef\string\th@mbsmax{\th@mbs}}
  \expandafter\newwrite\csname tf@tmb\endcsname

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

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

\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.

\newcommand{\addthumbsoverviewtocontents}{[2]}% 
\gdef\th@mbs@toc@level{[#1]}% 
\gdef\th@mbs@toc@text{[#2]}%
We need a command to clear a double page, thus that the following text is left instead of right as accomplished with the usual \cleardoublepage. For this we take the original \cleardoublepage code and revert the \ifodd\c@page else (i.e. if even \c@page) condition.

\newcommand{\clearotherdoublepage}{\clearpage\if@twoside \ifodd\c@page% removed "else" from \cleardoublepage\hbox{}\newpage\if@twocolumn\hbox{}\newpage\fi\fi\fi%}

When the \hyperref package is used, one might like to refer to the thumb overview page(s), therefore \th@mbstablabeling command is defined (and used later). First 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 undolabl package (which is automatically loaded by the pageslts package).

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

\newcommand{\th@mbstablabeling}{\ltx@ifpackageloaded{hyperref}{\phantomsection}{}%\let\label\thumbsoriglabel%\ifx\th@mbstable\pagesLTS@one%\label{TableOfThumbs}%\label{TableOfThumbs1}%\else%\overridelabel{TableOfThumbs}%\label{TableOfThumbs\th@mbstable}%\fi%\let\label\@gobble%\ifx\th@mbs@toc@level\empty\relax%\else \addcontentsline{toc}{\th@mbs@toc@level}{\th@mbs@toc@text}%\fi%}

\newcommand{\th@mbstabs}{\ltx@ifpackageloaded{hyperref}{\phantomsection}{}%\let\label\thumbsoriglabel%\ifx\th@mbstable\pagesLTS@one%\label{TableOfThumbs}%\label{TableOfThumbs1}%\else%\overridelabel{TableOfThumbs}%\label{TableOfThumbs\th@mbstable}%\fi%\let\label\@gobble%\ifx\th@mbs@toc@level\empty\relax%\else \addcontentsline{toc}{\th@mbs@toc@level}{\th@mbs@toc@text}%\fi%}

For compatibility with documents created using older versions of this package \th@mbstabs did not get a second argument, but it is renamed to \th@mbstabsprint and additional to \th@mbstabs new commands are introduced. It is of course also possible to use \th@mbstabsprint with its two arguments directly, therefore its name does not include any \save the users the use of \makeatother and \makeatletter.

- \th@mbstabsprint prints the thumb marks at the right side and (in twoside mode) skips left sides (useful e.g. at the beginning of a document)
- \th@mbstabsprintback prints the thumb marks at the left side and (in twoside mode) skips right sides (useful e.g. at the end of a document)
- \texttt{\short.thumbsoverviewverso} prints the thumb marks at the right side and (in \texttt{twoside} mode) repeats them at the next left side and so on (useful anywhere in the document and when one wants to prevent empty pages)

- \texttt{\short.thumbsoverviewdouble} prints the thumb marks at the left side and (in \texttt{twoside} mode) repeats them at the next right side and so on (useful anywhere in the document and when one wants to prevent empty pages)

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

\begin{verbatim}
\short.thumbsoverview
1631 \newcommand{\thumbsoverview}[1]{\thumbsoverviewprint{#1}{r}}
1632
\short.thumbsoverviewback
1633 \newcommand{\thumbsoverviewback}[1]{\thumbsoverviewprint{#1}{l}}
1634
\short.thumbsoverviewverso
1635 \newcommand{\thumbsoverviewverso}[1]{\thumbsoverviewprint{#1}{v}}
1636
\short.thumbsoverviewdouble
1637 \newcommand{\thumbsoverviewdouble}[1]{\thumbsoverviewprint{#1}{d}}
1638
\short.thumbsoverviewprint
\short.thumbsoverviewprint works by calling the internal command \texttt{\short.th@mb@view} (see below), repeating this until all thumb marks have been processed.
1639 \newcommand{\thumbsoverviewprint}[2]{% It would be possible to just \texttt{\edef\th@mbs@viewpage{#2}}, but \texttt{\short.thumbsoverviewprint} might be called manually and without valid second argument.
1640 \edef\th@mbs@view{#2}%
1641 \def\th@mbs@viewb{r}%
1642 \ifx\th@mbs@view\th@mbs@viewb r
1643 \gdef\th@mbs@viewpage{r}%
1644 \else%
1645 \def\th@mbs@viewb{l}%
1646 \ifx\th@mbs@view\th@mbs@viewb l
1647 \gdef\th@mbs@viewpage{l}%
1648 \else%
1649 \def\th@mbs@viewb{v}%
1650 \ifx\th@mbs@view\th@mbs@viewb v
\end{verbatim}
\gdef\thumbsprintpage{v}%
\else%
\def\thumbsbtestb{d}%
\ifx\thumbsbtest\thumbsbtestb% d
\gdef\thumbsprintpage{d}%
\else%
\PackageError{thumbs}{% Invalid second parameter of \string\thumbsoverviewprint \space must be \MessageBreak
} {The second argument of command \string\thumbsoverviewprint \space must be \MessageBreak
either "r" or "l" or "v" or "d" but it is neither.\MessageBreak
Now "r" is chosen instead.\MessageBreak
}%
\gdef\thumbsprintpage{r}%
\fi%
\fi%
\fi%
\fi%
\fi%
\fi%
\fi%

Option \makeatletter\thumbs@thumblink is checked for a valid and reasonable value here.
\def\thumbsbtest{none}%
\ifx\thumbs@thumblink\thumbsbtest% OK
\else%
\ltx@ifpackageloaded{hyperref}{% hyperref loaded
 \def\thumbsbtest{title}%
 \ifx\thumbs@thumblink\thumbsbtest% OK
 \else%
 \def\thumbsbtest{page}%
 \ifx\thumbs@thumblink\thumbsbtest% OK
 \else%
 \def\thumbsbtest{titleandpage}%
 \ifx\thumbs@thumblink\thumbsbtest% OK
 \else%
 \def\thumbsbtest{line}%
 \ifx\thumbs@thumblink\thumbsbtest% OK
 \else%
 \def\thumbsbtest{rule}%
 \ifx\thumbs@thumblink\thumbsbtest% OK
 \else%
 \PackageError{thumbs}{Option thumblink with invalid value}{% Option thumblink has invalid value "\thumbs@thumblink ".\MessageBreak
 Valid values are "none", "title", "page",\MessageBreak
 "titleandpage", "line", or "rule".\MessageBreak
 "rule" will be used now.\MessageBreak
}%
\gdef\thumbs@thumblink{rule}%
\fi%
\fi%
\fi%
\fi%
\fi%
\fi%
\fi%
\fi%
\fi
When the thumb overview is printed and there is already a thumb mark set, for example for the front-matter (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).

\edef\thmbprintingovertoc{\thmbprinting}\
\ifnum \th@mbmax > \pagesLTS@zero%\
  \if@twoside%\
    \def\th@mbstest{r}%\
    \ifx\th@mbstest\th@mbsprintpage%\
      \cleardoublepage%\
    \else%\
      \def\th@mbstest{v}%\
      \ifx\th@mbstest\th@mbsprintpage%\
        \cleardoublepage%\
      \else% 1 or d\
        \clearotherdoublepage%\
      \fi%\
    \fi%\
  \else \clearpage%\
  \fi%\
\stopthumb%\
\markboth{\MakeUppercase #1 }{\MakeUppercase #1}%\
\fi%
\setlength{\th@mbsposytocy}{\th@mbposy}%\
\setlength{\th@mbsposytocyy}{\th@mbsposy}%\
\ifx\th@mbstable\pagesLTS@zero%\
  \newcounter{th@mblinea}\
\fi%\
\newcounter{th@mblineb}\
\newcounter{FileLine}%\
\newcounter{thumbsstop}%
\fi%
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:

\thumbsoriglabel
\let\thumbsoriglabel\label%

\thumbsorigindex
\let\thumbsorigindex\index%

\thumbsorigglossary
\let\thumbsorigglossary\glossary%
\let\label\@gobble%
\let\index\@gobble%
\let\glossary\@gobble%

Some preparation in case of double printing the overview page(s):
\def\th@mbstest{v}\% r l r ... 
\ifx\th@mbstest\th@mbsprintpage\%
\def\th@mbsprintpage{l}\% because it will be changed to r
\def\th@mbdoublepage{1}\%
\else\%
\def\th@mbstest{d}\% l r l ... 
\ifx\th@mbstest\th@mbsprintpage\%
\def\th@mbsprintpage{r}\% because it will be changed to l
\def\th@mbdoublepage{1}\%
\else\%
\def\th@mbsdoublepage{0}\%
\fi\%
\fi\%
\def\th@mbsresetdoublepage{0}\%
\@whilenum\value{FileLine}<\value{thumbsstop}\do%
For double printing the overview page(s) we just change between printing left and right, and we need to reset the line number of the \jobname.tmb file which is read, because we need to read things twice.

When the very first page of a thumb marks overview is generated, the label is set (with the \th@mbstablabeling command).

\begin{verbatim}
1765  {\ifx\th@mbdoublepage \pagesLTS@one%
1766    \def\th@mbstest{r}%
1767    \ifx\th@mbsprintpage\th@mbstest%
1768      \def\th@mbsprintpage{l}%
1769    \else  \th@mbsprintpage is l
1770      \def\th@mbsprintpage{r}%
1771    \fi%
1772    \clearpage%
1773  \ifx\th@mb@resetdoublepage \pagesLTS@one%
1774    \setcounter{th@mblinea}{\theth@mblinea}%
1775    \setcounter{th@mblineb}{\theth@mblineb}%
1776    \def\th@mb@resetdoublepage{0}%
1777  \else%
1778    \edef\theth@mblinea{\arabic{th@mblinea}}%
1779    \edef\theth@mblineb{\arabic{th@mblineb}}%
1780    \def\th@mb@resetdoublepage{1}%
1781  \fi%
1782 \else%
1783  \if@twoside%
1784    \def\th@mbstest{r}%
1785    \ifx\th@mbstest\th@mbsprintpage%
1786      \cleardoublepage%
1787    \else  l
1788      \clearotherdoublepage%
1789    \fi%
1790  \else%
1791    \clearpage%
1792  \fi%
1793 \fi%
1794 \fi%
1795 \fi%
1796 \fi%
1797 \fi%
1798 \else%
1799 \clear
1800 \th@mbstablabeling%
1801 \fi%
1802 \fi%
1803 \null%
1804 \th@mbs@verview%
1805 \pagebreak%
\end{verbatim}

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When double page mode is active and `\th@mb@resetdoublepage` is one, the last page of the thumbs mark overview must be repeated, but
\@whilenum\value{FileLine}<\value{thumbsstop}\do
would prevent this, because `FileLine` is already too large and would only be reset inside the loop, but the loop would not be executed again.

After the overview, the current thumb mark (if there is any) is restored,
\setlength{\th@mbposy}{\th@mbsposytocy}%
\ifx\th@mbprintingovertoc\pagesLTS@one%
\continuethumb%
\fi%
as well as the `\label`, `\index`, and `\glossary` commands:
\let\label\thumbsoriglabel%
\let\index\thumbsorigindex%
\let\glossary\thumbsorigglossary%
and `\th@mbs@toc@level` and `\th@mbs@toc@text` need to be emptied, otherwise for each following Table of Thumb Marks the same entry in the table of contents would be added, if no new `addthumbsoverviewtocontents` would be given. (But when no `addthumbsoverviewtocontents` is given, it can be assumed that no `thumbsoverview`-entry shall be added to contents.)
\addthumbsoverviewtocontents{}{}
}

The internal command `\th@mbs@overview` 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`).

\newcommand{\th@mbs@overview}{%}
\ifthumbs@verbose%
\message{THUMBS: Processing line \arabic{th@mblinea} to \arabic{th@mblineb} of \jobname.tmb.}%
\fi%
\setcounter{FileLine}{1}%
\AtBeginShipoutNext{%
\AtBeginShipoutUpperLeftForeground{%
\IfFileExists{\jobname.tmb}{% then
\openin\@instreamthumb=\jobname.tmb %
\@whilenum\value{FileLine}<\value{th@mblineb}\do%
{\ifthumbs@verbose%
\message{THUMBS: Processing \jobname.tmb line \arabic{FileLine}.}%

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\ifnum \value{FileLine}<\value{th@mblinea}\n
\ifthumbs@verbose%
  \message{Can be skipped.^^J}\
\fi%
\fi%
\% NIRVANA: ignore the line by not executing it,
\% i.e. not executing \@unused.
\% \% \@unused
\else%
\fi%
\ifnum \value{FileLine}=\value{th@mblinea}\
\read\@instreamthumb to \@thumbsout% execute the code of this line
\ifthumbs@verbose%
  \message{Executing \jobname.tmb line \arabic{FileLine}.^^J}\
\fi%
\fi%
\fi%
\else%
\fi%
\ifnum \value{FileLine}=>\value{th@mblinea}\
\read\@instreamthumb to \@thumbsout% execute the code of this line
\ifthumbs@verbose%
  \message{Executing \jobname.tmb line \arabic{FileLine}.^^J}\
\fi%
\fi%
\fi%
\else% THIS SHOULD NEVER HAPPEN!
\PackageError{thumbs}{Unexpected error! (Really!)}{%
  ! You are in trouble here.\MessageBreak%
  ! Type\space X \string<Return\string>\space to quit.\MessageBreak%
  ! Delete temporary auxiliary files\MessageBreak%
  ! (like \jobname.aux, \jobname.tmb, \jobname.out)\MessageBreak%
  ! and retry the compilation.\MessageBreak%
  ! If the error persists, cross your fingers\MessageBreak%
  ! and try typing\space \string<Return\string>\space to proceed.\MessageBreak%
  ! If that does not work,\MessageBreak%
  ! please contact the maintainer of the thumbs package.\MessageBreak%
}
\fi%
\fi%
\fi%
\stepcounter{FileLine}\
\fi%
\ifnum \value{FileLine}=\value{th@mblineb}\
\ifthumbs@verbose%
  \message{THUMBS: Processing \jobname.tmb line \arabic{FileLine}.}\
\fi%
\fi%
\read\@instreamthumb to \@thumbsout% Execute the code of that line.
\ifthumbs@verbose%
  \message{Executing \jobname.tmb line \arabic{FileLine}.^^J}\
\fi%
Well, really execute it here. \stepcounter{FileLine}

And on to the next overview page of thumb marks (if there are so many thumb marks):
\addtocounter{th@mblinea}{\th@umbsperpage}\
\addtocounter{th@mblineb}{\th@umbsperpage}\
\@tempcnta=\th@mbsmax\relax\n\ifnum \value{th@mblineb}>\@tempcnta\relax\n\setcounter{th@mblineb}{\@tempcnta}\n\fi

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@verview in \thumbsoverview. (And we issue a warning, of course.)
\setcounter{FileLine}{\arabic{thumbsstop}}\n\AtEndAfterFileList{%\PackageWarningNoLine{thumbs}{File \jobname.tmb not found. Rerun to get thumbs overview page(s) right.\MessageBreak%\}%\%
}

When we are in draft mode, the thumb marks are “de-coloured”, their width is reduced, and a warning is given.
\let\thumborigaddthumb\addthumb\n
\ifthumbs@draft
\setlength{\th@mbwidthx}{2pt}\n\renewcommand{\addthumb}[4]{\thumborigaddthumb{#1}{#2}{black}{gray}}\n\PackageWarningNoLine{thumbs}{thumbs package in draft mode: Thumb mark width is set to 2pt, thumb mark text colour to black, and thumb mark background colour to gray. Use package option final to get the original values.\MessageBreak%\}%\%
}
\fi

\thumborigaddthumb
When we are in `hidethumbs` mode, there are no thumb marks and therefore neither any thumb mark overview page. A warning is given.

\begin{verbatim}
\ifthumbshidethumbs
\renewcommand{\addthumb}[4]{\relax}
\PackageWarningNoLine{thumbs}{thumbs package in hide mode:\MessageBreak%
Thum marks are hidden.\MessageBreak%
Set package option "hidethumbs=false" to get thumb marks%}
\fi
\end{verbatim}
6 Installation

6.1 Downloads

Everything is available on http://www.ctan.org/ but may need additional packages themselves.

thumbs.dtx  For unpacking the thumbs.dtx file and constructing the documentation it is required:
- \TeX\ Format \LaTeX\ 2\epsilon, http://www.CTAN.org/
- package geometry, 2010/09/12, v5.6, http://ctan.org/pkg/geometry
- package holtxdoc, 2012/03/21, v0.24, http://ctan.org/pkg/holtxdoc

thumbs.sty  The thumbs.sty for \LaTeX\ 2\epsilon (i.e. each document using the thumbs package) requires:
- \TeX\ Format \LaTeX\ 2\epsilon, http://www.CTAN.org/
- package pageslts, 2014/01/19, v1.2c, http://ctan.org/pkg/pageslts
- package pagecolor, 2012/02/23, v1.0e, http://ctan.org/pkg/pagecolor
- package alphalph, 2011/05/13, v2.4, http://ctan.org/pkg/alphalph
The `thumb-example.tex` requires the same files as all documents using the `thumbs` package and additionally:

- package `hyperref`, 2012/11/06, v6.83m, [http://ctan.org/pkg/hyperref](http://ctan.org/pkg/hyperref)
- package `thumbs`, 2014/03/09, v1.0q, [http://ctan.org/pkg/thumbs](http://ctan.org/pkg/thumbs)

(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 (newer versions might be available)

- `chapterthumb`, 2005/03/10, v0.1, [CTAN:info/examples/KOMA-Script-3/Anhang-B/source/chapterthumb.sty](http://mirror.ctan.org/install/macros/latex/contrib/hyperref.tds.zip)
- `eso-pic`, 2010/09/10, v2.0c, [http://ctan.org/pkg/eso-pic](http://ctan.org/pkg/eso-pic)
- `thumb` (a completely different one), 1997/12/24, v1.0, [http://ctan.org/pkg/thumb](http://ctan.org/pkg/thumb)
- `thumb-index`, from the `fancyhdr` package, 2005/03/22 v3.2, [http://ctan.org/pkg/fancyhdr](http://ctan.org/pkg/fancyhdr)
- `thumby`, 2010/01/14, v0.1, [http://ctan.org/pkg/thumby](http://ctan.org/pkg/thumby)

All packages of HEIKO OBERDIEK’s bundle ‘oberdiek’ (especially `holtxdoc`, `alphalph`, `atbegshi`, `infwarerr`, `kvoptions`, `ltxcmds`, `picture`, and `rerunfilecheck`) are also available in a TDS compliant ZIP archive: [http://mirror.ctan.org/install/macros/latex/contrib/oberdiek.tds.zip](http://mirror.ctan.org/install/macros/latex/contrib/oberdiek.tds.zip).

It is probably best to download and use this, because the packages in there are quite probably both recent and compatible among themselves.

**München**

A hyperlinked list of my (other) packages can be found at [http://www.ctan.org/author/muench-hm](http://www.ctan.org/author/muench-hm).
6.2 Package, unpacking TDS

**Package.** This package is available on [CTAN.org](http://mirror.ctan.org/macros/latex/contrib/thumbs/thumbs.dtx)

The source file.

http://mirror.ctan.org/macros/latex/contrib/thumbs/thumbs.pdf

The documentation.

http://mirror.ctan.org/macros/latex/contrib/thumbs/thumbs-example.pdf

The compiled example file, as it should look like.

http://mirror.ctan.org/macros/latex/contrib/thumbs/README

The README file.

There is also a thumbs.tds.zip available:

http://mirror.ctan.org/install/macros/latex/contrib/thumbs.tds.zip

Everything in TDS compliant, compiled format.

```plaintext
which additionally contains
thumbs.ins  The installation file.
thumbs.drv  The driver to generate the documentation.
thumbs.sty  The .style file.
thumbs-example.tex  The example file.
```

For required other packages, please 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):

```
thumbs.sty  → tex/latex/thumbs/thumbs.sty
thumbs.pdf  → doc/latex/thumbs/thumbs.pdf
thumbs-example.tex  → doc/latex/thumbs/thumbs-example.tex
thumbs-example.pdf  → doc/latex/thumbs/thumbs-example.pdf
thumbs.dtx  → source/latex/thumbs/thumbs.dtx
```

If you have a docstrip.cfg that configures and enables docstrip’s TDS installing feature, then some files can already be in the right place, see the documentation of docstrip.

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6.3 Refresh file name databases

If your \TeX\ distribution (te\TeX, mik\TeX, \ldots) relies on file name databases, you must refresh these. For example, te\TeX\ users run `texhash` or `mktexlsr`.

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 the following 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.dtx
makeindex -s gind.ist thumbs.idx
pdflatex thumbs.dtx
makeindex -s gind.ist thumbs.idx
pdflatex thumbs.dtx
```

6.5 Compiling the example

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

```
l 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 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 and everybody at http://tex.stackexchange.com/ for their help in all things TeX (especially David Carlisle for http://tex.stackexchange.com/a/45654/6865). Thanks for bug reports go to Veronica Brandt and Martin Baute (even two bug reports).

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, background colour) 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 $2^{147}483,647$th 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@mbsdistance,

where
\advance\th@mbheight\th@mbsdistance
\advance\th@mbheight\th@mbsdistance
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-coloure” 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 as `\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.

[2011/06/24 v1.0g]

- 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 Table of Tumbs multiply defined`-error and it was not possible to refer to any but the last Table of Tumbs. Fixed with labels `Table of Tumbs1, Tumbs2,...` (`table of Tumbs` still aims at the last used Table of Tumbs for compatibility.)

- Bug fix: Sometimes the thumb marks were stopped one page too early before the Table of Tumbs - fixed.

- Some details changed.

[2011/08/08 v1.0h]

- Replaced `\global` by `\xdef`. 

- Now using the `pagecolor` package. Empty thumb marks now inherit their colour from the page's background. Option `pagecolor` is therefore obsolete.

- The `pagesLT5` package has been replaced by the `pageslts` package.

- New kinds of thumb mark overview pages introduced additionally to `\thumbsoverview`: `\thumbsoverviewback`, `\thumbsoverviewverso`, and `\thumbsoverviewdouble`.

- New option `hidethumbs=true` to hide thumb marks (and their overview page(s)).

- Option `ignorehoffset` did not work for the thumb marks overview page(s) - neither `true` nor `false`; fixed.

- Changed a huge number of details.
Hot fix: TeX 2011/06/27 has changed `\enddocument` and thus broken the `\AtVeryVeryEnd` command/hooking of `atveryend` package as of 2011/04/23, v1.7. Version 2011/06/30, v1.8, fixed it, but this version was not available at CTAN.org yet. Until then `\AtEndAfterFileList` was used.

Changed some Warnings into Infos (as suggested by Martin Baute).

The SW(P)-warning is now only given `\IfFileExists{tcilatex.tex}`, otherwise just a message is given. (Warning questioned by Martin Baute, thanks.)

New option `nophantomsection` to `globally` disable the automatical placement of a `\phantomsection` before `all` thumb marks.

New command `\thumbsnophantom` to `locally` disable the automatical placement of a `\phantomsection` before the `next` thumb mark.

README fixed.

Minor details changed.

Bugfix: Wrong installation path given in the documentation, fixed.

No longer uses the `th@mbs@tmpA` counter but uses `\@tempcnta` instead.

No longer abuses the `\th@mbposyA` dimension but `\@tempdima`.

Update of documentation, README, and dtx internals.

Bugfix: Used a `\@tempcnta` where a `\@tempdima` should have been.

Bugfix: Replaced `\newcommand\[2]{#2}` (for SWP) by `\providecommand\[2]{#2}`.

Bugfix: When the tikz package was loaded before thumbs, in twoside-mode the thumb marks were printed at the wrong side of the page. (Bug reported by Martin Baute, thanks!) With hyperref it really depends on the loading order of the three packages.

Now using `\ltx@ifpackageloaded` from the ltxcmds package to check (after `\begin{document}`) whether the hyperref package was loaded.
• For the thumb marks \texttt{parbox}es instead of \texttt{makebox}es are used (just in case somebody wants to place two lines into a thumb mark, e.g.
\begin{verbatim}
Sch
St
\end{verbatim}
in a phone book, where the other \texttt{Ses} are placed in another chapter).

• Minor details changed.

\textbf{2012/02/25 v1.0n}

• Check for loading order of \texttt{tikz} and \texttt{hyperref} replaced by robust method. (Thanks to David Carlisle, \url{http://tex.stackexchange.com/a/45654/6865}!)

• Fixed \texttt{url}-handling in the example in case the \texttt{hyperref} package was not loaded.

• In the index the line-numbers of definitions were not underlined; fixed.

• In the \texttt{thumbs-example} there are now a few words about “paragraph-thumbs” (i.e. text which is too long for the width of a thumb mark).

\textbf{2013/08/22 v1.0o, not released to the general public}

• Stephanie Hein requested the feature to be able to increase the horizontal space between page edge and the text inside of the thumb mark. Therefore options \texttt{evenindent} and \texttt{oddexdent} were implemented (later renamed to \texttt{eventxtindent} and \texttt{oddtxtexdent}).

• Bjorn Victor reported the same problem and also the one, that two marks are not printed at the exact same vertical position on recto and verso pages. Because this can be seen with a lot of duplex printers, the new option \texttt{evenprintvoffset} allows to vertically shift the marks on even pages by any length.

\textbf{2013/09/17 v1.0p, not released to the general public}

• The thumb mark text is now set in \texttt{parbox}es everywhere.

• Heini Geiring requested the feature to be able to horizontally move the marks away from the page edge, because this is useful when using brochure printing where after the printing the physical page edge is changed by cutting the paper. Therefore the options \texttt{evenmarkindent} and \texttt{oddmarkexdent} were introduced and the options \texttt{evenindent} and \texttt{oddexdent} were renamed to \texttt{eventxtindent} and \texttt{oddtxtexdent}.

• Changed a lot of internal details.

\textbf{2014/03/09 v1.0q}

• New version of the \texttt{atveryend} package is now available at \url{CTAN.org} (see entry in this history for \texttt{thumbs} version [2011/08/22 v1.0i]).

• Support for SW(P) drastically reduced. No more testing is performed. Get a current \TeX{} distribution instead!
• New option `txtcentered`: If it is set to `true`, the thumb’s text is placed using \centering, otherwise either \raggedright or \raggedleft (depending on left or right page for double sided documents).

• \normalsize added to prevent “font size leakage” from the respective page.

• Handling of obsolete options (mainly from version 2013/08/22 v1.0o) added.

• Changed (hopefully improved) a lot of details.

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: \(X\) 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.
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