

# Contents

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<b>1</b>	<b>xframed Implementation</b>	<b>2</b>
1.1	xframed.sty – Main file . . . . .	2
1.2	xframed-default.def – Drawing algorithm with \ule . . . . .	15
1.3	xframed-dev.def – Developer info . . . . .	23
1.4	xframed-dim.def – Helper functions handling dimensions . . . . .	29
1.5	xframed-funct.def – helper functions . . . . .	33
1.6	xframed-initial.def – Define all internal variables . . . . .	41
1.7	xframed-keys.def – Defining all options . . . . .	43
1.8	xframed-listings.def – listings support . . . . .	55
1.9	xframed-mdframed.def – NOT SUPPORTED . . . . .	55
1.10	xframed-minted.def – minted support . . . . .	56
1.11	xframed-msg.def – Defining all messages . . . . .	58
1.12	xframed-split.def – splitting algorithm . . . . .	61
1.13	xframed-theorem.def – theorem support . . . . .	75
1.14	xframed-tikz.def – drawing method tikz . . . . .	76
1.15	xframed-titlefoot.def – handling title and foot . . . . .	87
1.16	xframed-todo.def – list of todos . . . . .	91
1.17	xframed-user.def – defining user commands . . . . .	91
1.18	xframed-doc.sty – internal package for documenation . . . . .	99

<b>Change History</b>	<b>115</b>
-----------------------	------------

<b>Index</b>	<b>116</b>
--------------	------------

# Section 1

## xframed Implementation

---

### 1.1 xframed.sty – Main file

```
1  \<package>
2  \<@@=xframed>
3  %%
4  %% This is file `xframed.sty',
5  %% -----
6  %%
7  %% Author's name: Marco Daniel
8  %% License type: lppl
9  %%
10 %% =====
11 %% ===== Currently the package has a pre-pre-alpha-status =====
12 %% =====
13 %%
14 %% Copyright (c) 2013 Marco Daniel
15 %%
16 \RequirePackage{expl3}
17 \GetIdInfo$Id: xframed.dtx 13 2012-06-08 14:11:22Z marco $
18     {package xframed}
19
20 \ProvidesExplPackage {xframed} {2013/06/21} {0.01 ALPHA} {package xframed}
21
22 \@ifpackagelater { expl3 } { 2011/09/05 }
23     { }
```

---

```

24 {
25   \PackageError { xframed } { Support~package~expl3~too~old. }
26   {
27     You~need~to~update~your~installation~of~the~bundles~'l3kernel'~and~
28     'l3packages'.\\
29     Loading~xframed~will~abort!
30   }
31   \tex_endinput:D
32 }

```

Load all needed packages. The packages longtable and lengthconvert are only needed to print out developer info. The package tikz can't be loaded with \ExplSyntaxOn.

```

33 \RequirePackage{ xparse , l3keys2e }
34 \RequirePackage{xcolor}
35 \ExplSyntaxOff
36 \RequirePackage{tikz}
37 \usetikzlibrary{backgrounds,shadows,calc,positioning,shapes.misc}
38 \ExplSyntaxOn
39 \RequirePackage{ longtable , lengthconvert }
40
41 \RequirePackage{etoolbox}%as long as regexpatch has alpha status

```

---

`__xframed__load_deffiles:n`

---

Load all files of xframed with the extension def. It is also a test whether the package is installed correctly or not.

```

42 \cs_new_protected:Npn __xframed__load_deffiles:n #1 {
43   \IfFileExists {xframed-#1.def}
44   { \input{xframed-#1.def} }
45   { \msg_error:nnx { xframed } { def-not-available } {#1} }
46 }
47 \msg_new:nnnn { xframed } { def-not-available }
48 { File~xframed-'#1'.def~is~not~available. }
49 {
50   The~file~xframed-#1-.def~is~not available\\

```

---

```

51     but~xframed~needs~the~file~.\\
52     I~guess~you~installed~xframed~wrong.
53 }
54 %!input all new variables
55 \__xframed__load_deffiles:n { initial }
56 %!input dim/skip functions
57 \__xframed__load_deffiles:n { dim }
58 %!input helper functions
59 \__xframed__load_deffiles:n { funct }
60 %!input development functions
61 \__xframed__load_deffiles:n { dev }
62 %!input messages
63 \__xframed__load_deffiles:n { msg }
64 %!input user keys
65 \__xframed__load_deffiles:n { keys }
66 %!input title-foot-coffin-setup
67 \__xframed__load_deffiles:n { titlefoot }
68 %!input split
69 \__xframed__load_deffiles:n { split }
70 %!input drawing method default
71 \__xframed__load_deffiles:n { default }
72 %!input user commands
73 \__xframed__load_deffiles:n { user }

```

*(End definition for \\_\_xframed\_\_load\_deffiles:n. This function is documented on page ??.)*

---

```

\__xframed__load_ifrequested:n

```

Load some packages if they are really needed.

```

74 \cs_new_protected:Npn \__xframed__load_ifrequested:n #1 {
75   \bool_if:cT { 1__xframed_#1_bool }
76   {
77     \IfFileExists {xframed-#1.def}
78     { \input{xframed-#1.def} }
79     { \msg_error:nnx { xframed } { def-not-available } {#1} }

```

```

80   }
81 }
82 \__xframed__load_ifrequested:n { listings }
83 \__xframed__load_ifrequested:n { minted   }
84 \__xframed__load_ifrequested:n { tikz     }
85 \__xframed__load_ifrequested:n { pstricks }
86 \__xframed__load_ifrequested:n { theorem  }
87 \__xframed__load_ifrequested:n { mdframed }

```

(End definition for `\__xframed__load_ifrequested:n`. This function is documented on page ??.)

---

## xframed

---

Definition of the main user environment. That's the reason why the definition is sourced out from the other user commands.

```

88 \NewDocumentEnvironment { xframed } { O{} }
89 {
90   \group_begin:
91     \xframedsetup { #1 }
92     \__xframed__start_environment:n
93     {
94       \__xframed__get_length:n
95       {
96         minimum-space
97       }
98     }
99     \__xframed__environment_precode:
100     \vcoffin_set:Nnw \l__xframed_main_coffin
101                     { \l__xframed_coffin_width_dim }
102     \@minipagetrue
103     \__xframed_prevent_firstindent:
104     \__xframed__environment_inner_precode:
105     \__xframed__inner_head:
106   }
107 {

```

---

```

108     \__xframed__environment_inner_postcode:
109     \@minipagefalse
110     \vcoffin_set_end:
111     \__xframed__set_list:
112     \__xframed__environment_postcode:
113     \__xframed__set_endlist:
114     \group_end:
115 }

```

*(End definition for xframed. This function is documented on page ??.)*

---

\\_\_xframed\_prevent\_firstindent:

The first line of the environment doesn't need any indent.

```

116 \cs_new:Nn \__xframed_prevent_firstindent:
117 {
118     \@afterindentfalse\@afterheading
119 }

```

*(End definition for \\_\_xframed\_prevent\_firstindent:. This function is documented on page ??.)*

---

\\_\_xframed\_\_inner\_head:

The definition of the inner head inside the environment itself.

```

120 \cs_new:Nn \__xframed__inner_head:
121 {
122     \tl_if_blank:VF \l___xframed_head_tl
123     {
124         \group_begin:
125         \tl_use:N \l___xframed_headprecode_tl
126         \color
127         {
128             \__xframed__get_color:n { head-font-color }
129         }
130         \tl_use:N \l___xframed_head_font_tl
131         \tl_use:N \l___xframed_head_tl
132         \tl_use:N \l___xframed_headpostcode_tl

```

```

133     \group_end:
134     }
135 }

```

(End definition for `\__xframed__inner_head:`. This function is documented on page ??.)

---

### `\xframeddivide`

---

MAYBE LATER!!!!

```

136 \cs_new_nopar:Npn \xframeddivide
137 {
138     \__xframed__environment_head_postcode:
139     \vcoffin_set_end:
140     \coffin_set_eq:NN \l__xframed_head_coffin \l__xframed_main_coffin
141     \bool_set_true:N \l__xframed_head_bool
142     \vcoffin_set:Nnw \l__xframed_main_coffin
143         { \l__xframed_coffin_width_dim }
144     \__xframed__environment_afterhead_precode:
145 }

```

(End definition for `\xframeddivide`. This function is documented on page ??.)

---

### `\__xframed__environment_afterhead_precode:`

---



---

### `\__xframed__environment_head_postcode:`

---



---

### `\__xframed__environment_precode:`

---

Provides some macros which can be extended by options. Normally hooks.

```

146 \cs_new:Npn \__xframed__environment_afterhead_precode: {}
147
148 \cs_new:Npn \__xframed__environment_head_postcode: {}
149
150 \cs_new:Npn \__xframed__environment_precode:
151 {
152     \__xframed__developer_tools:
153     %%\__xframed__minimum_space:

```

```

154 \__xframed__test_ifSplittable:
155 \__xframed__frame_linewidth:
156 \__xframed__calculate_width:
157 \__xframed__declare_footnotes:
158 \tl_use:N \l__xframed_codebefore_tl
159 }

```

(End definition for `\__xframed__environment_afterhead_precode:`, `\__xframed__environment_head_postcode:`, and `\__xframed__environment_precode:`. These functions are documented on page ??.)

---

### `\__xframed__calculate_width:`

---

Calling this command means to calculate the complete width for the contents of the frame.

The result will be saved inside `\l__xframed_coffin_width_dim`.

```

160 \cs_new:Npn \__xframed__calculate_width:
161 {
162   \dim_set:Nn \l__xframed_coffin_width_dim { \__xframed__get_length:n { width } }
163   \clist_map_inline:nn
164     {
165       margin-left , line-width-left , inner-margin-left ,
166       inner-margin-right , line-width-right , margin-right
167     }
168     {
169       \dim_sub:Nn \l__xframed_coffin_width_dim
170         {
171           \__xframed__get_length:n { ##1 }
172         }
173     }
174   \dim_compare:nNnT { \l__xframed_coffin_width_dim } > { \linewidth }
175     {
176       \__xframed__msg_log:n { oversized~environment }
177     }
178 }

```

(End definition for `\__xframed__calculate_width:`. This function is documented on page ??.)



---

`\_xframed\_declare\_footnotes:`

xframed shall handle footnotes like minipage.

```

179 \cs_new:Npn \_xframed\_declare\_footnotes:
180 {
181   %% START
182   \cs_set:Npn \@mpfn { mpfootnote }
183   %% set the counter output
184   \cs_set:Npn \thempfn { \thempfootnote }
185   %%reset counter
186   \int_set_eq:NN \c@mpfootnote \c_zero
187   %%
188   \cs_set_eq:NN \@footnotetext \@mpfootnotetext
189 }

```

*(End definition for \\_xframed\\_declare\\_footnotes:. This function is documented on page ??.)*

---

`\_xframed\_declare\_footnotes:`

Execute some code at the beginning of the environment. Remove first \parskip, set font and color.

```

190 \cs_new:Npn \_xframed\_environment\_inner\_precode:
191 {
192   \skip_vertical:n { - \parskip }
193   \tl_use:N \l__xframed_main_font_tl
194   \color { \_xframed\_get\_color:n { font-color } }
195   \tl_use:N \l__xframed_codebegin_tl
196 }

```

*(End definition for \\_xframed\\_declare\\_footnotes:. This function is documented on page ??.)*

---

`\_xframed\_environment\_inner\_postcode:`

Execute some code at the end of the environment.

```

197 \cs_new:Npn \_xframed\_environment\_inner\_postcode:
198 {
199   \_xframed\_ignore\_last\_skip:
200   \_xframed\_ignore\_last\_descenders:

```

---

```

201 \tl_use:N \l__xframed_codeend_tl
202 }

```

(End definition for `\__xframed__environment_inner_postcode:`. This function is documented on page ??.)

---

```

\__xframed__ignore_last_skip:

```

Remove last skip added by some environments like `list`.

```

203 \cs_new:Npn \__xframed__ignore_last_skip:
204 {
205   \bool_if:NT \l__xframed_ignore_lastskip_bool
206   {
207     \par \tex_unskip:D
208     \skip_vertical:N \tex_lastskip:D
209   }
210 }

```

(End definition for `\__xframed__ignore_last_skip:`. This function is documented on page ??.)

---

```

\__xframed__ignore_last_descenders:

```

Ignore descenders in the last line.

```

211 \cs_new:Npn \__xframed__ignore_last_descenders:
212 {
213   \bool_if:NT \l__xframed_descenders_bool
214   {
215     \par
216     \strut
217     \par \tex_unskip:D \tex_unskip:D
218     \setbox0=\tex_lastbox:D
219     \skip_vertical:n { 0.7 \tex_baselineskip:D - \tex_baselineskip:D }
220   }
221 }

```

(End definition for `\__xframed__ignore_last_descenders:`. This function is documented on page ??.)

---

`\_xframed\_environment\_postcode:`

After closing the save box this code is executed.

```

222 \cs_new:Npn \_xframed\_environment\_postcode:
223 {
224 % \_xframed\_check\_title\_first:
225 \_xframed\_check\_footnotes:
226 \_xframed\_title:
227 \_xframed\_foot:
228 \_xframed\_coffin\_output:
229 \tl\_use:N \l\_xframed\_codeafter\_tl
230 \skip\_vertical:n { - \parskip }
231 }

```

(End definition for `\_xframed\_environment\_postcode:`. This function is documented on page ??.)

---

`\_xframed\_check\_footnotes:`

Test if footnotes are presented and save them in the main coffin as part of the output.

```

232 \cs_new:Npn \_xframed\_check\_footnotes:
233 {
234 \box\_if\_empty:NTF \@mpfootins
235 {
236 \_xframed\_msg\_log:n { no~footnotes~presented }
237 }
238 {
239 \_xframed\_msg\_log:n { footnotes~are~found }
240 %%Save the footnoterule inside a coffin
241 \vcoffin\_set:Nnn \l\_xframed\_temp\_coffin
242 { \l\_xframed\_coffin\_width\_dim }
243 {
244 \skip\_vertical:n
245 {
246 \_xframed\_get\_skip:n { footnote-distance }
247 }
248 \_xframed\_footnote\_rule:

```

---

```

249             \vbox_unpack_clear:N \@mpfootins
250         }
251     %%Join main coffin with footnote-rule coffin
252     \coffin_join:NnnNnnnn
253     \l__xframed_main_coffin {b}{l}
254     \l__xframed_temp_coffin {t}{l}
255     { 0pt }{ 0pt }
256     %%reset structure of main coffin:
257     \__xframed__coffin_restructure:N \l__xframed_main_coffin
258 }
259 }

```

(End definition for `\__xframed_check_footnotes:`. This function is documented on page ??.)

---

#### `\__xframed_footnote_rule:`

It's the equal definition of  $\text{\TeX}2_{\epsilon}$  but with the new options provided by xframed.

```

260 \cs_new:Npn \__xframed_footnote_rule:
261 {
262     \tex_kern:D \c_zero_skip
263     \tex_hrulerule:D
264     width \__xframed__get_length:n { footnote-line-length }
265     height \__xframed__get_length:n { footnote-line-width }
266     \scan_stop:
267     \tex_kern:D 2.6 pt
268 }

```

(End definition for `\__xframed_footnote_rule:`. This function is documented on page ??.)

---

#### `\__xframed__frame_linewidth:`

Helper functions. It test whether a line shall be drawn. If the line shall be hidden the width is set to 0pt.

```

269 \cs_new:Nn \__xframed__frame_linewidth:
270 {
271     \__xframed__test_linewidth:nnn
272     { topline } { length } { line-width-top }

```

---

```

273 \__xframed__test_linewidth:nnn
274   { leftline } { length } { line-width-left }
275 \__xframed__test_linewidth:nnn
276   { rightline } { length } { line-width-right }
277 \__xframed__test_linewidth:nnn
278   { bottomline } { length } { line-width-bottom }
279 }

```

(End definition for \\_\_xframed\_\_frame\_linewidth:. This function is documented on page ??.)

---

\\_\_xframed\_\_coffin\_output:

---

Starting the output routine

```

280 \cs_new:Npn \__xframed__coffin_output:
281 {
282   \__xframed__coffin_restructure:N \l__xframed_temp_coffin
283   \__xframed__coffin_restructure:N \l__xframed_main_coffin
284   \tl_set_eq:NN \l__xframed_temptitle_tl \l__xframed_firsttitle_tl
285   \tl_set_eq:NN \l__xframed_tempfoot_tl \l__xframed_lastfoot_tl
286   \__xframed__title:
287   \__xframed__foot:
288   \dim_set:Nn \l__xframed_maincoffin_htdp_dim
289   {
290     \coffin_ht:N \l__xframed_main_coffin +
291     \coffin_dp:N \l__xframed_main_coffin
292   }
293   \__xframed__coffin_output_aux:
294 }

```

(End definition for \\_\_xframed\_\_coffin\_output:. This function is documented on page ??.)

---

\\_\_xframed\_\_coffin\_output\_aux:

---

Helper functions for the output. A combination with the former one isn't possible because this functions is used later too.

```

295 \cs_new:Npn \__xframed__coffin_output_aux:
296 {

```

---

```

297  \__xframed__test_ifSplittable:
298  \bool_if:NT \l__xframed_allowbreaking_bool { \__xframed_needed_height: }
299  \__xframed__output_and_draw:
300  }

```

(End definition for \\_\_xframed\_\_coffin\_output\_aux:. This function is documented on page ??.)

---

\\_\_xframed\_needed\_height:

Calculate the height of the unsplitted and complete environment.

```

301 \cs_new:Npn \__xframed_needed_height:
302 {
303   \dim_set:Nn \l__xframed_computed_coffin_height_dim
304     {
305       \l__xframed_maincoffin_htdp_dim
306       +
307       \l__xframed_title_htdp_dim
308       +
309       \l__xframed_foot_htdp_dim
310     }
311   \__xframed__frame_linewidth:
312   \clist_map_inline:nn
313     {
314       extra-skip-above , line-width-top , line-width-bottom ,
315       inner-top-margin, inner-bottom-margin , line-width-title ,
316       line-width-foot
317     }
318     {
319       \dim_add:Nn \l__xframed_computed_coffin_height_dim
320         {
321           \__xframed__get_length:n { ##1 }
322         }
323     }
324   \dim_compare:nNnTF

```

```

325     { \l__xframed_computed_coffin_height_dim } < { \l__xframed_free_vs-
pace_dim }
326     %break needed
327     { \bool_set_false:N \l__xframed_allowbreaking_bool }
328     %no break needed
329     { \bool_set_true:N \l__xframed_allowbreaking_bool }
330     \msg_log:n
331     {
332         xframed~info~\msg_line_number:\\\
333         \ coffin~dimension =~\dim_use:N \l__xframed_computed_coffin_height_dim\ =
334         \ \__xframed__convert:n{\l__xframed_computed_cof-
fin_height_dim} \
335         \ used =~\dim_use:N \tex_pagetotal:D\ =
336         \ \__xframed__convert:n{\tex_pagetotal:D} \
337         \ free =~\dim_use:N \l__xframed_free_vspace_dim\ =
338         \ \__xframed__convert:n{\l__xframed_free_vspace_dim}
339     }
340 }

```

(End definition for `\__xframed_needed_height`:. This function is documented on page ??.)

```

341 \tex_endinput:D
342 </package>

```

## 1.2 xframed-default.def – Drawing algorithm with `\ule`

```

343 <*package-default>
344 <@@=xframed>
345 %%=====%%
346 %% file to define all basic draw functions using \rule %%
347 %%=====%%
348
349

```

```

350
351
352 \cs_new:Nn \__xframed__draw_default_frame:
353 {
354   \begin{tikzpicture}[remember~picture]
355     %%Inner part -- defines node xframed-inner
356     \__xframed__default_innerpart:
357     %%title part -- defines node xframed-title
358     \__xframed__default_titlepart:
359     %%foot part -- defines node xframed-foot
360     \__xframed__default_footpart:
361     %%%%%%%%%%
362     %%Outer part -- defines node xframed-outer
363     \__xframed__default_drawframe:
364     %\pgfnodealias{xframed-outer}{xframed-inner}
365     %use the correct bounding box
366     \pgfresetboundingbox\useasboundingbox%
367         ($(\xframed-outer.south~west)+(-\__xframed__get_length:n { mar-
368         gin-left },0)$)
369         rectangle
370         ($(\xframed-outer.north~east)+( \__xframed__get_length:n { mar-
371         gin-right },0)$
372         +(0,\__xframed__get_length:n { extra-skip-above } )$) ;
373     %Show development tools
374     %%User hook
375     \tl_use:N \l__xframed_posttikz_tl
376     \l__xframed_singletikz_tl
377     %%xframed-developer info
378     %\__xframed__nodepoints_development:
379     \end{tikzpicture}
380     %%% \__xframed__all_option_output:
381   }
382

```



```

381 \cs_new:Nn \__xframed__default_innerpart:
382 {
383   \begin{scope}
384     \tikzset{every~node/.style={inner~sep=0pt,outer~sep=0pt,}}
385     \node[] (xframed-inner)
386     {
387       \hbox:n{} \skip_horizontal:n { \__xframed__get_length:n { in-
ner-margin-left } }
388       \__xframed__display_coffins:N \l__xframed_main_coffin
389       \skip_horizontal:n { \__xframed__get_length:n { inner-margin-right } } \hbox:n{}
390     };
391   \end{scope}
392 }
393
394 \cs_new:Nn \__xframed__default_titlepart:
395 {
396   \tl_if_blank:VTF \l__xframed_firsttitle_tl
397   {
398     \pgfnodealias{xframed-title}{xframed-inner}
399   }
400   {
401     \begin{scope}
402       \tikzset{every~node/.style={inner~sep=0pt,outer~sep=0pt,}}
403       \node[anchor=south,
404         yshift= \__xframed__get_length:n { line-width-title } ] (xframed-title) at (xframed-inner)
405       {
406         \hbox:n{} \skip_horizontal:n { \__xframed__get_length:n { in-
ner-margin-left } }
407         \__xframed__display_coffins:N \l__xframed_title_coffin
408         \skip_horizontal:n { \__xframed__get_length:n { in-
ner-margin-right } } \hbox:n{}
409       };
410

```

```

411     \end{scope}
412   }
413 }
414 \cs_new:Nn \__xframed__default_footpart:
415 {
416   \tl_if_blank:VTF \l__xframed_lastfoot_tl
417   {
418     \pgfnodealias{xframed-foot}{xframed-inner}
419   }
420   {
421     \begin{scope}
422       \tikzset{every~node/.style={inner~sep=0pt,outer~sep=0pt,}}
423       \node[anchor=north,
424         yshift= {-\__xframed__get_length:n { line-width-foot }},
425         ] (xframed-foot) at (xframed-inner.south)
426         {
427           \skip_horizontal:n { \__xframed__get_length:n { inner-margin-left } }
428           \__xframed__display_coffins:N \l__xframed_foot_coffin
429           \skip_horizontal:n { \__xframed__get_length:n { in-
430             ner-margin-right } } \hbox:n{}
431         };
432     \end{scope}
433   }
434 }
435 \cs_new:Nn \__xframed__default_drawframe:
436 {
437   \begin{scope}[on~background~layer]
438     %%Draw the main frame
439     \coordinate (fxx) at %fxx=left bottom
440       ($ (xframed-foot.south~west)+(-\__xframed__get_length:n { line-width-left },-\__xframed__get_length:n { line-width-bottom })$);
441     \coordinate (fyy) at %fyy=right top
442       ($ (xframed-title.north~east)+(\__xframed__get_length:n { line-width-right },\__xframed__get_length:n { line-width-top })$);

```

```

443 \tikzset{every~node/.style={inner~sep=0pt,outer~sep=0pt,}}
444 \node[anchor=south,
445       yshift= -\__xframed__get_length:n { line-width-bottom },
446       xshift= .5*\__xframed__get_length:n { line-width-right }-.5*\__xframed__get_length:n
447       (xframed-outer) at (xframed-foot.south)
448       {\tikz\path(fxx) rectangle (fyy)};
449 \clip[xframed/outer~arc](xframed-outer.south~west) rectangle (xframed-outer.north~east);
450 \__xframed__default_drawframe_lines:
451 \__xframed__default_drawframe_titlefoot:
452 \end{scope}
453 }
454 \cs_new:Nn \__xframed__default_drawframe_lines:
455 {
456   %left line
457   \path[fill = \__xframed__get_color:n { line-color-left }]
458   (xframed-outer.north~west) -- (xframed-outer.south~west) -- (xframed-inner.center) --cycle;
459   %right line
460   \path[fill = \__xframed__get_color:n { line-color-right }]
461   (xframed-outer.north~east) -- (xframed-outer.south~east) -- (xframed-inner.center) --cycle;
462   %top line
463   \path[fill = \__xframed__get_color:n { line-color-top }]
464   (xframed-outer.north~east) -- (xframed-outer.north~west) -- (xframed-inner.center) --cycle;
465   %bottom line
466   \path[fill = \__xframed__get_color:n { line-color-bottom }]
467   (xframed-outer.south~east) -- (xframed-outer.south~west) -- (xframed-inner.center) --cycle;
468 }
469
470 \cs_new:Nn \__xframed__default_drawframe_titlefoot:
471 {
472   \begin{scope}
473     %inner frame
474     \clip[xframed/inner~arc] (xframed-foot.south~west) rectangle (xframed-title.north~east);
475     \path[xframed/bg] (xframed-foot.south~west) rectangle (xframed-title.north~east);

```

```

476 %draw title componente (1) title (2) foot rule:
477 \tl_if_blank:VF \l___xframed_firsttitle_tl
478 {
479     \path[xframed/title~bg] (xframed-title.south~west) rectan-
         gle (xframed-title.north~east);
480     \bool_if:NT \l___xframed_footline_bool
481     {
482         \path[xframed/title~rule]
483             ([yshift= .5*\__xframed__get_length:n { line-width-foot }]xframed-inner.north~w
484             ([yshift= .5*\__xframed__get_length:n { line-width-foot }]xframed-inner.north~e
485         }
486     }
487 %draw foot componente (1) foot (2) foot rule:
488 \tl_if_blank:VF \l___xframed_lastfoot_tl
489 {
490     \path[xframed/foot~bg] (xframed-foot.south~west) rectan-
         gle (xframed-foot.north~east);
491     \bool_if:NT \l___xframed_footline_bool
492     {
493         \path[xframed/foot~rule]
494             ([yshift= -.5*\__xframed__get_length:n { line-width-foot }]xframed-inner.south~w
495             ([yshift= -.5*\__xframed__get_length:n { line-width-foot }]xframed-inner.south~e
496         }
497     }
498 \end{scope}
499 }
500
501 \tex_endinput:D
502 %%%%%%%%%%
503 %DEVELOPER INFO
504 %%%%%%%%%%
505 \cs_new:Nn \__xframed__nodepoints_development:
506 {

```

```

507 \bool_if:NT \l__xframed_developer_info_bool
508 {
509   \begin{scope}
510     %%%%Inner nodes
511     \__xframed__nodepoints_inner_development:
512     %%%%title nodes
513     \__xframed__nodepoints_title_development:
514     %%%%foot nodes
515     \__xframed__nodepoints_foot_development:
516     %%%%Outer nodes
517     \__xframed__nodepoints_outer_development:
518     %%%%length
519     \__xframed__outerlength_development:
520   \end{scope}
521 }
522 }
523
524 \cs_new:Nn \__xframed__nodepoints_inner_development:
525 {
526   \fill[red!70!black] (xframed-inner.north~west) circle (2pt)
527   node[above=0.5cm,font=\footnotesize\ttfamily] {xframed-inner.north~west};
528   \fill[red!70!black] (xframed-inner.north~east) circle (2pt)
529   node[above=0.5cm,font=\footnotesize\ttfamily] {xframed-inner.north~east};
530   \fill[red!70!black] (xframed-inner.south~west) circle (2pt)
531   node[below=0.5cm,font=\footnotesize\ttfamily] {xframed-inner.south~west};
532   \fill[red!70!black] (xframed-inner.south~east) circle (2pt)
533   node[below=0.5cm,font=\footnotesize\ttfamily] {xframed-inner.south~east};
534   \fill[red!70!black] (xframed-inner.center) circle (2pt)
535   node[draw,rectangle,fill=yellow,above=0.5cm,font=\footnotesize\ttfamily] {xframed-inner
536 }
537
538 \cs_new:Nn \__xframed__nodepoints_outer_development:
539 {

```

```

540 \fill[blue!70!black] (xframed-outer.north~west) circle (2pt)
541 node[above=0.75cm,font=\footnotesize\ttfamily] {xframed-outer.north~west};
542 \fill[blue!70!black] (xframed-outer.north~east) circle (2pt)
543 node[above=0.75cm,font=\footnotesize\ttfamily] {xframed-outer.north~east};
544 \fill[blue!70!black] (xframed-outer.south~west) circle (2pt)
545 node[below=0.75cm,font=\footnotesize\ttfamily] {xframed-outer.south~west};
546 \fill[blue!70!black] (xframed-outer.south~east) circle (2pt)
547 node[below=0.75cm,font=\footnotesize\ttfamily] {xframed-outer.south~east};
548 \fill[blue!70!black] (xframed-outer.center) circle (2pt)
549 node[draw,rectangle,fill=yellow,below=0.5cm,font=\footnotesize\ttfamily] {xframed-outer}
550 }
551
552 \cs_new:Nn \__xframed__nodepoints_title_development:
553 {
554 \tl_if_blank:VF \l__xframed_firsttitle_tl
555 {
556 \fill[green!70!black] (xframed-title.north~west) circle (2pt)
557 node[above=0.5cm,font=\footnotesize\ttfamily] {xframed-title.north~west};
558 \fill[green!70!black] (xframed-title.north~east) circle (2pt)
559 node[above=0.5cm,font=\footnotesize\ttfamily] {xframed-title.north~east};
560 \fill[green!70!black] (xframed-title.south~west) circle (2pt)
561 node[below=0.5cm,font=\footnotesize\ttfamily] {xframed-title.south~west};
562 \fill[green!70!black] (xframed-title.south~east) circle (2pt)
563 node[below=0.5cm,font=\footnotesize\ttfamily] {xframed-title.south~east};
564 \fill[green!70!black] (xframed-title.center) circle (2pt)
565 node[draw,rectangle,fill=yellow,above=0.5cm,font=\footnotesize\ttfamily] {xframed-title}
566 }
567 }
568
569 \cs_new:Nn \__xframed__nodepoints_foot_development:
570 {
571 \tl_if_blank:VF \l__xframed_lastfoot_tl
572 {

```

```

573     \fill[green!70!black] (xframed-foot.north~west) circle (2pt)
574     node[above=0.5cm,font=\footnotesize\ttfamily] {xframed-foot.north~west};
575     \fill[green!70!black] (xframed-foot.north~east) circle (2pt)
576     node[above=0.5cm,font=\footnotesize\ttfamily] {xframed-foot.north~east};
577     \fill[green!70!black] (xframed-foot.south~west) circle (2pt)
578     node[below=0.5cm,font=\footnotesize\ttfamily] {xframed-foot.south~west};
579     \fill[green!70!black] (xframed-foot.south~east) circle (2pt)
580     node[below=0.5cm,font=\footnotesize\ttfamily] {xframed-foot.south~east};
581     \fill[green!70!black] (xframed-foot.center) circle (2pt)
582     node[draw,rectangle,fill=yellow,above=0.5cm,font=\footnotesize\ttfamily] {xframed-foot.center};
583   }
584 }
585
586 \cs_new:Nn \__xframed__outerlength_development:
587 {
588   \draw[latex-latex] (xframed-outer.east) --++ ( \__xframed__get_length:n { mar-
589     gin-right },0) ;
590   \draw[latex-latex] (xframed-outer.west) --++ (-\__xframed__get_length:n { mar-
591     gin-left }, 0) ;
592   \draw[latex-latex] (xframed-outer.north) --++ ( 0 , \__xframed__get_skip:n { skip-above } )
593   \draw[latex-latex] (xframed-outer.south) --++ ( 0 , -\__xframed__get_skip:n { skip-below } )
594 }
595
596
597
598 \endpackage

```

### 1.3 xframed-dev.def – Developer info

```

599 \*package-dev
600 \@@=xframed

```

```

601 %%%=====%%
602 %% file to define all development functions                %%
603 %%%=====%%
604
605
606 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
607 %%%=====%%
608 %%%%                               Testing if development info requested                               %%%%
609 %%%=====%%
610 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
611
612 \cs_new:Npn \__xframed__msg_log:n #1 {}
613
614 \cs_new:Npn \__xframed__developer_tools:
615 {
616   \bool_if:NT \l__xframed_developer_info_bool
617     {%developer info true
618      %print coffin coordinates
619      \cs_set:Npn \__xframed__display_coffins:N ##1
620        {
621          \coffin_display_handles:Nn ##1 { blue!70!black }
622        }
623      %print extra information to log file
624      \cs_set:Npn \__xframed__msg_log:n ##1
625        {
626          \msg_log:n { xframed~developer~info~line~
627                    \msg_line_number:~\\\##1
628                  }
629        }
630      }
631    }
632 \__xframed__developer_tools:
633 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

```



```

634 %%%=====
635 %%%                                Print all options in a longtable                                %%%
636 %%%=====
637 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
638 \cs_new:Nn \__xframed__all_option_output:
639 {
640   \tl_set:Nn \l_tmpa_tl
641   {
642     \group_begin:
643     \renewcommand\arraystretch{1.25}
644     \begin{longtable}{@{}lll@{}}
645       \caption*{Options}\\\hline
646       \endhead
647       \multicolumn{3}{@{}r@{}}{\ldots}\\\hline
648       \endfoot
649       \hline
650       \endlastfoot
651     }
652     \tl_put_right:Nn \l_tmpa_tl { \multicolumn{3}{@{}c@{}}{length} \\\hline }
653     \tl_put_right:Nn \l_tmpa_tl
654     {
655       \prop_map_inline:Nn \l__xframed_length_option_prop
656       { ##1 & \dim_eval:n { ##2 } & \Convert{##2} \\\ }
657     }
658     \tl_put_right:Nn \l_tmpa_tl
659     { \\\hline\multicolumn{3}{@{}c@{}}{skips} \\\hline }
660     \tl_put_right:Nn \l_tmpa_tl
661     {
662       \prop_map_inline:Nn \l__xframed_skip_option_prop
663       { ##1 & \skip_eval:n { ##2 } & \Convert{##2} \\\ }
664     }
665     \tl_put_right:Nn \l_tmpa_tl
666     { \\\hline\multicolumn{3}{@{}c@{}}{color} \\\hline }

```

---

```

667 \tl_put_right:Nn \l_tmpa_tl
668 {
669 \prop_map_inline:Nn \l__xframed_color_option_prop
670 { ##1 & ##2 & \color{ ##2 } ##1 \\ }
671 }
672 \tl_put_right:Nn \l_tmpa_tl { \end{longtable} \group_end: }
673 \tl_use:N \l_tmpa_tl
674 }
675 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
676 %%%=====
677 %%% Print all lenght options in a longtable %%%
678 %%%=====
679 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
680 \cs_new:Nn \__xframed__length_output_aux:
681 {
682 \tl_set:Nn \l_tmpa_tl
683 {
684 \group_begin:
685 \renewcommand\arraystretch{1.25}
686 \begin{longtable}{@{}lll@{}}
687 \caption*{Length-options}\\\hline
688 \endhead
689 \multicolumn{3}{@{}r@{}}{\ldots}\\\hline
690 \endfoot
691 \hline
692 \endlastfoot
693 }
694 \tl_put_right:Nn \l_tmpa_tl
695 {
696 \prop_map_inline:Nn \l__xframed_length_option_prop
697 { ##1 & \dim_eval:n { ##2 } & \Convert{##2} \\ }
698 }
699 \tl_put_right:Nn \l_tmpa_tl { \end{longtable} \group_end: }

```

```

700 \tl_use:N \l_tmpa_tl
701 }
702 %%%%%%%%%%
703 %%%=====%%
704 %%%          Print all skip options in a longtable          %%%
705 %%%=====%%
706 %%%%%%%%%%
707 \cs_new:Nn \__xframed__skip_output_aux:
708 {
709   \tl_set:Nn \l_tmpa_tl
710   {
711     \group_begin:
712     \renewcommand\arraystretch{1.25}
713     \begin{longtable}{@{}l@{}}
714       \caption*{Skip~options}\\hline
715       \endhead
716       \multicolumn{3}{@{}r@{}}{\ldots}\\hline
717       \endfoot
718       \hline
719       \endlastfoot
720   }
721   \tl_put_right:Nn \l_tmpa_tl
722   {
723     \prop_map_inline:Nn \l__xframed_skip_option_prop
724     { ##1 & \skip_eval:n { ##2 } & \Convert{##2} \ \ }
725   }
726   \tl_put_right:Nn \l_tmpa_tl { \end{longtable} \group_end: }
727   \tl_use:N \l_tmpa_tl
728 }
729 %%%%%%%%%%
730 %%%=====%%
731 %%%          Print all color options in a longtable          %%%
732 %%%=====%%

```

```

733 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
734 \cs_new:Nn \__xframed__color_output_aux:
735 {
736   \tl_set:Nn \l_tmpa_tl
737   {
738     \group_begin:
739     \renewcommand\arraystretch{1.25}
740     \begin{longtable} {@{} lll @{} }
741       \caption* {Color~options} \\ \hline
742       \endhead
743       \multicolumn{3} {@{} r @{} } {\ldots} \\ \hline
744       \endfoot
745       \hline
746       \endlastfoot
747     }
748   \tl_put_right:Nn \l_tmpa_tl
749   {
750     \prop_map_inline:Nn \l__xframed_color_option_prop
751     { ##1 & ##2 & \color{ ##2 } ##1 \\ }
752   }
753   \tl_put_right:Nn \l_tmpa_tl { \end{longtable} \group_end: }
754   \tl_use:N \l_tmpa_tl
755 }
756
757 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
758 %%%=====
759 %%% Print single length/skip option %%%
760 %%%=====
761 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
762 \cs_new:Npn \__xframed__show_length:n #1
763 {
764   \dim_set:Nn \l_tmpa_dim { \__xframed__get_length:n { #1 } }
765   \dim_use:N \l_tmpa_dim

```

```

766 }
767 \cs_new:Npn \__xframed__show_skip:n #1
768 {
769   \skip_set:Nn \l_tmpa_skip { \__xframed__get_skip:n { #1 } }
770   \skip_use:N \l_tmpa_skip
771 }
772
773
774 \tex_endinput:D
775 \</package-dev>

```

## 1.4 xframed-dim.def – Helper functions handling dimensions

```

776 \*package-dim>
777 \@@=xframed>

778 %%=====%%
779 %% file to define all needed dim functions          %%
780 %%=====%%
781
782 %%%%%%%%%%%
783 %%%=====%%
784 %%%%           All length/skip options are save in a property list           %%%%
785 %%%=====%%
786 %%%%%%%%%%%
787
788
789 %%%%%%%%%%%
790 %%%=====%%
791 %%%%           getting skip options out of the property list           %%%%
792 %%%=====%%
793 %%%%%%%%%%%
794 % \__xframed__get_skip:n { <skip option> }
795 \cs_new:Npn \__xframed__get_skip:n #1

```

```

796 {
797   \skip_eval:n
798   {
799     \prop_get:Nn \l__xframed_skip_option_prop { #1 }
800   }
801 }
802 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
803 %%%=====%%
804 %%%          getting length options out of the property list          %%%
805 %%%=====%%
806 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
807 % \__xframed__get_length:n { <length option> }
808 \cs_new:Npn \__xframed__get_length:n #1
809 {
810   \dim_eval:n
811   {
812     \prop_get:Nn \l__xframed_length_option_prop { #1 }
813   }
814 }
815
816 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
817 %%%=====%%
818 %%%          add/sub a length option to a given length          %%%
819 %%%=====%%
820 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
821 % \__xframed__length_add:Nn <dimen register> { <length option> }
822 \cs_new:Npn \__xframed__length_add:Nn #1 #2
823 {
824   \dim_add:Nn #1
825   {
826     \__xframed__get_length:n { #2 }
827   }
828 }

```

---

## 1.4 XFRAMED-DIM.DEF – HELPER FUNCTIONS HANDLING DIMENSIONS IMPLEMENTATION

---

```

829 % \__xframed__length_sub:Nn <dimen register> { <length option> }
830 \cs_new:Npn \__xframed__length_sub:Nn #1 #2
831 {
832   \dim_sub:Nn #1
833   {
834     \__xframed__get_length:n { #2 }
835   }
836 }
837 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
838 %%%=====
839 %%%                                     Output a dimension in cm                                     %%%
840 %%%=====
841 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
842 % \__xframed_convert:n { <dimension> }
843 \cs_new:Npn \__xframed_convert:n #1
844 {
845   \fp_eval:n { round( \dim_to_fp:n { #1 } / 1cm, 5) }~cm
846 }
847
848
849
850 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
851 %%%=====
852 %%%                                     remove glue from a skip register                                     %%%
853 %%%=====
854 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
855 % \__xframed__get_stretch:Nn <skip register> { <skipexpr> }
856 \cs_new:Npn \__xframed__get_stretch:Nn #1 #2
857 {
858   \skip_if_finite:nTF { #2 }
859   {
860     #1 = \etex_gluestretch:D #2 \scan_stop:
861   }

```

```

862 {
863   #1 = \c_zero_skip
864 }
865 }
866 % \__xframed__get_shrink:Nn <skip register> { <skipexpr> }
867 \cs_new:Npn \__xframed__get_shrink:Nn #1 #2
868 {
869   \skip_if_finite:nTF { #2 }
870   {
871     #1 = \etex_glueshrink:D #2 \scan_stop:
872   }
873   {
874     #1 = \c_zero_skip
875   }
876 }
877 % \__xframed__remove_skip_glue:Nn <dim register> { <skipexpr> }
878 \cs_new:Npn \__xframed__remove_skip_glue:Nn #1 #2
879 {
880   \skip_split_finite_else_action:nnNN { #2 } { } \l_tmpa_dim \l_tmpb_dim
881   \skip_set:Nn #1
882   {
883     #2 - \c_zero_dim ~ plus ~ \l_tmpa_dim
884     - \c_zero_dim ~ minus ~ \l_tmpb_dim
885   }
886 }
887
888
889 % \__xframed__maximum_skip:Nn <dim register> { <skipexpr> }
890 \cs_new:Npn \__xframed__maximum_skip:Nn #1 #2
891 {
892   \skip_split_finite_else_action:nnNN { #2 } { } \l_tmpa_dim \l_tmpb_dim
893   \skip_set:Nn #1
894   {

```



```

895     #2 - \c_zero_dim ~ plus ~ \l_tmpa_dim
896         - \c_zero_dim ~ minus ~ \l_tmpb_dim
897         + \l_tmpa_dim
898     }
899 }
900
901
902 \tex_endinput:D
903 </package-dim>

```

## 1.5 xframed-funct.def – helper functions

```

904 <*package-funct>
905 <@@=xframed>
906 %%=====%%
907 %% file to define helper functions                                %%
908 %%=====%%
909
910 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
911 %%%=====%%
912 %%%%                                restructure a coffin with given width                                %%%%
913 %%%=====%%
914 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
915 % \__xframed__coffin_restructure:N <coffing>
916 \cs_new:Npn \__xframed__coffin_restructure:N #1
917 {
918     \vcoffin_set:Nnn #1
919         { \coffin_wd:N \l__xframed_main_coffin }
920     {
921         \vbox_unpack_clear:N #1
922     }
923 }
924

```

```

925 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
926 %%%=====
927 %%%                                     output of a coffin for a user                                     %%%
928 %%%=====
929 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
930 % \__xframed__display_coffins:N <coffing>
931 \cs_new:Npn \__xframed__display_coffins:N #1
932 {
933   \box_use:N #1
934 }
935
936 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
937 %%%=====
938 %%%                                     set a property list with prefix xframed                                     %%%
939 %%%=====
940 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
941 % \__xframed__prop_set:Nnn <property list> {<key>} {<value>}
942 \cs_new_eq:NN \__xframed__prop_set:Nnn \prop_put:Nnn
943 \cs_generate_variant:Nn \__xframed__prop_set:Nnn { Nnx }
944 \cs_generate_variant:Nn \__xframed__prop_set:Nnn { cnn }
945
946 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
947 %%%=====
948 %%%                                     get value of a xframed-property list                                     %%%
949 %%%=====
950 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
951 % \__xframed__prop_set:Nnn {<xframed property list>} {<key>}
952 \cs_new:Npn \__xframed__prop_get:nn #1 #2
953 {
954   \prop_get:cn { l__xframed_#1_option_prop } { #2 }
955 }
956
957 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

```

```

958 %%%=====
959 %%%                                testing LaTeX2e if tests                                %%%
960 %%%=====
961 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
962 %http://tex.stackexchange.com/questions/119736/what-are-the-best-practices-for-programmati
963 % \__xframed_if:N <LaTeX2e if test>
964 \prg_new_conditional:Npnn \__xframed_if:N #1 {p,T,F,TF}
965 {
966   #1 \prg_return_true: \else: \prg_return_false: \fi:
967 }
968
969 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
970 %%%=====
971 %%%                                get value of xframed-property list color                                %%%
972 %%%=====
973 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
974 \cs_new:Npn \__xframed__get_color:n #1
975 {
976   \prop_get:Nn \l__xframed_color_option_prop { #1 }
977 }
978
979 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
980 %%%=====
981 %%%                                test the bool flag of line -- if false set 0pt                                %%%
982 %%%=====
983 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
984 % \__xframed__test_linewidth:nnn {<bool name>} {<prop-list>} {<length/skip>}
985 \cs_new:Npn \__xframed__test_linewidth:nnn #1 #2 #3
986 {
987   \bool_if:cF { l__xframed_ #1 _bool }
988   {
989     \__xframed__prop_set:cnn
990     { l__xframed_ #2 _option_prop }

```

```

991      { #3 }
992      { \c_zero_dim }
993    }
994  }
995
996  %%%%%%%%%%%
997  %%%=====
998  %%%                                variant of a token list test                                %%%
999  %%%=====
1000  %%%%%%%%%%%
1001  %http://tex.stackexchange.com/a/112345/5239
1002  \cs_generate_variant:Nn \tl_if_empty:nTF { f }
1003
1004
1005  %%%%%%%%%%%
1006  %%%=====
1007  %%%                                ignore any vbox-warning during splitting process                                %%%
1008  %%%=====
1009  %%%%%%%%%%%
1010  \tl_new:N \l__xframed_vbadness_tl
1011  \cs_new:Npn \__xframed__ignore_vbadness:
1012  {
1013    \tl_set:Nx \l__xframed_vbadness_tl { \int_use:N \tex_vbadness:D }
1014    \int_set:Nn \tex_vbadness:D { \c_ten_thousand }
1015    \tex_afterassignment:D \__xframed__restore_vbadness:
1016  }
1017  \cs_new:Npn \__xframed__restore_vbadness:
1018  {
1019    \int_set:Nn \tex_vbadness:D { \l__xframed_vbadness_tl }
1020  }
1021
1022  \cs_new_protected:Npn \__xframed__local_boxdim:
1023  {

```

```

1024 \dim_set:Nn \tex_boxmaxdepth:D { \c_zero_dim }
1025 \dim_set:Nn \texSplittopskip:D { \c_zero_dim }
1026 \dim_set:Nn \tex_splitmaxdepth:D { \c_zero_dim }
1027 }
1028 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
1029 %%%=====
1030 %%% LaTeX2e offinterlineskip to LaTeX3 %%%
1031 %%%=====
1032 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
1033 \cs_new:Npn \__xframed__offinterlineskip:
1034 {
1035 \dim_set:Nn \tex_baselineskip:D { - \c_one_thousand \c_one_pt_dim }
1036 \dim_set:Nn \tex_lineskip:D { \c_zero \c_one_pt_dim }
1037 \dim_set:Nn \tex_lineskiplimit:D { \c_max_dim }
1038 }
1039
1040
1041 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
1042 %%%=====
1043 %%% Start xframed environment %%%
1044 %%%=====
1045 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
1046 % \__xframed__start_environment:n {<dimension>}
1047 \cs_new:Npn \__xframed__start_environment:n #1
1048 {
1049 \par
1050 \__xframed__enough_room:n { #1 }
1051 \par
1052 \dim_compare:nNnF
1053 { \tex_prevdepth:D } { = } { - \c_one_thousand \c_one_pt_dim }
1054 {
1055 \int_set:Nn \l_tmpa_int
1056 {

```

```

1057     \fp_to_int:n
1058     {
1059         %%\prevdepth as integer in scale points
1060         (\dim_to_fp:n { \tex_prevdepth:D } * 65536)
1061         /
1062         %%\baselineskip as integer in scale points
1063         (\dim_to_fp:n { \baselineskip } * 65536)
1064         +
1065         \c_one
1066     }
1067 }
1068 \dim_set:Nn \l_tmpa_dim
1069 {
1070     \tex_prevdepth:D - \l_tmpa_int\baselineskip + \topskip
1071 }
1072 \tex_kern:D \l_tmpa_dim
1073 }
1074 }
1075 % \__xframed__enough_room:n {<dimension>}
1076 \cs_new:Npn \__xframed__enough_room:n #1
1077 {
1078     \par
1079     \group_begin:
1080         \@nobreakfalse\addpenalty\z@
1081     \group_end:
1082     \dim_set_eq:NN \l__xframed_free_vspace_dim \tex_pagegoal:D
1083     \dim_compare:nNnTF
1084     { \l__xframed_free_vspace_dim } = { \c_max_dim }
1085     { \dim_set_eq:NN \l__xframed_free_vspace_dim \vsize }
1086     { \dim_add:Nn \l__xframed_free_vspace_dim { - \tex_pagetotal:D } }
1087     \dim_set:Nn \l_tmpa_dim { #1 }
1088     %\__xframed__msg_log:n
1089     \msg_log:n

```

```

1090 {
1091   xframed~info~\msg_line_number:\ \ \ \
1092   \ dimension~of~the~current~page \ \
1093   \ height~==\dim_use:N \tex_pagegoal:D\ =
1094     \ \_xframed__convert:n{\tex_pagegoal:D} \ \
1095   \ used~==\dim_use:N \tex_pagetotal:D\ =
1096     \ \_xframed__convert:n{\tex_pagetotal:D} \ \
1097   \ free~==\dim_use:N \l__xframed_free_vspace_dim\ =
1098     \ \_xframed__convert:n{\l__xframed_free_vspace_dim} \ \
1099   \ request~==\dim_use:N \l_tmpa_dim\ =
1100     \ \_xframed__convert:n{ \l_tmpa_dim } \ \
1101   \ request~is~provided~by~the~option:~minimum-space
1102 }
1103 \dim_compare:nNnTF
1104 { \l__xframed_free_vspace_dim } < { \l_tmpa_dim }
1105 { %not enough space on current page
1106   \vfill\eject
1107   \dim_set_eq:NN \l__xframed_free_vspace_dim \vsize
1108 }{}
1109 }
1110
1111 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
1112 %%%=====
1113 %%%                                xframed trivlist environment                                %%%
1114 %%%=====
1115 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
1116
1117 \cs_new:Npn \_xframed__trivlist:
1118 {
1119   \skip_set:Nn {\topsep}{ \_xframed__prop_get:nn { skip } { skip-above } }
1120   \parsep\parskip
1121   \@nmblistfalse
1122   \@trivlist

```

```

1123 \labelwidth\z@
1124 \leftmargin\z@
1125 \itemindent\z@
1126 \let\@itemlabel\@empty
1127 \def\makelabel##1{##1}
1128 }
1129
1130 \cs_new:Npn \end__xframed__trivlist:
1131 {
1132 \if@inlabel
1133 \leavevmode
1134 \global \@inlabelfalse
1135 \fi
1136 \if@newlist
1137 \@noitemerr
1138 \global \@newlistfalse
1139 \fi
1140 \ifhmode\unskip \par
1141 \else
1142 \@inmatherr{\end{\@currenvir}}%
1143 \fi
1144 \if@nolist \else
1145 \ifdim\lastskip >\z@
1146 \@tempskipa\lastskip \vskip -\lastskip
1147 \advance\@tempskipa\parskip \advance\@tempskipa -\@outerparskip
1148 \vskip\@tempskipa
1149 \fi
1150 \addpenalty\@endparpenalty
1151 \addvspace { \__xframed__get_skip:n { skip-below } }
1152 \@endpetrue
1153 \fi
1154 }
1155

```



```

1156 %
1157 \cs_new_protected:Npn \__xframed__set_list:
1158 {
1159   \__xframed__trivlist:\item\relax\color_group_begin:
1160   \color_ensure_current:
1161 }
1162
1163
1164 \cs_set_protected_nopar:Npn \__xframed__set_endlist:
1165 {
1166   \color_group_end:
1167   \end__xframed__trivlist:
1168 }
1169
1170
1171
1172 \tex_endinput:D
1173 </package-funct>

```

## 1.6 xframed-initial.def – Define all internal variables

```

1174 <*package-initial>
1175 <@@=xframed>
1176 %%=====%%
1177 %% file to initial all new variables needed by xframed %%
1178 %%=====%%
1179
1180
1181
1182 %new coffins
1183 \coffin_new:N \l__xframed_head_coffin
1184 \coffin_new:N \l__xframed_main_coffin
1185 \coffin_new:N \l__xframed_title_coffin

```

```

1186 \coffin_new:N \l__xframed_firsttitle_coffin
1187 \coffin_new:N \l__xframed_foot_coffin
1188 \coffin_new:N \l__xframed_lastfoot_coffin
1189 \coffin_new:N \l__xframed_footnotes_coffin
1190
1191
1192 \coffin_new:N \l__xframed_draw_coffin
1193
1194 \coffin_new:N \l__xframed_temp_coffin
1195 \coffin_new:N \l__xframed_two_coffin
1196 \coffin_new:N \l__xframed_save_coffin
1197
1198
1199 \coffin_new:N \l__xframed_subtitle_coffin
1200 \coffin_new:N \l__xframed_subsubtitle_coffin
1201
1202
1203 %new length
1204 \dim_new:N \l__xframed_coffin_width_dim
1205 \dim_new:N \l__xframed_environment_width_dim
1206
1207
1208 \dim_new:N \l__xframed_title_htdp_dim
1209 \dim_new:N \l__xframed_firsttitle_htdp_dim
1210 \dim_new:N \l__xframed_foot_htdp_dim
1211 \dim_new:N \l__xframed_lastfoot_htdp_dim
1212
1213 \dim_new:N \l__xframed_maincoffin_htdp_dim
1214
1215 \dim_new:N \l__xframed_splitheight_dim
1216
1217
1218 \dim_new:N \l__xframed_free_vspace_dim

```

```

1219 \dim_new:N \l__xframed_computed_coffin_height_dim
1220 \dim_new:N \l__xframed_maximum_coffin_height_dim
1221
1222 \dim_new:N \l__xframed_tmpa_dim
1223 \dim_new:N \l__xframed_tmpb_dim
1224
1225 \box_new:N \l__xframed_tmpa_box
1226 \box_new:N \l__xframed_tmpb_box
1227
1228 \bool_new:N \l__xframed_head_bool
1229
1230 \dim_const:Nn \c_one_pt_dim { 1~pt }
1231
1232
1233 \tl_new:N \l__xframed_temptitle_tl
1234 \tl_new:N \l__xframed_tempfoot_tl
1235
1236 \tex_endinput:D
1237 </package-initial>

```

## 1.7 xframed-keys.def – Defining all options

```

1238 <*package-keys>
1239 <@@=xframed>
1240 %%=====%%
1241 %% file to define all allowed keys %%
1242 %%=====%%
1243
1244
1245 %!framemethod
1246 \tl_new:N \__xframed__framemethode_tl
1247 \int_new:N \__xframed__framemethode_int
1248 \cs_new_protected:Npn \__xframed__set_framemethod:n #1

```

```

1249 {
1250   \tl_set:Nx \l_tmpa_tl { \tl_expandable_lowercase:n { #1 } }
1251   \clist_if_in:noTF { pgf , tikz } { \l_tmpa_tl }
1252   {
1253     \tl_set:Nn \__xframed__framemethode_tl { tikz }
1254     \int_set_eq:NN \__xframed__framemethode_int \c_one
1255   }
1256   {
1257     \clist_if_in:noTF { default , tex , latex , none } { \l_tmpa_tl }
1258     {
1259       \tl_set:Nn \__xframed__framemethode_tl { default }
1260       \int_set_eq:NN \__xframed__framemethode_int \c_two
1261     }
1262     {
1263       \clist_if_in:noTF { pstricks , ps , postscript } { \l_tmpa_tl }
1264       {
1265         \tl_set:Nn \__xframed__framemethode_tl { pstricks }
1266         \int_set_eq:NN \__xframed__framemethode_int \c_three
1267       }
1268       {
1269         \msg_error:nnx { xframed }{ unknown-option } { \l_tmpa_tl }
1270       }
1271     }
1272   }
1273 }
1274
1275
1276 \keys_define:nn { xframed }
1277 {
1278   frame-method .code:n      = \__xframed__set_framemethod:n { #1 } ,
1279   frame-method .initial:n   = tikz ,
1280   no-tikz      .bool_gset:N = \g__xframed_notikz_bool ,
1281   no-tikz      .initial:n   = false ,

```

```

1282     no-pstricks .bool_gset:N = \g__xframed_notikz_bool           ,
1283     no-pstricks .initial:n   = true                             ,
1284     default     .code:n      = \__xframed__set_framemethod:n { default } ,
1285     default     .value_forbidden:                                ,
1286     tikz        .code:n      = \__xframed__set_framemethod:n { tikz } ,
1287     tikz        .value_forbidden:                                ,
1288   }
1289   %!end framemethod
1290
1291   %!length options
1292   \prop_new:N \l__xframed_length_option_prop
1293
1294   \cs_new_protected:Npn \__xframed__lengthkeys_define:n #1
1295   {
1296     \__xframed__lengthkeys_define_aux:nn #1 \q_stop
1297   }
1298
1299   \cs_new_protected:Npn \__xframed__lengthkeys_define_aux:nn #1==#2 \q_stop
1300   {
1301     \keys_define:nn { xframed }
1302     {
1303       #1 .code:n = \__xframed__prop_set:Nnn \l__xframed_length_option_prop
1304               { #1 } { ##1 }
1305     }
1306     \keys_set:nn { xframed }
1307     {
1308       #1 = { #2 }
1309     }
1310   }
1311
1312   \clist_map_function:nN
1313   {
1314     margin-left      == \c_zero_dim      ,

```

```

1315 margin-right      == \c_zero_dim      ,
1316 inner-margin-left  == 10pt            ,
1317 inner-margin-right  == 10pt            ,
1318 inner-top-margin    == 5.0pt           ,
1319 inner-bottom-margin == 5.0pt           ,
1320 line-width-top      == 0.8pt           ,
1321 line-width-left     == 0.8pt           ,
1322 line-width-right    == 0.8pt           ,
1323 line-width-bottom   == 0.8pt           ,
1324 line-width-title    == 0.6pt           ,
1325 line-width-foot     == 0.6pt           ,
1326 arc-inner           == 5.0pt           ,
1327 arc-outer           == 5.0pt           ,
1328 footnote-line-width == .8pt            ,
1329 footnote-line-length == 1 in           ,
1330 width               == \linewidth     ,
1331 title-skip-above    == 5pt             ,
1332 title-skip-below    == 5pt             ,
1333 foot-skip-above     == 5pt             ,
1334 foot-skip-below     == 5pt             ,
1335 subtitle-skip-above == 5pt             ,
1336 subtitle-skip-below == 5pt             ,
1337 shadow-size        == 2pt             ,
1338 extra-skip-above    == \c_zero_dim     ,
1339 minimum-space      == 2\baselineskip  ,
1340 split-skip-top      == 10pt            ,
1341 split-skip-bottom   == 10pt            ,
1342 footnote-distance   == 10pt            ,
1343 } \__xframed__lengthkeys_define:n
1344
1345
1346 %!meta options
1347 \keys_define:nn { xframed }

```

```

1348 {
1349     margin .meta:n =
1350     {
1351         margin-left = #1 ,
1352         margin-right = #1 ,
1353     } ,
1354     inner-margin .meta:n =
1355     {
1356         inner-margin-left = #1 ,
1357         inner-margin-right = #1 ,
1358     } ,
1359     skip .meta:n =
1360     {
1361         skip-above = #1 ,
1362         skip-below = #1 ,
1363     } ,
1364     title-skip .meta:n =
1365     {
1366         title-skip-above = #1 ,
1367         title-skip-below = #1 ,
1368     } ,
1369     foot-skip .meta:n =
1370     {
1371         foot-skip-above = #1 ,
1372         foot-skip-below = #1 ,
1373     } ,
1374     split-skip .meta:n =
1375     {
1376         split-skip-top = #1 ,
1377         split-skip-bottom = #1 ,
1378     } ,
1379     line-width .meta:n =

```

```

1381      {
1382          line-width-top          = #1          ,
1383          line-width-left         = #1          ,
1384          line-width-right        = #1          ,
1385          line-width-bottom       = #1          ,
1386      }
1387      line-color .meta:n =
1388      {
1389          line-color-top          = #1          ,
1390          line-color-left         = #1          ,
1391          line-color-right        = #1          ,
1392          line-color-bottom       = #1          ,
1393      }
1394      round-corner .meta:n =
1395      {
1396          arc-inner               = #1          ,
1397          arc-outer               = #1          ,
1398      }
1399      arc .meta:n =
1400      {
1401          arc-inner               = #1          ,
1402          arc-outer               = #1          ,
1403      }
1404      show-all-lines .meta:n =
1405      {
1406          top-line                = #1          ,
1407          left-line               = #1          ,
1408          bottom-line             = #1          ,
1409          right-line              = #1          ,
1410      }
1411  }
1412  %!end meta options
1413

```



---

```

1414 %!end length options
1415 \prop_new:N \l__xframed_skip_option_prop
1416
1417 \cs_new_protected:Npn \__xframed__skipkeys_define:n #1
1418 {
1419   \__xframed__skipkeys_define_aux:nn #1 \q_stop
1420 }
1421
1422 \cs_new_protected:Npn \__xframed__skipkeys_define_aux:nn #1==#2 \q_stop
1423 {
1424   \keys_define:nn { xframed }
1425   {
1426     #1 .code:n = \__xframed__prop_set:Nnn \l__xframed_skip_option_prop
1427                  { #1 } { \skip_eval:n { ##1 } }
1428   }
1429   \keys_set:nn { xframed }
1430   {
1431     #1 = { #2 }
1432   }
1433 }
1434 %!skip option
1435 \clist_map_function:nN
1436 {
1437   skip-above      == 10pt      ,
1438   skip-below      == 10pt      ,
1439   subtitle-skip-above == 5pt    ,
1440   subtitle-skip-below == 5pt    ,
1441 } \__xframed__skipkeys_define:n
1442 %!end skip options
1443
1444
1445 %!color options
1446 %\cs_new:Npn \__xframed__use_font_settings:N #1

```

```

1447 % {
1448 % \exp_args:No \color{ \_xframed__prop_get:nn { color } { #1-font-color} }
1449 % \tl_use:c {l\_xframed_#1font_tl
1450 % }
1451
1452 \prop_new:N \l\_xframed_color_option_prop
1453
1454 \cs_new_protected:Npn \_xframed__colorkeys_define:n #1
1455 {
1456   \_xframed__colorkeys_define_aux:nn #1 \q_stop
1457 }
1458
1459 \cs_new_protected:Npn \_xframed__colorkeys_define_aux:nn #1==#2 \q_stop
1460 {
1461   \keys_define:nn { xframed }
1462   {
1463     #1 .code:n = \_xframed__prop_set:Nnn \l\_xframed_color_option_prop
1464                 { #1 } { ##1 }
1465   }
1466   \keys_set:nn { xframed }
1467   {
1468     #1 = { #2 }
1469   }
1470 }
1471 \clist_map_function:nN
1472 {
1473   line-color-left      == black      ,
1474   line-color-right     == black      ,
1475   line-color-top       == black      ,
1476   line-color-bottom    == black      ,
1477   bg-color             == gray!20    ,
1478   font-color           == black      ,
1479   title-font-color     == black      ,

```

```

1480     foot-font-color      ==  black      ,
1481     head-font-color      ==  black      ,
1482     title-line-color     ==  black      ,
1483     title-bg-color       ==  gray!35    ,
1484     foot-bg-color        ==  gray!35    ,
1485     foot-line-color      ==  black      ,
1486     subtitle-font-color  ==  black      ,
1487     subtitle-line-color  ==  black      ,
1488     subtitle-bg-color    ==  white      ,
1489     shadow-color         ==  black!50   ,
1490 } \__xframed__colorkeys_define:n
1491 %!end color options
1492
1493 %!font option
1494 \keys_define:nn { xframed }
1495 {
1496     font          .tl_set:N = \l__xframed_main_font_tl      ,
1497     font          .initial:n = \normalfont                  ,
1498     head-font     .tl_set:N = \l__xframed_head_font_tl      ,
1499     head-font     .initial:n = \normalfont\sffamily\bfseries ,
1500     title-font    .tl_set:N = \l__xframed_title_font_tl     ,
1501     title-font    .initial:n = \bfseries\sffamily\large     ,
1502     foot-font     .tl_set:N = \l__xframed_foot_font_tl      ,
1503     foot-font     .initial:n = \bfseries\sffamily\small     ,
1504     subtitle-font .tl_set:N = \l__xframed_subtitle_font_tl  ,
1505     subtitle-font .initial:n = \bfseries\sffamily           ,
1506 }
1507 %!end font option
1508
1509 %!hooks
1510 \keys_define:nn { xframed }
1511 {
1512     code-before   .tl_set:N = \l__xframed_codebefore_tl      ,

```

```

1513 code-after          .tl_set:N = \l__xframed_codeafter_tl      ,
1514 code-begin          .tl_set:N = \l__xframed_codebegin_tl     ,
1515 code-end             .tl_set:N = \l__xframed_codeend_tl       ,
1516 subtitle-before     .tl_set:N = \l__xframed_codebefore_tl    ,
1517 subtitle-after       .tl_set:N = \l__xframed_codeafter_tl     ,
1518 code-frame-single    .tl_set:N = \l__xframed_code_single_frame_tl ,
1519 code-frame-first     .tl_set:N = \l__xframed_code_first_frame_tl ,
1520 code-frame-middle    .tl_set:N = \l__xframed_code_middle_frame_tl ,
1521 code-frame-last      .tl_set:N = \l__xframed_code_last_frame_tl  ,
1522 tikz-code-post       .tl_set:N = \l__xframed_posttikz_tl      ,
1523 tikz-code-single     .tl_set:N = \l__xframed_singletikz_tl     ,
1524 tikz-code-first      .tl_set:N = \l__xframed_firsttikz_tl     ,
1525 tikz-code-middle     .tl_set:N = \l__xframed_middletikz_tl    ,
1526 tikz-code-last       .tl_set:N = \l__xframed_lasttikz_tl      ,
1527 setup-tikz          .code:n = { \xframedsetuptikz {#1} }      ,
1528 head-pre-code        .tl_set:N = \l__xframed_headprecode_tl    ,
1529 head-post-code       .tl_set:N = \l__xframed_headpostcode_tl   ,
1530 head-post-code       .initial:n = \space                       ,
1531 title-pre-code       .tl_set:N = \l__xframed_titleprecode_tl   ,
1532 title-post-code      .tl_set:N = \l__xframed_titlepostcode_tl  ,
1533 foot-pre-code        .tl_set:N = \l__xframed_footprecode_tl    ,
1534 foot-post-code       .tl_set:N = \l__xframed_footpostcode_tl   ,
1535 }
1536 %!end hooks
1537
1538 %!bool option
1539 \keys_define:nn { xframed }
1540 {
1541   top-line           .bool_set:N = \l__xframed_topline_bool    ,
1542   top-line           .initial:n = true                          ,
1543   left-line          .bool_set:N = \l__xframed_leftline_bool   ,
1544   left-line          .initial:n = true                          ,
1545   bottom-line        .bool_set:N = \l__xframed_bottomline_bool ,

```

```

1546 bottom-line          .initial:n    = true                      ,
1547 right-line            .bool_set:N = \l__xframed_rightline_bool    ,
1548 right-line            .initial:n    = true                      ,
1549 title-line            .bool_set:N = \l__xframed_titleline_bool    ,
1550 title-line            .initial:n    = true                      ,
1551 foot-line             .bool_set:N = \l__xframed_footline_bool     ,
1552 foot-line             .initial:n    = true                      ,
1553 subtitle-line         .bool_set:N = \l__xframed_subtitleline_bool ,
1554 allow-breaking        .bool_set:N = \l__xframed_allowbreaking_bool ,
1555 allow-breaking        .initial:n    = true                      ,
1556 draw-everyline        .bool_set:N = \l__xframed_draweveryline_bool ,
1557 draw-everyline        .initial:n    = false                    ,
1558 %%!! footnote-inside not used and not described yet
1559 footnote-inside       .bool_set:N = \l__xframed_footnoteinside_bool ,
1560 twoside-mode          .bool_set:N = \l__xframed_usetwoside_bool    ,
1561 shadow                .bool_set:N = \l__xframed_shadow_bool       ,
1562 ignore-last-descender .bool_set:N = \l__xframed_descenders_bool    ,
1563 ignore-last-skip      .bool_set:N = \l__xframed_ignore_lastskip_bool ,
1564 ignore-last-skip      .initial:n    = true                      ,
1565 developer-info        .bool_set:N = \l__xframed_developer_info_bool ,
1566 mdframed              .bool_set:N = \l__xframed_mdframed_bool     ,
1567 minted                .bool_set:N = \l__xframed_minted_bool       ,
1568 listings              .bool_set:N = \l__xframed_listings_bool     ,
1569 tikz                  .bool_set:N = \l__xframed_tikz_bool         ,
1570 tikz                  .initial:n    = true                      ,
1571 pstricks              .bool_set:N = \l__xframed_pstricks_bool     ,
1572 mdframed              .bool_set:N = \l__xframed_mdframed_bool     ,
1573 theorem               .bool_set:N = \l__xframed_theorem_bool      ,
1574 theorem               .initial:n    = true                      ,
1575 }
1576 %!end bool options
1577
1578

```

```

1579 %!string option
1580 \keys_define:nn { xframed }
1581 {
1582   head          .tl_set:N = \l__xframed_head_tl          ,%inside frame
1583   title          .tl_set:N = \l__xframed_title_tl         ,
1584   first-title    .tl_set:N = \l__xframed_firsttitle_tl    ,
1585   foot           .tl_set:N = \l__xframed_foot_tl          ,
1586   last-foot      .tl_set:N = \l__xframed_lastfoot_tl      ,
1587 }
1588 %!end string options
1589
1590 %!unknown option
1591 \keys_define:nn { xframed }
1592 {
1593   unknown .code:n =
1594     {
1595       \msg_error:nxx { xframed } { unknown-option }
1596       { \exp_not:V \l_keys_key_tl }
1597     }
1598 }
1599 %!end unknown option
1600
1601 \ProcessKeysOptions { xframed }
1602
1603 %!style option
1604 \keys_define:nn { xframed }
1605 {
1606   style .code:n =
1607     {
1608       \cs_if_exist:cTF { __xframed_style_#1_user }
1609       {
1610         \exp_args:Nf \xframedsetup { \use:c { __xframed_style_#1_user } }
1611       }

```

```

1612     {
1613         \msg_error:nnx { xframed } { unknown-style }
1614         { \exp_not:V \l_keys_key_tl }
1615     }
1616 }
1617 }
1618 %!end style option
1619
1620 % This command is the user interface to setup options.
1621 \NewDocumentCommand \xframedsetup { m }
1622 {
1623     \keys_set:nn { xframed } { #1 }
1624 }
1625
1626 \tex_endinput:D
1627 </package-keys>

```

## 1.8 xframed-listings.def – listings support

```

1628 <*package-listings>
1629 <@@=xframed>
1630 %%=====%%
1631 %% file to support predefined environments with listings %%
1632 %%=====%%
1633 \RequirePackage{listings}
1634 \tex_endinput:D
1635 </package-listings>

```

## 1.9 xframed-mdframed.def – NOT SUPPORTED

```

1636 <*package-mdframed>
1637 <@@=xframed>
1638 %%=====%%

```

---

```

1639 %% file to use xframed instead of mdframed          %%
1640 %%=====%%
1641 \tex_endinput:D
1642 </package-mdframed>

```

## 1.10 xframed-minted.def – minted support

```

1643 <*package-minted>
1644 <@@=xframed>
1645 %%=====%%
1646 %% file to support predefined environments with minted  %%
1647 %%=====%%
1648 \RequirePackage{minted,caption}
1649 \keys_define:nn {xframed-doc-minted }
1650 {
1651   caption      .tl_set:N = \l__xframed_minted_caption_tl ,
1652   label        .tl_set:N = \l__xframed_minted_label_tl   ,
1653   minted-opt    .tl_set:N = \l__xframed_minted_minted_tl  ,
1654   minted-opt    .initial:n = {linenos=true}              ,
1655   language     .tl_set:N = \l__xframed_minted_language_tl ,
1656   language     .initial:n = latex                        ,
1657   result        .bool_set:N = \l__xframed_minted_result_bool ,
1658   result        .initial:n = false                      ,
1659   xframed       .tl_set:N = \l__xframed_minted_xframed_tl  ,
1660   hook         .tl_set:N = \l__xframed_minted_hook_tl     ,
1661 }
1662
1663 \NewDocumentCommand \xframedmintedsetup { m }
1664 {
1665   \keys_set:nn { xframed-doc-minted } { #1 }
1666 }
1667
1668 \NewDocumentEnvironment {xframedexample} { 0 {} }

```



---

```

1669 {
1670   \keys_set:nn { xframed-doc-minted } { #1 }
1671   \group_begin:
1672   \tl_set:Nx \l__mdxex_temp_tl
1673   {
1674     \exp_not:V \l__xframed_minted_hook_tl
1675     \exp_not:N \VerbatimEnvironment
1676     \exp_not:N \xframedsetup
1677     {
1678       line-color          = brown!70!black    ,
1679       bg-color            = brown!10!white    ,
1680       inner-top-margin    = 12pt              ,
1681       inner-bottom-margin = 6pt              ,
1682       title-skip-above    = 6pt              ,
1683       title-skip-below    = 6pt              ,
1684       title-bg-color      = brown!15!white    ,
1685       line-width-top      = 2pt              ,
1686       margin              = 1cm              ,
1687     }
1688     \tl_if_empty:NTF \l__xframed_minted_caption_tl
1689     {
1690       \scan_stop:
1691     }
1692     {
1693       \exp_not:N \xframedsetup
1694       {
1695         first-title      =
1696         {
1697           \exp_not:N \captionsetup { skip = 0pt }
1698           \exp_not:N \captionof
1699             { lstlisting }
1700             { \exp_not:V \l__xframed_minted_caption_tl }
1701           \tl_if_empty:NF \l__xframed_minted_label_tl

```

```

1702         {
1703             \exp_not:N \label
1704             { lst \exp_not:N : \l__xframed_minted_label_tl }
1705         }
1706     }
1707 }
1708 }
1709 \exp_not:n { \begin{xframed} }[ \exp_not:V \l__xframed_minted_xframed_tl ]
1710 % \exp_not:n { \MakePercentComment }
1711 \exp_not:n { \begin{minted} } [ \l__xframed_minted_minted_tl ]
1712                               { \l__xframed_minted_language_tl }
1713 }
1714 \l__mdxex_temp_tl
1715 }
1716 {
1717     \end{minted}
1718 % \MakePercentIgnore
1719 \end{xframed}
1720 \group_end:
1721 \bool_if:NT \l__xframed_minted_result_bool { \input{\jobname.pyg} }
1722 }
1723
1724 \RenewDocumentCommand\DeleteFile{m}{}
1725
1726 \tex_endinput:D
1727 </package-minted>

```

## 1.11 xframed-msg.def – Defining all messages

```

1728 <*package-msg>
1729 <@@=xframed>
1730 %%=====%%
1731 %% file to define all needed messanges %%

```

```
1732 %%=====%%
1733
1734
1735 \msg_new:nnn { xframed } { inside-box }
1736 {
1737     You~are~using~the~environment~xframed~inside~a~non~breakable\\
1738     box.~By~this~the~option~nobreak~is~used.~For~further~information\\
1739     see~the~documentation.
1740 }
1741
1742 \msg_new:nnn { xframed } { package-not-available }
1743 {
1744     The~#1~package~is~not~available~but~xframed~needs~the~package~.\\
1745     For~further~information~see~the~documenation.
1746 }
1747
1748 \msg_new:nnn { xframed } { unknown-option }
1749 {
1750     The~option~file~'#1'~is~not~known~by~xframed.\\
1751     Perhaps~it~is~spelled~incorrectly.
1752 }
1753
1754 \msg_new:nnn { xframed } { unknown-style }
1755 {
1756     The~style~'#1'~is~not~known~by~xframed:
1757     perhaps~it~is~spelled~incorrectly.
1758 }
1759
1760 \msg_new:nnn { xframed } { style-not-defined }
1761 {
1762     You~are~trying~to~expand~the~style~#1.\\
1763     The~style~is~undefined.~xframed~uses~ \\
1764     the~command~\newxframedstyle~instead.
```

```
1765     }
1766
1767 \msg_new:nnn { xframed } { style-already-defined }
1768 {
1769     You~are~trying~to~define~the~style~#1.\\
1770     The~style~is~alread~defined.~xframed~uses \\
1771     the~command~\addtoxframedstyle~instead.
1772 }
1773
1774
1775 \msg_new:nnn { xframed } { prop-key-not-available }
1776 {
1777     The~key~'#1'~is~not~defined~\\
1778     in~current~property~list~of~#2.\\
1779     Perhaps~it~is~spelled~incorrectly.
1780 }
1781
1782
1783 \msg_new:nnn { xframed } { patching-worked }
1784 { Patching~the~command~#1~was~successful. }
1785
1786 \msg_new:nnn { xframed } { patching-failed }
1787 { Patching~the~command~#1~failed. }
1788
1789
1790 \msg_new:nnn { xframed } { output-option-failed }
1791 {
1792     You~are~trying~to~print~all~#1~options.\\
1793     These~options~are~not~defined~by~xframed. \\
1794     Allowed~are:~length,~skip~and~color.\\
1795     Perhaps~it~is~spelled~incorrectly.
1796 }
1797
```

```

1798
1799 \tex_endinput:D
1800 </package-msg>

```

## 1.12 xframed-split.def – splitting algorithm

```

1801 <*package-split>
1802 <@@=xframed>
1803 %%=====%%
1804 %% file to define the algorithm to split xframed      %%
1805 %%=====%%
1806
1807 %%%%%%%%%%%
1808 %%%=====%%
1809 %%%              Starting Output of the frame              %%%
1810 %%%=====%%
1811 %%%%%%%%%%%
1812 %%do the output related to the previous tests
1813 %%if splittable or split needed
1814 %% \l__xframed_allowbreaking_bool = true
1815 %%if split need not or isn't needed
1816 %% \l__xframed_allowbreaking_bool = false
1817 \cs_new:Nn \__xframed__output_and_draw:
1818 {
1819   \bool_if:NTF \l__xframed_allowbreaking_bool
1820     {%need~split
1821       \__xframed__output_and_draw_aux:
1822     }
1823     {%no~split
1824       \__xframed_draw_frame:
1825     }
1826   }
1827

```

```

1828
1829 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
1830 %%%=====
1831 %%%                                     Output of the frame                                %%%
1832 %%%=====
1833 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
1834 % draw the frame and print the material
1835 % all calculations are done at this point
1836 \cs_new:Nn \__xframed_draw_frame:
1837 {
1838   \int_case:nnn { \__xframed__framemethode_int }
1839   {
1840     { 1 } { \__xframed__draw_tikz_frame: }%tikz
1841     { 2 } { \__xframed__draw_tikz_frame: }%default
1842     { 3 } { \__xframed__draw_tikz_frame: }%pstricks
1843   }
1844   {
1845     \__xframed__msg_log:n { xframed~undefined~style }%need a good warning
1846   }
1847 }
1848
1849 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
1850 %%%=====
1851 %%%                                     Splitting allowed?                                %%%
1852 %%%=====
1853 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
1854 %%Test if xframed can be splitted
1855 %% not possible if inside
1856 %% minipage, parbox, float, boxes
1857 \cs_new:Nn \__xframed__test_ifSplittable:
1858 {
1859   \bool_if:nTF
1860   {

```

```

1861 \__xframed_if_p:N \if@minipage || %compatible to LaTeX2e
1862 \mode_if_inner_p: || %compatible to LaTeX2e
1863 \int_compare_p:nNn { \@floatpenalty } < { 0 } || %compatible to LaTeX2e
1864 \bool_if_p:N \l__xframed_allowbreaking_bool
1865 }
1866 {
1867 \bool_if:NF \l__xframed_allowbreaking_bool
1868 {
1869 \msg_warning:nn { xframed } { inside-box }
1870 }
1871 \__xframed__msg_log:n { xframed~uses~nonsplittable~output }
1872 %%can't be splitted
1873 % \__xframed_use_nonsplittable_output:
1874 \bool_set_false:N \l__xframed_allowbreaking_bool
1875 }
1876 {
1877 \__xframed__msg_log:n { xframed~uses~splittable~output }
1878 %%can be splitted
1879 % \__xframed_use_splittable_output:
1880 \bool_set_true:N \l__xframed_allowbreaking_bool
1881 }
1882 }
1883
1884 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
1885 %%%=====
1886 %%%% Setup the different parts of the frame %%%%
1887 %%%=====
1888 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
1889 %must be used local!!!
1890 \cs_new:Npn \__xframed_setup_firstframe:
1891 {
1892 %bottom line required, otherwise bottomline 0pt.
1893 \bool_if:NF \l__xframed_draweveryline_bool

```

```

1894 {
1895   \bool_if:NT \l___xframed_bottomline_bool
1896   {
1897     \__xframed__prop_set:Nnn \l___xframed_length_option_prop
1898       { line-width-bottom } { 0pt }
1899     \bool_set_false:N \l___xframed_bottomline_bool
1900   }
1901 }
1902 %no last-foot -- only foot
1903 \tl_set_eq:NN \l___xframed_lastfoot_tl \l___xframed_foot_tl
1904 % \cs_set_eq:NN \__xframed__last_foot: \__xframed__foot:
1905 %no inner-bottom-margin -- instead split-skip-bottom
1906 \__xframed__prop_set:Nnn \l___xframed_length_option_prop
1907   { inner-bottom-margin } { \__xframed__get_length:n { split-skip-bottom } }
1908 %no skip below
1909 \__xframed__prop_set:Nnn \l___xframed_skip_option_prop
1910   { skip-below } { 0 pt }
1911 }
1912
1913 %must be used local!!!
1914 \cs_new:Npn \__xframed_setup_middleframe:
1915 {
1916   %top/bottom line required, otherwise top/bottom line 0pt.
1917   \bool_if:NF \l___xframed_draweveryline_bool
1918   {
1919     \bool_if:NT \l___xframed_bottomline_bool
1920     {
1921       \__xframed__prop_set:Nnn \l___xframed_length_option_prop
1922         { line-width-bottom } { 0pt }
1923       \bool_set_false:N \l___xframed_bottomline_bool
1924     }
1925     \bool_if:NT \l___xframed_topline_bool
1926     {

```



```

1927     \__xframed__prop_set:Nnn \l__xframed_length_option_prop
1928         { line-width-top } { 0pt }
1929     \bool_set_false:N \l__xframed_topline_bool
1930 }
1931 }
1932 %no extra skip above
1933 \__xframed__prop_set:Nnn \l__xframed_length_option_prop
1934     { extra-skip-above } { 0 pt }
1935 %no first-title -- only title
1936 \tl_set_eq:NN \l__xframed_firsttitle_tl \l__xframed_title_tl
1937 % \cs_set_eq:NN \__xframed__first_title: \__xframed__title:
1938 %no last-foot -- only foot
1939 \tl_set_eq:NN \l__xframed_lastfoot_tl \l__xframed_foot_tl
1940 % \cs_set_eq:NN \__xframed__last_foot: \__xframed__foot:
1941 %no inner-top-margin -- instead split-skip-top
1942 \__xframed__prop_set:Nnn \l__xframed_length_option_prop
1943     { inner-top-margin } { \__xframed__get_length:n { split-skip-top } }
1944 %no inner-bottom-margin -- instead split-skip-bottom
1945 \__xframed__prop_set:Nnn \l__xframed_length_option_prop
1946     { inner-bottom-margin } { \__xframed__get_length:n { split-skip-bottom } }
1947 %no skip below
1948 \__xframed__prop_set:Nnn \l__xframed_skip_option_prop
1949     { skip-below } { 0 pt }
1950 }
1951
1952 %must be used local!!!
1953 \cs_new:Npn \__xframed_setup_lastframe:
1954 {
1955     %top line required, otherwise top line 0pt.
1956     \bool_if:NF \l__xframed_draweveryline_bool
1957     {
1958         \bool_if:NT \l__xframed_topline_bool
1959         {

```

```

1960     \__xframed__prop_set:Nnn \l__xframed_length_option_prop
1961         { line-width-top } { 0pt }
1962     \bool_set_false:N \l__xframed_topline_bool
1963 }
1964 }
1965 %no extra skip above
1966 \__xframed__prop_set:Nnn \l__xframed_length_option_prop
1967     { extra-skip-above } { 0 pt }
1968 %no first-title -- only title
1969 \tl_set_eq:NN \l__xframed_firsttitle_tl \l__xframed_title_tl
1970 % \cs_set_eq:NN \__xframed__first_title: \__xframed__title:
1971 %no inner-top-margin -- instead split-skip-top
1972 \__xframed__prop_set:Nnn \l__xframed_length_option_prop
1973     { inner-top-margin } { \__xframed__get_length:n { split-skip-top } }
1974 }
1975
1976
1977 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
1978 %%%=====
1979 %%%          Test if split is in title of foot          %%%
1980 %%%=====
1981 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
1982
1983 \cs_set_eq:NN \__xframed__setup_frame: \q_stop
1984
1985 \cs_new:Npn \__xframed__dimtest_title_foot:
1986 {
1987     \dim_compare:nNnTF
1988         { \vsize }
1989         <
1990         {
1991             \l__xframed_title_htdp_dim + \l__xframed_foot_htdp_dim
1992         +

```

---

```

1993   \__xframed__get_length:n { line-width-title }
1994   +
1995   \__xframed__get_length:n { line-width-foot }
1996   }
1997   {%title+foot too big for one page -- error
1998   \__xframed__msg_log:n { xframed~foot~title~too~big }%need a good warning
1999   }
2000   {%we can work:
2001   \dim_compare:nNnTF
2002     { \l__xframed_free_vspace_dim }
2003     <
2004     {
2005       \l__xframed_firsttitle_htdp_dim + \l__xframed_foot_htdp_dim
2006       +
2007       \__xframed__get_length:n { line-width-title }
2008       +
2009       \__xframed__get_length:n { line-width-foot }
2010       +
2011       \__xframed__get_length:n { minimum-space }
2012     }
2013     {%title+foot too big for current page
2014     \xframed__pagebreak:
2015     \__xframed__coffin_output_aux:
2016     \__xframed__msg_log:n { xframed~foot~title~not~too~big~with~mini-
mum-space}
2017   }
2018   {
2019     \__xframed__msg_log:n { xframed~foot~title~not~too~big }
2020   }
2021   }
2022   }
2023
2024

```

```

2025 %%%%%%%%%%
2026 %%%=====
2027 %%% Starting splitting algorithm -- first part %%%
2028 %%%=====
2029 %%%%%%%%%%
2030 \cs_new:Npn \xframed__pagebreak:
2031 {
2032   \vfill\eject
2033   \dim_set_eq:NN \l__xframed_free_vspace_dim \vsize
2034   % \__xframed__output_and_draw_aux_i:
2035 }
2036
2037
2038 \cs_new:Npn \__xframed__output_and_draw_aux:
2039 {
2040   \group_begin:
2041     \tl_set_eq:NN \l__xframed_temptitle_tl \l__xframed_firsttitle_tl
2042     \tl_set_eq:NN \l__xframed_tempfoot_tl \l__xframed_foot_tl
2043     \__xframed__title:
2044     \__xframed__foot:
2045     \__xframed__dimtest_title_foot:
2046     %calculate the maximum height of first frame:
2047     \dim_set:Nn \l__xframed_splitheight_dim { \l__xframed_free_vs-
pace_dim }
2048     \clist_map_inline:nn
2049     {
2050       extra-skip-above , line-width-top , inner-top-margin ,
2051       split-skip-bottom , line-width-title , line-width-foot ,
2052       title-height , foot-height
2053     }
2054     {
2055       \__xframed__length_sub:Nn \l__xframed_splitheight_dim { ##1 }
2056     }

```

---

```

2057 \__xframed__maximum_skip:Nn \l_tmpa_dim
2058 { \__xframed__get_skip:n { skip-above } }
2059 \dim_sub:Nn \l__xframed_splitheight_dim { \l_tmpa_dim }
2060 \bool_if:NT \l__xframed_draweveryline_bool
2061 {
2062   \bool_if:NT \l__xframed_bottomline_bool
2063   {
2064     \__xframed__length_sub:Nn
2065       \l__xframed_splitheight_dim { line-width-bottom }
2066   }
2067 }
2068 \__xframed__msg_log:n
2069 {
2070   Maximum~height~of~first~frame:\\
2071   \dim_eval:n { \l__xframed_splitheight_dim } \ =\
2072   \__xframed__convert:n{ \l__xframed_splitheight_dim }
2073 }
2074 \dim_compare:nNnTF
2075 { \l__xframed_splitheight_dim }
2076 <
2077 { \__xframed__get_length:n { minimum-space } }
2078 { \xframed__pagebreak: \__xframed__output_and_draw_aux: }
2079 {
2080   \__xframed_splitting_algorithm:
2081   \group_begin:
2082     \__xframed_setup_firstframe:
2083     \coffin_set_eq:NN \l__xframed_main_coffin \l__xframed_temp_coffin
2084     \vcoffin_set:Nnn \l__xframed_main_coffin
2085       { \l__xframed_coffin_width_dim }
2086     {
2087       \__xframed__offinterlineskip:
2088       \skip_vertical:n { \__xframed__get_length:n { inner-top-margin } }
2089       \vbox_unpack_clear:N \l__xframed_main_coffin

```

```

2090 \skip_vertical:n { \__xframed__get_length:n { in-
ner-bottom-margin } }
2091 }
2092 \__xframed_draw_frame:
2093 \group_end:
2094 \xframed__pagebreak:
2095 \__xframed__output_and_draw_aux_i:
2096 }
2097 \group_end:
2098 }
2099 %%%%%%%%%%%
2100 %%%=====
2101 %%% Starting splitting algorithm -- middle part %%%
2102 %%%=====
2103 %%%%%%%%%%%
2104
2105 \cs_new:Npn \__xframed__output_and_draw_aux_i:
2106 {
2107 \dim_compare:nNnTF { \box_wd:N \l__xframed_main_coffin } < { 1pt }
2108 %\box_if_empty:NTF \l__xframed_main_coffin
2109 {
2110 %WARNING
2111 }
2112 {
2113 \tl_set_eq:NN \l__xframed_temptitle_tl \l__xframed_title_tl
2114 \tl_set_eq:NN \l__xframed_tempfoot_tl \l__xframed_lastfoot_tl
2115 \__xframed__title:
2116 \__xframed__foot:
2117 %calculate the maximum height of current / maybe last frame:
2118 \dim_set:Nn \l__xframed_splitheight_dim { \l__xframed_free_vs-
pace_dim }
2119 \clist_map_inline:nn
2120 {

```

---

```

2121     split-skip-top , inner-bottom-margin ,
2122     line-width-title , line-width-foot , line-width-bottom
2123   }
2124   {
2125     \__xframed__length_sub:Nn \l__xframed_splitheight_dim { ##1 }
2126   }
2127   \bool_if:NT \l__xframed_draweveryline_bool
2128   {
2129     \bool_if:NT \l__xframed_topline_bool
2130     {
2131       \__xframed__length_sub:Nn \l__xframed_splitheight_dim { line-width-top }
2132     }
2133   }
2134   \dim_compare:nNnTF
2135   { \box_ht:N \l__xframed_main_coffin + \box_dp:N \l__xframed_main_cof-
    fin }
2136   <
2137   { \l__xframed_splitheight_dim }
2138   {%last frame
2139     \group_begin:
2140     \__xframed_setup_lastframe:
2141     \vcoffin_set:Nnn \l__xframed_main_coffin
2142     { \l__xframed_coffin_width_dim }
2143     {
2144       \__xframed__offinterlineskip:
2145       \skip_vertical:n { \__xframed__get_length:n { split-skip-top } }
2146       \vbox_unpack_clear:N \l__xframed_main_coffin
2147       \skip_vertical:n { \__xframed__get_length:n { in-
    ner-bottom-margin } }
2148     }
2149     \__xframed_draw_frame:
2150     \group_end:
2151   }

```

```

2152     {%we have a middle part
2153     \tl_set_eq:NN \l___xframed_temptitle_tl \l___xframed_title_tl
2154     \tl_set_eq:NN \l___xframed_tempfoot_tl \l___xframed_foot_tl
2155     \__xframed__title:
2156     \__xframed__foot:
2157     \dim_set:Nn \l___xframed_splitheight_dim { \l___xframed_free_vs-
pace_dim }
2158     \clist_map_inline:nn
2159     {
2160         split-skip-top , split-skip-bottom, line-width-title ,
2161         line-width-foot , title-height , foot-height
2162     }
2163     {
2164         \__xframed__length_sub:Nn \l___xframed_splitheight_dim { ##1 }
2165     }
2166     \bool_if:NT \l___xframed_draweveryline_bool
2167     {
2168         \bool_if:NT \l___xframed_topline_bool
2169         {
2170             \__xframed__length_sub:Nn
2171             \l___xframed_splitheight_dim { line-width-top }
2172         }
2173         \bool_if:NT \l___xframed_bottomline_bool
2174         {
2175             \__xframed__length_sub:Nn
2176             \l___xframed_splitheight_dim { line-width-bottom }
2177         }
2178     }
2179     \__xframed__msg_log:n
2180     {
2181         Maximum~height~of~middle~frame:\
2182         \dim_eval:n { \l___xframed_splitheight_dim } \ =\
2183         \__xframed__convert:n{ \l___xframed_splitheight_dim }

```



```

2184     }
2185     \__xframed_splitting_algorithm:
2186     \group_begin:
2187         \__xframed_setup_middleframe:
2188         \coffin_set_eq:NN \l__xframed_main_coffin \l__xframed_temp_coffin
2189         \vcoffin_set:Nnn \l__xframed_main_coffin
2190             { \l__xframed_coffin_width_dim }
2191         {
2192             \__xframed__offinterlineskip:
2193             \skip_vertical:n { \__xframed__get_length:n { split-skip-top } }
2194             \vbox_unpack_clear:N \l__xframed_main_coffin
2195             \skip_vertical:n { \__xframed__get_length:n { split-skip-bottom } }
2196         }
2197         \__xframed_draw_frame:
2198     \group_end:
2199     \xframed__pagebreak:
2200     \__xframed__output_and_draw_aux_i:
2201 }
2202 }
2203 }
2204
2205 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
2206 %%%=====
2207 %%%                                Splitting with loop                                %%%
2208 %%%=====
2209 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
2210 \cs_new:Npn \__xframed_splitting_algorithm:
2211 {
2212     \__xframed__local_boxdim:
2213     \__xframed__ignore_vbadness:
2214     \vbox_set_split_to_ht:NNn
2215         \l__xframed_tmpb_box
2216         \l__xframed_main_coffin

```

---

```

2217     { \l___xframed_splitheight_dim - \tex_pageshrink:D }
2218 \vbox_set:Nn \l___xframed_tmpb_box
2219     { \vbox_unpack_clear:N \l___xframed_tmpb_box }
2220 \dim_set:Nn \l___xframed_tmpa_dim
2221     {
2222     \box_ht:N \l___xframed_tmpb_box + \box_dp:N \l___xframed_tmpb_box
2223     }
2224 \dim_compare:nNnTF { \l___xframed_splitheight_dim } > { \l___xframed_tmpa_dim }
2225     {%splitting successful
2226     \__xframed__msg_log:n { Splitting~successful }
2227     }
2228     {
2229     \__xframed__msg_log:n { Splitting~not~successful }
2230     \int_set:Nn \l_tmpa_int { 0 }
2231     \dim_set:Nn \l_tmpa_dim { 0pt }
2232     \dim_while_do:nNnn { \l___xframed_tmpa_dim } < { \l___xframed_splitheight_dim }
2233     {
2234     \coffin_set_eq:NN \l___xframed_main_coffin \l___xframed_save_coffin
2235     \int_incr:N \l_tmpa_int
2236     \dim_add:Nn \l_tmpa_dim { 8 pt }
2237     \__xframed__ignore_vbadness:
2238     \vbox_set_split_to_ht:NNn
2239         \l___xframed_tmpb_box
2240         \l___xframed_main_coffin
2241         { \l___xframed_splitheight_dim - \tex_pageshrink:D - \l_tmpa_dim }
2242     \vbox_set:Nn \l___xframed_tmpb_box
2243         { \vbox_unpack_clear:N \l___xframed_tmpb_box }
2244     \dim_set:Nn \l___xframed_tmpa_dim
2245         {
2246         \box_ht:N \l___xframed_tmpb_box + \box_dp:N \l___xframed_tmpb_box
2247         }
2248     \__xframed__msg_log:n { Splitting~Try~\int_use:N \l_tmpa_int }
2249     \int_compare:nNnT { \l_tmpa_int } > { 50 }

```

```

2250     {
2251         \__xframed__msg_log:n { too~much~loops }
2252         \dim_set:Nn \l__xframed_tmpa_dim { 0pt }
2253     }
2254 }
2255 }
2256 \vcoffin_set:Nnn
2257     \l__xframed_temp_coffin
2258     { \l__xframed_coffin_width_dim }
2259     { \vbox_unpack_clear:N \l__xframed_tmpb_box }
2260 \__xframed__coffin_restructure:N \l__xframed_temp_coffin
2261 \__xframed__coffin_restructure:N \l__xframed_main_coffin
2262 \__xframed__msg_log:n
2263 {
2264     height~of~split~frame:\\
2265     \dim_eval:n { \l__xframed_tmpa_dim }\ =\
2266     \__xframed__convert:n{ \l__xframed_tmpa_dim }
2267 }
2268 }
2269
2270
2271 \tex_endinput:D
2272 </package-split>

```

## 1.13 xframed-theorem.def – theorem support

```

2273 <*package-theorem>
2274 <@@=xframed>
2275 %%=====%%
2276 %% file to supports theorems %%
2277 %%=====%%
2278 \tex_endinput:D

```

```
2279 </package-theorem>
```

## 1.14 xframed-tikz.def – drawing method tikz

```
2280 <*package-tikz>
2281 <@@=xframed>
2282 %%=====%%
2283 %% file to define all tikz functions to draw the frame %%
2284 %%=====%%
2285
2286
2287
2288 %%initial~of~styles
2289 %\def\xframedsetuptikz{\pgfqkeys{/tikz/xframed}}
2290 \pgfqkeys{/tikz/xframed}{
2291 %main
2292   bg/.style=
2293     {
2294       fill = { \_xframed\_get_color:n { bg-color } },
2295       rounded~corners= { 0pt }
2296     },
2297 %title
2298   title~bg/.style=
2299     {
2300       draw=none,
2301       fill= \_xframed\_get_color:n { title-bg-color },
2302       rounded~corners= { 0pt }
2303     },
2304   title~rule/.style=
2305     {
2306       draw= \_xframed\_get_color:n { title-line-color },
2307       line~width= \_xframed\_get_length:n { line-width-title },
2308     },
```

file: xframed

```

2309 %foot
2310 foot~bg/.style=
2311 {
2312     fill= \_xframed\_get\_color:n { foot-bg-color },
2313     rounded~corners= { 0pt }
2314 },
2315 foot~rule/.style=
2316 {
2317     draw = \_xframed\_get\_color:n { foot-line-color },
2318     line~width=\_xframed\_get\_length:n { line-width-foot }
2319 },
2320 %%%%%%%%%title
2321 %%%%%%%%% left~line/.style={line~width=2pt},
2322 %%%%%%%%%arc
2323 inner~arc/.style={rounded~corners=\_xframed\_get\_length:n { arc-inner }},
2324 outer~arc/.style={rounded~corners=\_xframed\_get\_length:n { arc-outer }},
2325 %frame
2326 right~line/.style=
2327 {
2328     draw = \_xframed\_get\_color:n { line-color-right } ,
2329     line~width= { \_xframed\_get\_length:n { line-width-right } },
2330 },
2331 left~line/.style=
2332 {
2333     draw = \_xframed\_get\_color:n { line-color-left } ,
2334     line~width={ \_xframed\_get\_length:n { line-width-left } },
2335 },
2336 top~line/.style=
2337 {
2338     draw = \_xframed\_get\_color:n { line-color-top } ,
2339     line~width={ \_xframed\_get\_length:n { line-width-top } },
2340 },
2341 bottom~line/.style=

```

```

2342     {
2343         draw = \__xframed__get_color:n { line-color-bottom } ,
2344         line-width={ \__xframed__get_length:n { line-width-bottom } },
2345     },
2346 %subtitle
2347 % subtitle~bg/.style={fill=red},
2348 % subtitle~above~rule/.style={draw=black,line~width=2pt},
2349 % subtitle~below~rule/.style={draw=black,line~width=2pt},
2350 % subtitle~rule/.style={subtitle~above~rule=#1,subtitle~below~rule=#1},
2351 %clear definition
2352 }
2353
2354
2355 \cs_new:Nn \__xframed__draw_tikz_frame:
2356 {
2357     \begin{tikzpicture}[remember~picture]
2358         %%Inner part -- defines node xframed-inner
2359         \__xframed__tikz_innerpart:
2360         %%title part -- defines node xframed-title
2361         \__xframed__tikz_titlepart:
2362         %%foot part -- defines node xframed-foot
2363         \__xframed__tikz_footpart:
2364         %%%%%%%%%%%
2365         %Outer part -- defines node xframed-outer
2366         \__xframed__tikz_drawframe:
2367         %\pgfnodealias{xframed-outer}{xframed-inner}
2368         %use the correct bounding box
2369         \pgfresetboundingbox\useasboundingbox%
2370             ($(\xframed-outer.south~west)+(-\__xframed__get_length:n { mar-
2371 gin-left },0)$)
2372             rectangle
2373             ($(\xframed-outer.north~east)+( \__xframed__get_length:n { mar-
2374 gin-right },0)$)

```

```

2373      +(0,\__xframed__get_length:n { extra-skip-above } )$) ;
2374      %Show development tools
2375      %%User hook
2376      \tl_use:N \l__xframed_posttikz_tl
2377      \tl_use:N \l__xframed_singletikz_tl
2378      %%xframed-developer info
2379      \__xframed__nodepoints_development:
2380      \end{tikzpicture}
2381      %%%% \__xframed__all_option_output:
2382      }
2383
2384      \cs_new:Nn \__xframed__tikz_innerpart:
2385      {
2386      \begin{scope}
2387      \tikzset{every~node/.style={inner~sep=0pt,outer~sep=0pt,}}
2388      \node[] (xframed-inner)
2389      {
2390      \hbox:n{}
2391      \skip_horizontal:n
2392      {
2393      \__xframed__get_length:n { inner-margin-left }
2394      }
2395      \__xframed__display_coffins:N \l__xframed_main_coffin
2396      \skip_horizontal:n
2397      {
2398      \__xframed__get_length:n { inner-margin-right }
2399      }
2400      \hbox:n{}
2401      };
2402      \end{scope}
2403      }
2404
2405      \cs_new:Nn \__xframed__tikz_titlepart:

```

```

2406 {
2407   \tl_if_blank:VTF \l___xframed_firsttitle_tl
2408   {
2409     \pgfnodealias{xframed-title}{xframed-inner}
2410   }
2411   {
2412     \begin{scope}
2413       \tikzset{every~node/.style={inner~sep=0pt,outer~sep=0pt,}}
2414       \node[anchor=south, yshift= \__xframed__get_length:n { line-width-title } ]
2415         (xframed-title) at (xframed-inner.north)
2416         {
2417           \hbox:n{}
2418           \skip_horizontal:n { \__xframed__get_length:n { inner-margin-left } }
2419           \__xframed__display_coffins:N \l___xframed_title_coffin
2420           \skip_horizontal:n { \__xframed__get_length:n { in-
ner-margin-right } }
2421           \hbox:n{}
2422         };
2423     \end{scope}
2424   }
2425 }
2426 \cs_new:Nn \__xframed__tikz_footpart:
2427 {
2428   \tl_if_blank:VTF \l___xframed_lastfoot_tl
2429   {
2430     \pgfnodealias{xframed-foot}{xframed-inner}
2431   }
2432   {
2433     \begin{scope}
2434       \tikzset{every~node/.style={inner~sep=0pt,outer~sep=0pt,}}
2435       \node[anchor=north,
2436         yshift= {-\__xframed__get_length:n { line-width-foot } },
2437       ] (xframed-foot) at (xframed-inner.south)

```



```

2438     {
2439     \skip_horizontal:n { \__xframed__get_length:n { inner-margin-left } }
2440     \__xframed__display_coffins:N \l__xframed_foot_coffin
2441     \skip_horizontal:n { \__xframed__get_length:n { inner-
ner-margin-right } }
2442     \hbox:n{}
2443     };
2444     \end{scope}
2445   }
2446 }
2447
2448 \cs_new:Nn \__xframed__tikz_drawframe:
2449 {
2450   \begin{scope}[on~background~layer]
2451     %%Draw the main frame
2452     \coordinate (fxx) at %fxx=left bottom
2453       ($(\xframed-foot.south~west)
2454         +(-\__xframed__get_length:n { line-width-left },
2455           -\__xframed__get_length:n { line-width-bottom }
2456         )
2457       $);
2458     \coordinate (fyy) at %fyy=right top
2459       ($(\xframed-title.north~east)
2460         +(\__xframed__get_length:n { line-width-right },
2461           \__xframed__get_length:n { line-width-top }
2462         )
2463       $);
2464     \tikzset{every~node/.style={inner~sep=0pt,outer~sep=0pt,}}
2465     \node[anchor=south,
2466           yshift= -\__xframed__get_length:n { line-width-bottom },
2467           xshift= .5*\__xframed__get_length:n { line-width-right }
2468             -.5*\__xframed__get_length:n { line-width-left }, ]
2469       (xframed-outer) at (xframed-foot.south)

```

```

2470         {\tikz\path(fxx) rectangle (fyy)};
2471     \clip[xframed/outer~arc](xframed-outer.south~west) rectangle
2472         (xframed-outer.north~east);
2473     \__xframed__tikz_drawframe_lines:
2474     \__xframed__tikz_drawframe_titlefoot:
2475     \end{scope}
2476 }
2477 \cs_new:Nn \__xframed__tikz_drawframe_lines:
2478 {
2479     %left line
2480     \path[fill = \__xframed__get_color:n { line-color-left }]
2481         (xframed-outer.north~west) -- (xframed-outer.south~west)
2482         -- (xframed-inner.center) --cycle;
2483     %right line
2484     \path[fill = \__xframed__get_color:n { line-color-right }]
2485         (xframed-outer.north~east) -- (xframed-outer.south~east)
2486         -- (xframed-inner.center) --cycle;
2487     %top line
2488     \path[fill = \__xframed__get_color:n { line-color-top }]
2489         (xframed-outer.north~east) -- (xframed-outer.north~west)
2490         -- (xframed-inner.center) --cycle;
2491     %bottom line
2492     \path[fill = \__xframed__get_color:n { line-color-bottom }]
2493         (xframed-outer.south~east) -- (xframed-outer.south~west)
2494         -- (xframed-inner.center) --cycle;
2495 }
2496
2497 \cs_new:Nn \__xframed__tikz_drawframe_titlefoot:
2498 {
2499     \begin{scope}
2500         %inner frame
2501         \clip[xframed/inner~arc] (xframed-foot.south~west) rectangle
2502             (xframed-title.north~east);

```

```

2503     \path[xframed/bg] (xframed-foot.south~west) rectangle
2504                       (xframed-title.north~east);
2505 %draw title componente (1) title (2) foot rule:
2506 \tl_if_blank:VF \l___xframed_firsttitle_tl
2507 {
2508     \path[xframed/title~bg] (xframed-title.south~west) rectangle
2509                             (xframed-title.north~east);
2510     \bool_if:NT \l___xframed_footline_bool
2511     {
2512         \path[xframed/title~rule]
2513             ([yshift= .5*\__xframed__get_length:n { line-width-foot }]
2514             xframed-inner.north~west) --
2515             ([yshift= .5*\__xframed__get_length:n { line-width-foot }]
2516             xframed-inner.north~east);
2517     }
2518 }
2519 %draw foot componente (1) foot (2) foot rule:
2520 \tl_if_blank:VF \l___xframed_lastfoot_tl
2521 {
2522     \path[xframed/foot~bg] (xframed-foot.south~west) rectangle
2523                             (xframed-foot.north~east);
2524     \bool_if:NT \l___xframed_footline_bool
2525     {
2526         \path[xframed/foot~rule]
2527             ([yshift= -.5*\__xframed__get_length:n { line-width-foot }]
2528             xframed-inner.south~west) --
2529             ([yshift= -.5*\__xframed__get_length:n { line-width-foot }]
2530             xframed-inner.south~east);
2531     }
2532 }
2533 \end{scope}
2534 }
2535

```

```

2536
2537 %%%%%%%%%%
2538 %DEVELOPER INFO
2539 %%%%%%%%%%
2540 \cs_new:Nn \__xframed__nodepoints_development:
2541 {
2542   \bool_if:NT \l__xframed_developer_info_bool
2543   {
2544     \begin{scope}
2545       %%%%Inner nodes
2546       \__xframed__nodepoints_inner_development:
2547       %%%%title nodes
2548       \__xframed__nodepoints_title_development:
2549       %%%%foot nodes
2550       \__xframed__nodepoints_foot_development:
2551       %%%%Outer nodes
2552       \__xframed__nodepoints_outer_development:
2553       %%%%length
2554       \__xframed__outerlength_development:
2555       \end{scope}
2556   }
2557 }
2558
2559 \cs_new:Nn \__xframed__nodepoints_inner_development:
2560 {
2561   \fill[red!70!black] (xframed-inner.north~west) circle (2pt)
2562   node[above=0.5cm,font=\footnotesize\ttfamily] {xframed-inner.north~west};
2563   \fill[red!70!black] (xframed-inner.north~east) circle (2pt)
2564   node[above=0.5cm,font=\footnotesize\ttfamily] {xframed-inner.north~east};
2565   \fill[red!70!black] (xframed-inner.south~west) circle (2pt)
2566   node[below=0.5cm,font=\footnotesize\ttfamily] {xframed-inner.south~west};
2567   \fill[red!70!black] (xframed-inner.south~east) circle (2pt)
2568   node[below=0.5cm,font=\footnotesize\ttfamily] {xframed-inner.south~east};

```

```

2569 \fill[red!70!black] (xframed-inner.center) circle (2pt)
2570 node[draw,rectangle,fill=yellow,above=0.5cm,font=\footnotesize\ttfamily]
2571 {xframed-inner.center};
2572 }
2573
2574 \cs_new:Nn \__xframed__nodepoints_outer_development:
2575 {
2576 \fill[blue!70!black] (xframed-outer.north~west) circle (2pt)
2577 node[above=0.75cm,font=\footnotesize\ttfamily]
2578 {xframed-outer.north~west};
2579 \fill[blue!70!black] (xframed-outer.north~east) circle (2pt)
2580 node[above=0.75cm,font=\footnotesize\ttfamily]
2581 {xframed-outer.north~east};
2582 \fill[blue!70!black] (xframed-outer.south~west) circle (2pt)
2583 node[below=0.75cm,font=\footnotesize\ttfamily]
2584 {xframed-outer.south~west};
2585 \fill[blue!70!black] (xframed-outer.south~east) circle (2pt)
2586 node[below=0.75cm,font=\footnotesize\ttfamily] {xframed-outer.south~east};
2587 \fill[blue!70!black] (xframed-outer.center) circle (2pt)
2588 node[draw,rectangle,fill=yellow,below=0.5cm,font=\footnotesize\ttfamily]
2589 {xframed-outer.center};
2590 }
2591
2592 \cs_new:Nn \__xframed__nodepoints_title_development:
2593 {
2594 \tl_if_blank:VF \l__xframed_firsttitle_tl
2595 {
2596 \fill[green!70!black] (xframed-title.north~west) circle (2pt)
2597 node[above=0.5cm,font=\footnotesize\ttfamily]
2598 {xframed-title.north~west};
2599 \fill[green!70!black] (xframed-title.north~east) circle (2pt)
2600 node[above=0.5cm,font=\footnotesize\ttfamily]
2601 {xframed-title.north~east};

```

```

2602     \fill[green!70!black] (xframed-title.south~west) circle (2pt)
2603     node[below=0.5cm,font=\footnotesize\ttfamily]
2604     {xframed-title.south~west};
2605     \fill[green!70!black] (xframed-title.south~east) circle (2pt)
2606     node[below=0.5cm,font=\footnotesize\ttfamily]
2607     {xframed-title.south~east};
2608     \fill[green!70!black] (xframed-title.center) circle (2pt)
2609     node[draw,rectangle,fill=yellow,above=0.5cm,font=\footnotesize\ttfamily]
2610     {xframed-title.center};
2611   }
2612 }
2613
2614 \cs_new:Nn \__xframed__nodepoints_foot_development:
2615 {
2616   \tl_if_blank:VF \l___xframed_lastfoot_tl
2617   {
2618     \fill[green!70!black] (xframed-foot.north~west) circle (2pt)
2619     node[above=0.5cm,font=\footnotesize\ttfamily]
2620     {xframed-foot.north~west};
2621     \fill[green!70!black] (xframed-foot.north~east) circle (2pt)
2622     node[above=0.5cm,font=\footnotesize\ttfamily]
2623     {xframed-foot.north~east};
2624     \fill[green!70!black] (xframed-foot.south~west) circle (2pt)
2625     node[below=0.5cm,font=\footnotesize\ttfamily]
2626     {xframed-foot.south~west};
2627     \fill[green!70!black] (xframed-foot.south~east) circle (2pt)
2628     node[below=0.5cm,font=\footnotesize\ttfamily]
2629     {xframed-foot.south~east};
2630     \fill[green!70!black] (xframed-foot.center) circle (2pt)
2631     node[draw,rectangle,fill=yellow,above=0.5cm,font=\footnotesize\ttfamily]
2632     {xframed-foot.center};
2633   }
2634 }

```

```

2635
2636 \cs_new:Nn \__xframed__outerlength_development:
2637 {
2638   \draw[latex-latex] (xframed-outer.east) ---+
2639     ( \__xframed__get_length:n { margin-right },0) ;
2640   \draw[latex-latex] (xframed-outer.west) ---+
2641     (-\__xframed__get_length:n { margin-left }, 0) ;
2642   \dim_set:Nn \l_tmpa_dim { \__xframed__get_skip:n { skip-above } }
2643   \draw[latex-latex] (xframed-outer.north) ---+ ( 0 , \l_tmpa_dim ) ;
2644   \dim_set:Nn \l_tmpa_dim { \__xframed__get_skip:n { skip-below } }
2645   \draw[latex-latex] (xframed-outer.south) ---+ ( 0 , -\l_tmpa_dim ) ;
2646 }
2647
2648
2649 \tex_endinput:D
2650 </package-tikz>

```

## 1.15 xframed-titlefoot.def – handling title and foot

```

2651 <*package-titlefoot>
2652 <@@=xframed>
2653 %%=====%%
2654 %% file to define all functions to use title or foot      %%
2655 %%=====%%
2656
2657
2658 %%%%%%%%%%%
2659 %%%=====%%
2660 %%%              Declaration of title              %%%
2661 %%%=====%%
2662 %%%%%%%%%%%
2663 \__xframed__prop_set:Nnn \l__xframed_length_option_prop
2664   { title-height } { \c_zero_dim }

```

```

2665 \__xframed__prop_set:Nnn \l__xframed_length_option_prop
2666   { foot-height } { \c_zero_dim }
2667
2668
2669 \cs_new:Nn \__xframed__title:
2670 {
2671   \tl_if_blank:VTF \l__xframed_temptitle_tl
2672   {
2673     \coffin_set_eq:NN \l__xframed_title_coffin \c_empty_coffin
2674     \dim_set:Nn \l__xframed_title_htdp_dim { 0pt }
2675     \__xframed__prop_set:Nnn \l__xframed_length_option_prop
2676       { line-width-title } { 0pt }
2677     \bool_set_false:N \l__xframed_titleline_bool
2678     \__xframed__prop_set:Nnn \l__xframed_length_option_prop
2679       { title-height } { 0pt }
2680   }
2681   {
2682     %save the contents of title in coffin
2683     \vcoffin_set:Nnn
2684       \l__xframed_title_coffin
2685       { \l__xframed_coffin_width_dim }
2686       {
2687         \tl_use:N \l__xframed_titleprecode_tl
2688         \tl_use:N \l__xframed_title_font_tl
2689         \color { \__xframed__get_color:n { title-font-color } }
2690         \tl_use:N \l__xframed_temptitle_tl
2691         \__xframed__ignore_last_descenders:
2692         \__xframed__ignore_last_skip:
2693         \tl_use:N \l__xframed_titlepostcode_tl
2694       }
2695     \__xframed__coffin_restructure:N \l__xframed_title_coffin
2696     %add the needed vertical space to coffin
2697     \vcoffin_set:Nnn

```



```

2698         \l___xframed_title_coffin
2699     { \l___xframed_coffin_width_dim }
2700     {
2701         \__xframed__offinterlineskip:
2702         \skip_vertical:n { \__xframed__get_length:n { title-skip-above } }
2703         \vbox_unpack_clear:N \l___xframed_title_coffin
2704         \skip_vertical:n { \__xframed__get_length:n { title-skip-below } }
2705     }
2706     \dim_set:Nn \l___xframed_title_htdp_dim
2707     {
2708         \coffin_ht:N \l___xframed_title_coffin +
2709         \coffin_dp:N \l___xframed_title_coffin
2710     }
2711     \__xframed__prop_set:Nnn \l___xframed_length_option_prop
2712         { title-height } { \dim_use:N \l___xframed_title_htdp_dim }
2713     \bool_if:NF \l___xframed_titleline_bool
2714     {
2715         \__xframed__prop_set:Nnn \l___xframed_length_option_prop
2716             { line-width-title } { 0pt }
2717     }
2718 }
2719 }
2720 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
2721 %%%=====%%
2722 %%%          Declaration of foot          %%%
2723 %%%=====%%
2724 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
2725
2726 \cs_new:Nn \__xframed__foot:
2727 {
2728     \tl_if_blank:VTF \l___xframed_tempfoot_tl
2729     {
2730         \coffin_set_eq:NN \l___xframed_foot_coffin \c_empty_coffin

```

```

2731     \dim_set:Nn \l___xframed_foot_htdp_dim { 0pt }
2732     \__xframed__prop_set:Nnn \l___xframed_length_option_prop
2733       { line-width-foot } { 0pt }
2734     \bool_set_false:N \l___xframed_footline_bool
2735   }
2736   {
2737     \vcoffin_set:Nnn
2738       \l___xframed_foot_coffin
2739       { \l___xframed_coffin_width_dim }
2740     {
2741       \color { \__xframed__get_color:n { foot-font-color } }
2742       \tl_use:N \l___xframed_footprecode_tl
2743       \tl_use:N \l___xframed_foot_font_tl
2744       \tl_use:N \l___xframed_tempfoot_tl
2745       \__xframed__ignore_last_descenders:
2746       \__xframed__ignore_last_skip:
2747       \tl_use:N \l___xframed_footpostcode_tl
2748     }
2749     \vcoffin_set:Nnn
2750       \l___xframed_foot_coffin
2751       { \l___xframed_coffin_width_dim }
2752     {
2753       \__xframed__offinterlineskip:
2754       \skip_vertical:n { \__xframed__get_length:n { foot-skip-above } }
2755       \vbox_unpack_clear:N \l___xframed_foot_coffin
2756       \skip_vertical:n { \__xframed__get_length:n { foot-skip-below } }
2757     }
2758     \dim_set:Nn \l___xframed_foot_htdp_dim
2759       {
2760         \coffin_ht:N \l___xframed_foot_coffin +
2761         \coffin_dp:N \l___xframed_foot_coffin
2762       }
2763     \__xframed__prop_set:Nnn \l___xframed_length_option_prop

```

```

2764         { foot-height } { \dim_use:N \l__xframed_foot_htdp_dim }
2765     \bool_if:NF \l__xframed_footline_bool
2766     {
2767         \__xframed__prop_set:Nnn \l__xframed_length_option_prop
2768         { line-width-foot } { 0pt }
2769     }
2770 }
2771 }
2772
2773
2774 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
2775 %%%=====
2776 %%%                                END                                %%%
2777 %%%=====
2778 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
2779 \tex_endinput:D
2780 \</package-titlefoot>

```

## 1.16 xframed-todo.def – list of todos

```

2781 \<*package-todo>
2782 \<@@=xframed>
2783 %%%=====
2784 %% file for developping -- only a small list of todos    %%
2785 %%%=====
2786
2787 \</package-todo>

```

## 1.17 xframed-user.def – defining user commands

```

2788 \<*package-user>
2789 \<@@=xframed>
2790 %%%=====

```

```

2791 %% file to define frontends for users                                %%
2792 %%=====%%
2793
2794
2795 %%Defining new document environment based on xframed
2796 %%syntax \Newxframedenv[option list]{env name}
2797 \NewDocumentCommand \Newxframedenv { O{} m }
2798 {
2799   \NewDocumentEnvironment { #2 }{ }
2800   {
2801     \xframedsetup{#1}
2802     \begin{xframed}
2803   }
2804   {
2805     \end{xframed}
2806   }
2807 }
2808 %%Redefining document environment based on xframed
2809 %%syntax \Renewxframedenv[option list]{env name}
2810 \NewDocumentCommand \Renewxframedenv { O{} m }
2811 {
2812   \RenewDocumentEnvironment { #2 }{ O{} }
2813   {
2814     \xframedsetup{#1}
2815     \begin{xframed}
2816   }
2817   {
2818     \end{xframed}
2819   }
2820 }
2821
2822 %%Defining method to save styles
2823 \NewDocumentCommand \newxframedstyle { m m }

```

```

2824 {
2825   \tl_if_exist:cTF { __xframed__style_#1_user_tl }
2826   {
2827     \msg_warning:nnx { xframed } { style-already-defined } { #1 }
2828     \addtoxframedstyle { #1 } { #2 }
2829   }
2830   {
2831     \tl_new:c { __xframed__style_#1_user_tl }
2832     \tl_set:cn { __xframed__style_#1_user_tl } { #2 }
2833   }
2834 }
2835
2836
2837 \NewDocumentCommand \renewxframedstyle { m m }
2838 {
2839   \tl_if_exist:cTF { __xframed__style_#1_user_tl }
2840   {
2841     \tl_set:cn { __xframed__style_#1_user_tl } { #2 }
2842   }
2843   {
2844     \msg_warning:nnx { xframed } { style-not-defined } { #1 }
2845     \newxframedstyle { #1 } { #2 }
2846   }
2847 }
2848
2849
2850 \NewDocumentCommand \addtoxframedstyle { m m }
2851 {
2852   \tl_if_exist:cTF { __xframed__style_#1_user_tl }
2853   { \tl_put_right:cn { __xframed__style_#1_user_tl } { #2 } }
2854   {
2855     \msg_warning:nnx { xframed } { style-not-defined } { #1 }
2856     \newxframedstyle { #1 } { #2 }

```

```
2857   }
2858 }
2859
2860
2861 %%display the frame method
2862 \NewDocumentCommand \xframedmethod { }
2863 {
2864   \tl_use:N \__xframed__framemethode_tl
2865 }
2866
2867
2868 %%Allows the usage of length defined by key=value
2869 %%\usexframendlength{key}
2870 %%http://tex.stackexchange.com/a/112345/5239
2871 \NewDocumentCommand \usexframendlength { m }
2872 {
2873   % \__xframed__get_length:n { #1 }
2874   \tl_if_empty:FTF % return value is empty but only if we do "f" expansion
2875   { \prop_get:Nn \l__xframed_length_option_prop { #1 } }
2876   {
2877     opt
2878     \msg_warning:nnnn
2879       { xframed }
2880       { prop-key-not-available }
2881       { #1 }
2882       { length }
2883   }
2884   {
2885     \prop_get:Nn \l__xframed_length_option_prop { #1 }
2886   }
2887 }
2888 %%\showxframendlength{key}
2889 %%http://tex.stackexchange.com/a/112345/5239
```

```

2890 \NewDocumentCommand \showxframendlength { m }
2891 {
2892   %needed if value was length
2893   % \dim_set:Nn \l_tmpa_dim { \__xframed__get_length:n { #1 } }
2894   % \dim_use:N \l_tmpa_dim
2895   \tl_if_empty:fTF % return value is empty but only if we do "f" expansion
2896   { \prop_get:Nn \l__xframed_length_option_prop { #1 } }
2897   {
2898     \msg_warning:nnnn
2899     { xframed }
2900     { prop-key-not-available }
2901     { #1 }
2902     { length }
2903     \textcolor{red}{??}
2904   }
2905   {
2906     \dim_set:Nn \l_tmpa_dim { \__xframed__get_length:n { #1 } }
2907     \dim_use:N \l_tmpa_dim
2908   }
2909 }
2910
2911
2912
2913
2914
2915
2916 %%Allows the usage of skips defined by key=value
2917 %%\usexframendskips{key}
2918 %%http://tex.stackexchange.com/a/112345/5239
2919 \NewDocumentCommand \usexframendskip { m }
2920 {
2921   % \__xframed__get_skips:n { #1 }
2922   \tl_if_empty:fTF % return value is empty but only if we do "f" expansion

```

```

2923 { \prop_get:Nn \l__xframed_skip_option_prop { #1 } }
2924 {
2925   opt
2926   \msg_warning:nnnn
2927   { xframed }
2928   { prop-key-not-available }
2929   { #1 }
2930   { skip }
2931 }
2932 {
2933   \prop_get:Nn \l__xframed_skip_option_prop { #1 }
2934 }
2935 }
2936 %%\showxframendskip{key}
2937 \NewDocumentCommand \showxframendskip { m }
2938 {
2939   %needed if value was a skip
2940   % \skip_set:Nn \l_tmpa_skip { \__xframed__get_skip:n { #1 } }
2941   % \skip_use:N \l_tmpa_skip
2942   \tl_if_empty:ftF % return value is empty but only if we do "f" expansion
2943   { \prop_get:Nn \l__xframed_skip_option_prop { #1 } }
2944   {
2945     \msg_warning:nnnn
2946     { xframed }
2947     { prop-key-not-available }
2948     { #1 }
2949     { skip }
2950     \textcolor{red}{??}
2951   }
2952   {
2953     \skip_set:Nn \l_tmpa_skip { \__xframed__get_skip:n { #1 } }
2954     \skip_use:N \l_tmpa_skip
2955   }

```



```

2956 }
2957
2958
2959 %%Prints all options
2960 %% \xframedprintalloption[<option property>]
2961 \NewDocumentCommand \xframedprintalloption { o }
2962 {
2963   \IfNoValueTF { #1 }
2964   {
2965     \__xframed__all_option_output:
2966   }
2967   {
2968     \clist_map_inline:nn { #1 }
2969     {
2970       \cs_if_exist_use:cF { __xframed__##1_output_aux: }
2971       { \msg_error:nnn { xframed } { output-option-failed } { ##1 } }
2972     }
2973   }
2974 }
2975
2976
2977
2978 %%Allows the usage of color defined by key=value
2979 %%\usexframendcolor{key}
2980 %%http://tex.stackexchange.com/a/112345/5239
2981 \NewDocumentCommand \usexframendcolor { m }
2982 {
2983   % \color { \__xframed__get_color:n { #1 } }
2984   \tl_if_empty:FTF % return value is empty but only if we do "f" expansion
2985   { \prop_get:Nn \l__xframed_color_option_prop { #1 } }
2986   {
2987     \msg_warning:nnnn
2988     { xframed }

```

```

2989     { prop-key-not-available }
2990     { #1 }
2991     { color }
2992     \textcolor{red}{??}
2993   }
2994   {
2995     \color{ \prop_get:Nn \l___xframed_color_option_prop { #1 } }
2996   }
2997 }
2998
2999 %%\showxframendcolor{key}
3000 %%\http://tex.stackexchange.com/a/112345/5239
3001 \NewDocumentCommand \showxframendcolor { m }
3002 {
3003   % \__xframed__get_color:n { #1 }
3004   \tl_if_empty:FTF % return value is empty but only if we do "f" expansion
3005   { \prop_get:Nn \l___xframed_color_option_prop { #1 } }
3006   {
3007     \msg_warning:nnnn
3008     { xframed }
3009     { prop-key-not-available }
3010     { #1 }
3011     { color }
3012     \textcolor{red}{??}
3013   }
3014   {
3015     \prop_get:Nn \l___xframed_color_option_prop { #1 }
3016   }
3017 }
3018
3019
3020 %%Surround predefined environments with xframed
3021 %%syntax \Surroundwithxframed[option list]{env name}

```

```

3022 \NewDocumentCommand \Surroundwithxframed { O{} m }
3023 {
3024   \BeforeBeginEnvironment{#2}{\begin{xframed}[#1]}%
3025   \AfterEndEnvironment{#2}{\end{xframed}}%
3026 }
3027
3028 %
3029 \NewDocumentCommand \xframedsetuptikz { m }
3030 {
3031   \pgfqkeys{/tikz/xframed}
3032 }
3033
3034 \tex_endinput:D
3035 </package-user>

```

## 1.18 xframed-doc.sty – internal package for documentation

```

3036 <*doc-package>
3037 %%^^A__xframed=xframed%no need
3038 %%=====%%
3039 %% generate sty-file for documentation %%
3040 %%=====%%
3041 \RequirePackage{expl3,xparse,ifxetex,ifluatex}
3042
3043 \ProvidesExplPackage
3044   {xframed-doc}{2013/05/13}{1.0}{documentation package for xframed}
3045 \@ifpackagelater { expl3 } { 2012/11/21 }
3046   { }
3047   {
3048     \PackageError { xframed-doc } { Support~package~expl3~too~old }
3049     {
3050       You~need~to~update~your~installation~of~the~bundles~'l3kernel'~and~
3051       'l3packages'.\MessageBreak

```

```

3052         Loading~xframed-doc~will~abort!
3053     }
3054     \tex_endinput:D
3055 }
3056 \@ifclassloaded{ l3doc }
3057 { }
3058 {
3059     \PackageError { xframed-doc } { Wrong~document~class }
3060     {
3061         This~package~requires~the~document~class~l3doc~which~
3062         is~part~of~the~bundles~'l3kernel'~and~
3063         'l3packages'.\MessageBreak
3064         Loading~xframed-doc~will~abort!
3065     }
3066     \tex_endinput:D
3067 }
3068
3069 \ifnum 0\ifxetex 1\fi\ifluatex 1\fi>0
3070     % code for XeTeX or LuaTeX
3071 \else
3072     \PackageError { xframed-doc } { Wrong~engine }
3073     {
3074         This~package~requires~the~engine~xetex~or~lualatex.\MessageBreak
3075         Loading~xframed-doc~will~abort!
3076     }
3077     \tex_endinput:D
3078 \fi
3079
3080
3081
3082 \RequirePackage{ l3keys2e , xparse}
3083
3084

```

```

3085 \keys_define:nn { xframeddoc }
3086 {
3087   tocdepth .int_set:N = \l__xframeddoc_tocdepth_int ,
3088   tocdepth .initial:n = 3 ,
3089   show-code .bool_set:N = \l__xframeddoc_showcode_bool ,
3090 }
3091
3092
3093 \keys_define:nn { xframeddoc } {
3094   unknown .code:n =
3095     {
3096       \msg_error:nnx { xframeddoc } { option-unknown }
3097       { \exp_not:V \l_keys_key_tl }
3098     }
3099 }
3100 \msg_new:nnnn { xframeddoc } { option-unknown }
3101 { Unknown~option~'#1'~for~package~#2. }
3102 {
3103   LaTeX~has~been~asked~to~set~an~option~called~'#1'~
3104   but~the~#2~package~has~not~created~an~option~with~this~name.
3105 }
3106
3107 \ProcessKeysOptions { xframeddoc }
3108
3109 \RequirePackage{geometry}
3110
3111 \RequirePackage{fontspec}
3112 \RequirePackage[ttscale=0.8]{libertine}
3113 \RequirePackage{fontawesome}
3114 \RequirePackage{metalogo}
3115 \RequirePackage{xspace}
3116 \NewDocumentCommand \Github {} {Github\faGithub\xspace }
3117

```

```

3118
3119 \RequirePackage{setspace}\onehalfspacing
3120
3121 \RequirePackage{titlesec}
3122
3123 \RequirePackage{xcolor}
3124 \colorlet{docblue}{blue!30!black}
3125 \colorlet{docred}{red!30!black}
3126 %Kopf- und Fusszeilen
3127 \RequirePackage{scrpage2}
3128 \clearscrheadfoot
3129 \pagestyle{scrheadings}
3130 \automark[subsection]{section}
3131 \ihead{\small\rightmark}
3132 \ohead{\small\leftmark}
3133 \ofoot[\small\pagemark]{\small\pagemark}
3134 \setheadtopline{2pt}
3135 \setheadsepline{.4pt}
3136 \ifoot[\small file:~\jobname]{\small file:~\jobname}
3137
3138 \RequirePackage{caption}
3139 \RequirePackage{listings}
3140 \lst@RequireAspects{writefile}
3141 \captionsetup[lstlisting]{font=sf,labelfont=bf,aboveskip=0pt,belowskip=0pt}
3142 \captionsetup[figure]{font=sf,labelfont=bf,position=above}
3143
3144 \hypersetup{%
3145     breaklinks=true,
3146     pdftitle={Documenation of mdframed},%
3147     pdfauthor={Marco Daniel},%
3148     colorlinks=true,%
3149     linkcolor=docblue,
3150     urlcolor=cyan,

```

```

3151     bookmarksdepth= \int_use:N \l__xframeddoc_tocdepth_int,
3152 }
3153
3154 \NewDocumentCommand \addsec { m }
3155 {
3156   \clearpage
3157   \phantomsection
3158   \addcontentsline{toc}{section}{#1}
3159   \section*{ #1 }
3160   \markboth { #1 }{}
3161 }
3162 \NewDocumentCommand \addsubsec { m }
3163 {
3164   \phantomsection
3165   \addcontentsline{toc}{subsection}{#1}
3166   \subsection*{ #1 }
3167 }
3168
3169 \NewDocumentCommand \minisec { m }
3170 {
3171   \subsubsection*{ #1 }
3172 }
3173
3174
3175 \newcommand{\sectionbreak}{\clearpage\null\thispagestyle{plain}}
3176
3177 \titleformat{\section}[display]{\normalfont\Large\bfseries\sffamily}%
3178     {Section~\thesec\usesecpreamble}{1em}{}%
3179     [{\vspace{10pt}\color{docred}\titlerule[.2em]}]
3180 \titleformat{\subsection}{\normalfont\large\bfseries\sffamily}%
3181     {\llap{\makebox[2em][l]{\thesubsection}}}{0em}{}
3182
3183 \box_new:N \g__doc_secpreamble_box

```

```

3184
3185 \NewDocumentCommand \usesecpreamble {}
3186 {
3187   \box_if_empty:Nf \g__doc_secpreamble_box
3188   {
3189     \hfill
3190     \hbox_overlap_left:n
3191     {
3192       \dim_set:Nn \l_tmpa_dim { \box_ht:N \g__doc_secpreamble_box }
3193       \box_set_dp:Nn \g__doc_secpreamble_box { \c_zero_dim }
3194       \box_set_ht:Nn \g__doc_secpreamble_box { \c_zero_dim }
3195       \box_move_up:nn { 0.5\l_tmpa_dim }
3196       { \box_use_clear:N \g__doc_secpreamble_box }
3197     }
3198   }
3199 }
3200
3201 \NewDocumentCommand \secpreamble { m }
3202 {
3203   \hbox_gset:Nn \g__doc_secpreamble_box { #1 }
3204 }
3205
3206
3207 \NewDocumentCommand \dictum { +o +m }
3208 {
3209   \IfNoValueTF { #1 }
3210   {
3211     \parbox{0.5\linewidth}
3212     {
3213       \normalfont\normalcolor\sffamily\small
3214       \raggedright
3215       #2\strut
3216     }

```



```

3217   }
3218   {
3219     \parbox{0.5\linewidth}
3220     {
3221       \normalfont\normalcolor\sffamily\small
3222       \raggedright
3223       #2\strut\par\vskip-1ex\hrulefill\par
3224       \itshape\raggedleft
3225       (#1)\strut\par
3226     }
3227   }
3228 }
3229
3230
3231
3232 %Modifikation of code
3233 \tl_gput_left:Nn \theCodelineNo { \color{gray} }
3234 \dim_set:Nn \MacroTopsep { 10pt }
3235 \tl_gput_right:Nn \MacroFont { \color{docblue} }
3236
3237
3238 %Anweisung zur Darstellung
3239
3240 \NewDocumentCommand \Opt { m }
3241 {
3242   {\hyperlink{doc-md-opt-#1}{\MacroFont #1}\xspace}
3243 }
3244
3245 \NewDocumentCommand \Env { m }
3246 {
3247   {\hyperlink{doc-md-env-#1}{\MacroFont #1}\xspace}
3248 }
3249

```

```

3250 \NewDocumentCommand \Cmd { m }
3251 {
3252   {\hyperlink{doc-md-cmd-#1}{\MacroFont\textbackslash #1}\xspace}
3253 }
3254
3255 \DeclareRobustCommand \Pack {\textsf}
3256
3257
3258 \NewDocumentCommand \OArgs { O{option-list} }
3259 {
3260   \texttt{[#1]}
3261 }
3262 \NewDocumentCommand \MArgs { O{option-list} }
3263 {
3264   \texttt{\{#1\}}
3265 }
3266
3267 \NewDocumentCommand \Metakey {}
3268 {
3269   \quad\textcolor{red!70!black}{\tiny\faStar}
3270 }
3271
3272
3273 \NewDocumentCommand \ExplEnv { o m O{[option-list]} }
3274 {
3275   \par
3276   \skip_vertical:n { 14pt~plus~0.3pt~minus~0.2pt }
3277   \noindent
3278   \hypertarget{doc-md-env-#2}
3279   {
3280     \hbox_to_wd:nn { \c_zero_dim }
3281     {
3282       \skip_horizontal:n { -2em }

```

```

3283         \@bsphack\def\arraystretch{1.25}
3284         \SpecialEnvIndex{#2}%
3285         \begin{tabular}{@{}l@{}}\hline
3286         \MacroFont \textbackslash begin\{#2\}\#3\\
3287         \MacroFont \textbackslash end\{#2\}\\hline
3288         \end{tabular}
3289         \@esphack
3290     }
3291 }
3292 \hfill\null
3293 \IfNoValueF { #1 }
3294 {
3295     \hbox:n { \small default=\ttfamily #1 }
3296 }
3297 \par\nobreak
3298 \skip_vertical:n { 12pt~plus~0.3pt~minus~0.2pt }
3299 \@afterheading
3300 }
3301
3302 \NewDocumentCommand \ExplCmd { o m O{} }
3303 {
3304     \par
3305     \skip_vertical:n { 14pt~plus~0.3pt~minus~0.2pt }
3306     \noindent
3307     \hypertarget{doc-md-cmd-#2}
3308     {
3309         \hbox_to_wd:nn { \c_zero_dim }
3310         {
3311             \skip_horizontal:n { -2em }
3312             \@bsphack\def\arraystretch{1.25}
3313             \begin{tabular}{@{}l@{}}\hline
3314             \MacroFont \textbackslash #2 #3
3315             \SpecialUsageIndex{#2}\\hline

```

```

3316             \end{tabular}
3317         \@esphack
3318     }
3319 }
3320 \hfill\null
3321 \IfNoValueF { #1 }
3322 {
3323     \hbox:n { \small default=\ttfamily #1 }
3324 }
3325 \par\nobreak
3326 \skip_vertical:n { 12pt~plus~0.3pt~minus~0.2pt }
3327 \@afterheading
3328 }
3329
3330 \NewDocumentCommand \ExplOpt { o m }
3331 {
3332     \par
3333     \skip_vertical:n { 14pt~plus~0.3pt~minus~0.2pt }
3334     \noindent
3335     \hbox_to_wd:nn { \c_zero_dim }
3336     {
3337         \skip_horizontal:n { -2em }
3338         \group_begin:
3339         \@bsphack\def\arraystretch{1.25}
3340         \tl_set:Nn \l_tmpa_tl { \begin{tabular}{@{}ll@{}}\hline }
3341         \clist_map_inline:nn {#2}
3342         {
3343             \tl_if_in:nnTF { ##1 } { * }
3344             {
3345                 \tl_set:Nn \l_tmpb_tl { ##1 }
3346                 \tl_remove_once:Nn \l_tmpb_tl { * }
3347                 \tl_put_right:Nx \l_tmpa_tl
3348                 {

```

```

3349         \exp_not:N \hypertarget{doc-md-opt-\l_tmpb_tl}
3350         {
3351         \exp_not:N \MacroFont \l_tmpb_tl \exp_not:N \Metakey
3352         }
3353     }
3354     \SpecialOptIndex{ ##1 }
3355     \tl_put_right:Nn \l_tmpa_tl { &\ }
3356 }
3357 {
3358     \tl_put_right:Nn \l_tmpa_tl
3359     {
3360         \hypertarget{doc-md-opt-##1}
3361         {
3362             \MacroFont ##1&~<value>
3363         }
3364         \SpecialOptIndex{##1}
3365         \\
3366     }
3367 }
3368 }
3369     \tl_put_right:Nn \l_tmpa_tl {\hline\end{tabular} }
3370     \tl_use:N \l_tmpa_tl
3371     \@esphack
3372     \group_end:
3373 }
3374 \hfill\null
3375 \IfNoValueF { #1 }
3376 {
3377     \hbox:n { \small default=\ttfamily #1 }
3378 }
3379 \par\nobreak
3380 \skip_vertical:n { 12pt~plus~0.3pt~minus~0.2pt }
3381 \@afterheading

```

```

3382 }
3383
3384 \NewDocumentCommand \ExplTOpt { o m }
3385 {
3386   \par
3387   \skip_vertical:n { 14pt~plus~0.3pt~minus~0.2pt }
3388   \noindent
3389   \hbox_to_wd:nn { \c_zero_dim }
3390   {
3391     \skip_horizontal:n { -2em }
3392     \@bsphack\def\arraystretch{1.25}
3393     \begin{tabular}{@{}l@{}}\hline
3394       \MacroFont #2~
3395       \SpecialOptIndex{#2}\\ \hline
3396     \end{tabular}
3397     \@esphack
3398   }
3399   \hypertarget{doc-md-opt-#2}{}
3400   \hfill\null
3401   \IfNoValueF { #1 }
3402   {
3403     \group_begin:\small \ttfamily
3404     \tl_set:Nn \l_tmpa_tl { \begin{tabular}{t}{@{}r@{}} }
3405     \clist_map_inline:nn {#1}
3406     {
3407       \tl_put_right:Nn \l_tmpa_tl { ##1 \\ }
3408     }
3409     \tl_put_right:Nn \l_tmpa_tl { \end{tabular} }
3410     \tl_use:N \l_tmpa_tl
3411     \group_end:
3412   }
3413   \par\nobreak
3414   \skip_vertical:n { 12pt~plus~0.3pt~minus~0.2pt }

```

```

3415     \@afterheading
3416 }
3417
3418 %%%%%%%%%%
3419 \cs_set_nopar:Npn \__codedoc_macro_single:n #1
3420 {
3421   \int_incr:N \l__codedoc_macro_int
3422
3423   \tl_set:Nx \l__codedoc_at_replaced_macro_tl { \token_to_str:N #1 }
3424   \__codedoc_replace_at_at:N \l__codedoc_at_replaced_macro_tl
3425   \tl_set_eq:NN \saved@macroname \l__codedoc_at_replaced_macro_tl
3426
3427   \topsep\MacroTopsep
3428   \trivlist
3429   \cs_set_nopar:Npn \makelabel ##1
3430   {
3431     \skip_horizontal:n { - 1.5cm }
3432     \begin{tabular}{@{}l@{}}
3433       \hline {##1} \\ \hline
3434     \end{tabular}
3435   }
3436   \if@inlabel
3437     \cs_set_eq:NN \@tempa \@empty
3438     \count@ \macro@cnt
3439     \loop \ifnum\count@>\z@
3440       \cs_set_nopar:Npx \@tempa{\@tempa\hbox{\strut}}
3441       \advance\count@\m@ne
3442     \repeat
3443     \cs_set_nopar:Npx \makelabel ##1
3444     {
3445       \llap{\vtop to\baselineskip {\@tempa\hbox{##1}\vss}}
3446     }
3447     \advance \macro@cnt \@ne

```

```

3448 \else
3449   \macro@cnt \@ne
3450 \fi
3451
3452 \bool_if:NT \l__codedoc_macro_aux_bool
3453 {
3454   \cs_set_eq:NN \__codedoc_macroname_prefix:n \__codedoc_typeset_aux:n
3455 }
3456 \bool_if:NT \l__codedoc_macro_TF_bool
3457 {
3458   \cs_set_eq:NN \__codedoc_macroname_suffix: \__codedoc_typeset_TF:
3459 }
3460
3461 \bool_if:NF \l__codedoc_macro_aux_bool
3462 {
3463   \tl_gset:Nx \l__codedoc_macro_tl { \tl_to_str:N \l__codedoc_at_re-
placed_macro_tl }
3464   \exp_args:NNf \tl_greplace_all:Nnn \l__codedoc_macro_tl {\token_to_str:N _} {/}
3465   \exp_args:NNf \tl_greplace_all:Nnn \l__codedoc_macro_tl {\@back-
slashchar} {}
3466 }
3467
3468 \use:x
3469 {
3470   \exp_not:N \item [ \exp_not:N \__codedoc_print_macroname:n {
3471     \tl_to_str:N \l__codedoc_at_replaced_macro_tl
3472   }] \exp_not:N \mbox{} \exp_not:N \par
3473 }
3474 \int_gincr:N \c@CodelineNo
3475
3476 \bool_if:NF \l__codedoc_macro_aux_bool
3477 {
3478   \bool_if:NTF \l__codedoc_macro_TF_bool

```



```

3479     {
3480       \seq_gput_right:Nx \g_doc_macros_seq { \tl_to_str:N \l__codedoc_at_re-
placed_macro_tl \tl_to_str:n {TF} }
3481       \seq_gput_right:Nx \g_doc_macros_seq { \tl_to_str:N \l__codedoc_at_re-
placed_macro_tl \tl_to_str:n {T} }
3482       \seq_gput_right:Nx \g_doc_macros_seq { \tl_to_str:N \l__codedoc_at_re-
placed_macro_tl \tl_to_str:n { F} }
3483     }
3484     {
3485       \seq_gput_right:Nx \g_doc_macros_seq { \tl_to_str:N \l__codedoc_at_re-
placed_macro_tl }
3486     }
3487   }
3488   \bool_if:NTF \l__codedoc_macro_TF_bool
3489   {
3490     \exp_args:Nx \SpecialMainIndex{ \tl_to_str:N \l__codedoc_at_re-
placed_macro_tl TF}\nobreak
3491     \exp_args:Nx \DoNotIndex{ \tl_to_str:N \l__codedoc_at_replaced_macro_tl TF}
3492   }
3493   {
3494     \exp_args:Nx \SpecialMainIndex{ \tl_to_str:N \l__codedoc_at_re-
placed_macro_tl }\nobreak
3495     \exp_args:Nx \DoNotIndex{ \tl_to_str:N \l__codedoc_at_replaced_macro_tl }
3496   }
3497
3498   \int_gdecr:N \c@CodelineNo
3499   \ignorespaces
3500 }
3501
3502
3503
3504
3505

```

```

3506
3507
3508
3509
3510
3511
3512
3513 %%%%%%%%%%
3514 \def\SpecialOptIndex#1{\@bsphack
3515     \index{#1\actualchar{\protect\ttfamily#1}
3516         (option)\encapchar usage}%
3517     \index{options:\levelchar#1\actualchar{\protect\ttfamily#1}\encapchar
3518         usage}\@esphack}
3519
3520 %\tex_endinput:D
3521 \</doc-package>

```

# Change History

---

v0.1alpha

General: first dtx-file . . . . . 1

# Index

---

The *italic* numbers denote the pages where the corresponding entry is described, numbers underlined point to the definition, all others indicate the places where it is used.

Symbols	
\@afterheading 118, 3299, 3327, 3381, 3415	\@nobreakfalse ..... 1080
\@afterindentfalse ..... 118	\@noitemerr ..... 1137
\@backslashchar ..... 3465	\@outerparskip ..... 1147
\@bsphack ... 3283, 3312, 3339, 3392, 3514	\@tempa ..... 3437, 3440, 3445
\@currenvir ..... 1142	\@tempskipa ..... 1146, 1147, 1148
\@empty ..... 1126, 3437	\@trivlist ..... 1122
\@endparpenalty ..... 1150	\\ ..... 28, 50, 51, 332, 334, 336, 627, 645, 647, 652, 656, 659, 663, 666, 670, 687, 689, 697, 714, 716, 724, 741, 743, 751, 1091, 1092, 1094, 1096, 1098, 1100, 1737, 1738, 1744, 1750, 1762, 1763, 1769, 1770, 1777, 1778, 1792, 1793, 1794, 2070, 2181, 2264, 3286, 3287, 3315, 3355, 3365, 3395, 3407, 3433
\@endpetrue ..... 1152	\{ ..... 3264, 3286, 3287
\@esphack ... 3289, 3317, 3371, 3397, 3518	\} ..... 3264, 3286, 3287
\@floatpenalty ..... 1863	__codedoc_macro_single:n ..... 3419
\@footnotetext ..... 188	__codedoc_macroname_prefix:n .. 3454
\@ifclassloaded ..... 3056	__codedoc_macroname_suffix: ... 3458
\@ifpackagelater ..... 22, 3045	__codedoc_print_macroname:n ... 3470
\@inlabelfalse ..... 1134	__codedoc_replace_at_at:N ..... 3424
\@inmatherr ..... 1142	__codedoc_typeset_TF: ..... 3458
\@itemlabel ..... 1126	__codedoc_typeset_aux:n ..... 3454
\@minipagefalse ..... 109	__xframed__all_option_output: .. ..... 378, 638, 2381, 2965
\@minipagetrue ..... 102	
\@mpfn ..... 182	
\@mpfootins ..... 234, 249	
\@mpfootnotetext ..... 188	
\@ne ..... 3447, 3449	
\@newlistfalse ..... 1138	
\@nmbrrlistfalse ..... 1121	

<code>\__xframed__calculate_width:</code> . . . . .	<code>\__xframed__draw_tikz_frame:</code> . . . . .
. . . . . 156, <a href="#">160</a> , 160	. . . . . 1840, 1841, 1842, 2355
<code>\__xframed__check_title_first:</code> . . 224	<code>\__xframed__enough_room:n</code> . . . . .
<code>\__xframed__coffin_output:</code> 228, <a href="#">280</a> , 280	. . . . . 1050, 1075, 1076
<code>\__xframed__coffin_output_aux:</code> . . . . .	<code>\__xframed__environment_afterhead_precode:</code>
. . . . . 293, <a href="#">295</a> , 295, 2015	. . . . . 144, <a href="#">146</a> , 146
<code>\__xframed__coffin_restructure:N</code> . . . . .	<code>\__xframed__environment_head_postcode:</code>
257, 282, 283, 915, 916, 2260, 2261, 2695	. . . . . 138, <a href="#">146</a> , 148
<code>\__xframed__color_output_aux:</code> . . . 734	<code>\__xframed__environment_inner_postcode:</code>
<code>\__xframed__colorkeys_define:n</code> . . . . .	. . . . . 108, <a href="#">197</a> , 197
. . . . . 1454, 1490	<code>\__xframed__environment_inner_precode:</code>
<code>\__xframed__colorkeys_define_aux:nn</code> . . . . .	. . . . . 104, 190
. . . . . 1456, 1459	<code>\__xframed__environment_postcode:</code>
<code>\__xframed__convert:n</code> . . . . .	. . . . . 112, <a href="#">222</a> , 222
. . . . . 334, 336, 338, 843,	<code>\__xframed__environment_precode:</code> . . . . .
1094, 1096, 1098, 1100, 2072, 2183, 2266	. . . . . 99, <a href="#">146</a> , 150
<code>\__xframed__declare_footnotes:</code> . . . . .	<code>\__xframed__first_title:</code> . . . 1937, 1970
. . . . . 157, <a href="#">179</a> , 179, <a href="#">190</a>	<code>\__xframed__foot:</code> . . . . . 227,
<code>\__xframed__default_drawframe:</code> 363, 435	287, 1904, 1940, 2044, 2116, 2156, 2726
<code>\__xframed__default_drawframe_lines:</code> . . . . .	<code>\__xframed__frame_linewidth:</code> . . . . .
. . . . . 450, 454	. . . . . 155, <a href="#">269</a> , 269, 311
<code>\__xframed__default_drawframe_titlefoot</code>	<code>\__xframed__framemethode_int</code> . . . . .
. . . . . 451, 470	. . . . . 1247, 1254, 1260, 1266, 1838
<code>\__xframed__default_footpart:</code> 360, 414	<code>\__xframed__framemethode_tl</code> . . . . .
<code>\__xframed__default_innerpart:</code> 356, 381	. . . . . 1246, 1253, 1259, 1265, 2864
<code>\__xframed__default_titlepart:</code> 358, 394	<code>\__xframed__get_color:n</code> . . . . .
<code>\__xframed__developer_tools:</code> . . . . .	. . . . . 128, 194, 457, 460,
. . . . . 152, 614, 632	463, 466, 974, 2294, 2301, 2306, 2312,
<code>\__xframed__dimtest_title_foot:</code> . . . . .	2317, 2328, 2333, 2338, 2343, 2480,
. . . . . 1985, 2045	2484, 2488, 2492, 2689, 2741, 2983, 3003
<code>\__xframed__display_coffins:N</code> 388,	<code>\__xframed__get_length:n</code> . . . . .
407, 428, 619, 930, 931, 2395, 2419, 2440	. 94, 162, 171, 264, 265, 321, 367, 369,
<code>\__xframed__draw_default_frame:</code> . . 352	370, 387, 389, 404, 406, 408, 424, 427,

- 429, 440, 442, 445, 446, 483, 484, 494,  
495, 588, 589, 764, 807, 808, 826, 834,  
1907, 1943, 1946, 1973, 1993, 1995,  
2007, 2009, 2011, 2077, 2088, 2090,  
2145, 2147, 2193, 2195, 2307, 2318,  
2323, 2324, 2329, 2334, 2339, 2344,  
2370, 2372, 2373, 2393, 2398, 2414,  
2418, 2420, 2436, 2439, 2441, 2454,  
2455, 2460, 2461, 2466, 2467, 2468,  
2513, 2515, 2527, 2529, 2639, 2641,  
2702, 2704, 2754, 2756, 2873, 2893, 2906  
\\\_xframed\_\_get\_shrink:Nn . . . 866, 867  
\\\_xframed\_\_get\_skip:n . . . . .  
                    246, 590, 591, 769, 794,  
                    795, 1151, 2058, 2642, 2644, 2940, 2953  
\\\_xframed\_\_get\_skips:n . . . . . 2921  
\\\_xframed\_\_get\_stretch:Nn . . . 855, 856  
\\\_xframed\_\_ignore\_last\_descenders:  
                    . . . . . 200, 211, 211, 2691, 2745  
\\\_xframed\_\_ignore\_last\_skip: . . .  
                    . . . . . 199, 203, 203, 2692, 2746  
\\\_xframed\_\_ignore\_vbadness: . . . .  
                    . . . . . 1011, 2213, 2237  
\\\_xframed\_\_inner\_head: . . 105, 120, 120  
\\\_xframed\_\_last\_foot: . . . . 1904, 1940  
\\\_xframed\_\_length\_add:Nn . . . . 821, 822  
\\\_xframed\_\_length\_output\_aux: . . 680  
\\\_xframed\_\_length\_sub:Nn . 829, 830,  
                    2055, 2064, 2125, 2131, 2164, 2170, 2175  
\\\_xframed\_\_lengthkeys\_define:n . .  
                    . . . . . 1294, 1343  
\\\_xframed\_\_lengthkeys\_define\_aux:nn  
                    . . . . . 1296, 1299  
\\\_xframed\_\_load\_deffiles:n . . . 42,  
                    42, 55, 57, 59, 61, 63, 65, 67, 69, 71, 73  
\\\_xframed\_\_load\_ifrequested:n . .  
                    . . . . . 74, 74, 82, 83, 84, 85, 86, 87  
\\\_xframed\_\_local\_boxdim: . . 1022, 2212  
\\\_xframed\_\_maximum\_skip:Nn . . . . .  
                    . . . . . 889, 890, 2057  
\\\_xframed\_\_minimum\_space: . . . . . 153  
\\\_xframed\_\_msg\_log:n . . . . .  
                    . . . . . 176, 236, 239, 612, 624, 1088,  
                    1845, 1871, 1877, 1998, 2016, 2019,  
                    2068, 2179, 2226, 2229, 2248, 2251, 2262  
\\\_xframed\_\_nodepoints\_development:  
                    . . . . . 376, 505, 2379, 2540  
\\\_xframed\_\_nodepoints\_foot\_development:  
                    . . . . . 515, 569, 2550, 2614  
\\\_xframed\_\_nodepoints\_inner\_development:  
                    . . . . . 511, 524, 2546, 2559  
\\\_xframed\_\_nodepoints\_outer\_development:  
                    . . . . . 517, 538, 2552, 2574  
\\\_xframed\_\_nodepoints\_title\_development:  
                    . . . . . 513, 552, 2548, 2592  
\\\_xframed\_\_offinterlineskip: . . .  
                    . . . . 1033, 2087, 2144, 2192, 2701, 2753  
\\\_xframed\_\_outerlength\_development:  
                    . . . . . 519, 586, 2554, 2636  
\\\_xframed\_\_output\_and\_draw: 299, 1817  
\\\_xframed\_\_output\_and\_draw\_aux: .  
                    . . . . . 1821, 2038, 2078  
\\\_xframed\_\_output\_and\_draw\_aux\_i:  
                    . . . . . 2034, 2095, 2105, 2200  
\\\_xframed\_\_prop\_get:nn 952, 1119, 1448  
\\\_xframed\_\_prop\_set:Nnn . . . . .



\addcontentsline . . . . .	3158, 3165	\bool_set_false:N . . . . .	327,
\addpenalty . . . . .	1080, 1150		1874, 1899, 1923, 1929, 1962, 2677, 2734
\addsec . . . . .	3154	\bool_set_true:N . . . . .	141, 329, 1880
\addsubsec . . . . .	3162	\box_dp:N . . . . .	2135, 2222, 2246
\addtoxfamedstyle . . . .	1771, 2828, 2850	\box_ht:N . . . . .	2135, 2222, 2246, 3192
\addvspace . . . . .	1151	\box_if_empty:NF . . . . .	3187
\advance . . . . .	1147, 3441, 3447	\box_if_empty:NTF . . . . .	234, 2108
\AfterEndEnvironment . . . . .	3025	\box_move_up:nn . . . . .	3195
\arraystretch . . . . .		\box_new:N . . . . .	1225, 1226, 3183
	643, 685, 712, 739, 3283, 3312, 3339, 3392	\box_set_dp:Nn . . . . .	3193
\automark . . . . .	3130	\box_set_ht:Nn . . . . .	3194
<b>B</b>			
\baselineskip . . . . .	1062, 1063, 1070, 1339, 3445	\box_use:N . . . . .	933
\BeforeBeginEnvironment . . . . .	3024	\box_use_clear:N . . . . .	3196
\begin . . . . .	354,	\box_wd:N . . . . .	2107
	383, 401, 421, 437, 472, 509, 644, 686,	<b>C</b>	
	713, 740, 1709, 1711, 2357, 2386, 2412,	\c@CodelineNo . . . . .	3474, 3498
	2433, 2450, 2499, 2544, 2802, 2815,	\c@mpfootnote . . . . .	186
	3024, 3285, 3313, 3340, 3393, 3404, 3432	\c_empty_coffin . . . . .	2673, 2730
\bfseries . . . . .	1499, 1501, 1503, 1505, 3177, 3180	\c_max_dim . . . . .	1037, 1084
\bool_if:cF . . . . .	987	\c_one . . . . .	1065, 1254
\bool_if:cT . . . . .	75	\c_one_pt_dim . . . . .	1035, 1036, 1053, 1230
\bool_if:NF . . . . .	1867,	\c_one_thousand . . . . .	1035, 1053
	1893, 1917, 1956, 2713, 2765, 3461, 3476	\c_ten_thousand . . . . .	1014
\bool_if:NT . . . . .	205, 213, 298, 480,	\c_three . . . . .	1266
	491, 507, 616, 1721, 1895, 1919, 1925,	\c_two . . . . .	1260
	1958, 2060, 2062, 2127, 2129, 2166,	\c_zero . . . . .	186, 1036
	2168, 2173, 2510, 2524, 2542, 3452, 3456	\c_zero_dim . . . . .	883, 884, 895, 896, 992, 1024,
\bool_if:NTF . . . . .	1819, 3478, 3488		1025, 1026, 1314, 1315, 1338, 2664,
\bool_if:nTF . . . . .	1859		2666, 3193, 3194, 3280, 3309, 3335, 3389
\bool_if_p:N . . . . .	1864	\c_zero_skip . . . . .	262, 863, 874
\bool_new:N . . . . .	1228	\caption . . . . .	645, 687, 714, 741
		\captionof . . . . .	1698



- 
- \captionsetup . . . . . 1697, 3141, 3142
  - \clearpage . . . . . 3156, 3175
  - \clearscrheadfoot . . . . . 3128
  - \clip . . . . . 449, 474, 2471, 2501
  - \clist\_if\_in:noTF . . . . . 1251, 1257, 1263
  - \clist\_map\_function:nN . . . . . 1312, 1435, 1471
  - \clist\_map\_inline:nn . . . . . 163,  
312, 2048, 2119, 2158, 2968, 3341, 3405
  - \Cmd . . . . . 3250
  - \coffin\_display\_handles:Nn . . . . . 621
  - \coffin\_dp:N . . . . . 291, 2709, 2761
  - \coffin\_ht:N . . . . . 290, 2708, 2760
  - \coffin\_join:NnnNnnnn . . . . . 252
  - \coffin\_new:N . . . . .  
. 1183, 1184, 1185, 1186, 1187, 1188,  
1189, 1192, 1194, 1195, 1196, 1199, 1200
  - \coffin\_set\_eq:NN . . . . .  
. . . . . 140, 2083, 2188, 2234, 2673, 2730
  - \coffin\_wd:N . . . . . 919
  - \color . . . . . 126, 194, 670, 751, 1448,  
2689, 2741, 2983, 2995, 3179, 3233, 3235
  - \color\_ensure\_current: . . . . . 1160
  - \color\_group\_begin: . . . . . 1159
  - \color\_group\_end: . . . . . 1166
  - \colorlet . . . . . 3124, 3125
  - \Convert . . . . . 656, 663, 697, 724
  - \coordinate . . . . . 439, 441, 2452, 2458
  - \count@ . . . . . 3438, 3439, 3441
  - \cs\_generate\_variant:Nn . . . . . 943, 944, 1002
  - \cs\_if\_exist:cTF . . . . . 1608
  - \cs\_if\_exist\_use:cF . . . . . 2970
  - \cs\_new:Nn . . . . . 116, 120,  
269, 352, 381, 394, 414, 435, 454, 470,  
505, 524, 538, 552, 569, 586, 638, 680,  
707, 734, 1817, 1836, 1857, 2355, 2384,  
2405, 2426, 2448, 2477, 2497, 2540,  
2559, 2574, 2592, 2614, 2636, 2669, 2726
  - \cs\_new:Npn . . . . . 146, 148, 150, 160, 179,  
190, 197, 203, 211, 222, 232, 260, 280,  
295, 301, 612, 614, 762, 767, 795, 808,  
822, 830, 843, 856, 867, 878, 890, 916,  
931, 952, 974, 985, 1011, 1017, 1033,  
1047, 1076, 1117, 1130, 1446, 1890,  
1914, 1953, 1985, 2030, 2038, 2105, 2210
  - \cs\_new\_eq:NN . . . . . 942
  - \cs\_new\_nopar:Npn . . . . . 136
  - \cs\_new\_protected:Npn . . . . .  
. . . . . 42, 74, 1022, 1157,  
1248, 1294, 1299, 1417, 1422, 1454, 1459
  - \cs\_set:Npn . . . . . 182, 184, 619, 624
  - \cs\_set\_eq:NN . . . . . 188, 1904,  
1937, 1940, 1970, 1983, 3437, 3454, 3458
  - \cs\_set\_nopar:Npn . . . . . 3419, 3429
  - \cs\_set\_nopar:Npx . . . . . 3440, 3443
  - \cs\_set\_protected\_nopar:Npn . . . . . 1164
- D**
- \DeclareRobustCommand . . . . . 3255
  - \def . . . . . 1127, 2289, 3283, 3312, 3339, 3392, 3514
  - \DeleteFile . . . . . 1724
  - \dictum . . . . . 3207
  - \dim\_add:Nn . . . . . 319, 824, 1086, 2236
  - \dim\_compare:nNnF . . . . . 1052
  - \dim\_compare:nNnT . . . . . 174
  - \dim\_compare:nNnTF . . . . . 324, 1083,  
1103, 1987, 2001, 2074, 2107, 2134, 2224

<code>\dim_const:Nn</code> . . . . .	1230	<code>\Env</code> . . . . .	3245
<code>\dim_eval:n</code> . . . . .	656, 697, 810, 2071, 2182, 2265	<code>\etex_glueshrink:D</code> . . . . .	871
<code>\dim_new:N</code> . . . . .		<code>\etex_gluestretch:D</code> . . . . .	860
. . . . .	1204, 1205, 1208, 1209, 1210, 1211,	<code>\exp_args:Nf</code> . . . . .	1610
. . . . .	1213, 1215, 1218, 1219, 1220, 1222, 1223	<code>\exp_args:NNf</code> . . . . .	3464, 3465
<code>\dim_set:Nn</code> . . . . .	162, 288, 303, 764,	<code>\exp_args:No</code> . . . . .	1448
. . . . .	1024, 1025, 1026, 1035, 1036, 1037,	<code>\exp_args:Nx</code> . . . . .	3490, 3491, 3494, 3495
. . . . .	1068, 1087, 2047, 2118, 2157, 2220,	<code>\exp_not:N</code> . . . . .	1675, 1676, 1693, 1697,
. . . . .	2231, 2244, 2252, 2642, 2644, 2674,	. . . . .	1698, 1703, 1704, 3349, 3351, 3470, 3472
. . . . .	2706, 2731, 2758, 2893, 2906, 3192, 3234	<code>\exp_not:n</code> . . . . .	1709, 1710, 1711
<code>\dim_set_eq:NN</code> . . . . .	1082, 1085, 1107, 2033	<code>\exp_not:v</code> . . . . .	1596, 1614, 1674, 1700, 1709, 3097
<code>\dim_sub:Nn</code> . . . . .	169, 832, 2059	<code>\ExplCmd</code> . . . . .	3302
<code>\dim_to_fp:n</code> . . . . .	845, 1060, 1063	<code>\ExplEnv</code> . . . . .	3273
<code>\dim_use:N</code> . . . . .	333, 335, 337, 765, 1093,	<code>\ExplOpt</code> . . . . .	3330
. . . . .	1095, 1097, 1099, 2712, 2764, 2894, 2907	<code>\ExplSyntaxOff</code> . . . . .	35
<code>\dim_while_do:nNnn</code> . . . . .	2232	<code>\ExplSyntaxOn</code> . . . . .	38
<code>\DoNotIndex</code> . . . . .	3491, 3495	<code>\ExplTOpt</code> . . . . .	3384
<code>\draw</code> . . . . .	588, 589, 590, 591, 2638, 2640, 2643, 2645		

**E**

<code>\eject</code> . . . . .	1106, 2032
<code>\else</code> . . . . .	1141, 1144, 3071, 3448
<code>\else:</code> . . . . .	966
<code>\encapchar</code> . . . . .	3516, 3517
<code>\end</code> . . . . .	377, 391, 411,
. . . . .	431, 452, 498, 520, 672, 699, 726, 753,
. . . . .	1142, 1717, 1719, 2380, 2402, 2423,
. . . . .	2444, 2475, 2533, 2555, 2805, 2818,
. . . . .	3025, 3288, 3316, 3369, 3396, 3409, 3434
<code>\end__xframed__trivlist:</code> . . . . .	1130, 1167
<code>\endfoot</code> . . . . .	648, 690, 717, 744
<code>\endhead</code> . . . . .	646, 688, 715, 742
<code>\endlastfoot</code> . . . . .	650, 692, 719, 746

**F**

<code>\faGithub</code> . . . . .	3116
<code>\faStar</code> . . . . .	3269
<code>\fi</code> . . . . .	1135,
. . . . .	1139, 1143, 1149, 1153, 3069, 3078, 3450
<code>\fi:</code> . . . . .	966
<code>\fill</code> . . . . .	526, 528, 530, 532, 534,
. . . . .	540, 542, 544, 546, 548, 556, 558, 560,
. . . . .	562, 564, 573, 575, 577, 579, 581, 2561,
. . . . .	2563, 2565, 2567, 2569, 2576, 2579,
. . . . .	2582, 2585, 2587, 2596, 2599, 2602,
. . . . .	2605, 2608, 2618, 2621, 2624, 2627, 2630
<code>\footnotesize</code> . . . . .	527, 529, 531, 533, 535,
. . . . .	541, 543, 545, 547, 549, 557, 559, 561,
. . . . .	563, 565, 574, 576, 578, 580, 582, 2562,

- 2564, 2566, 2568, 2570, 2577, 2580,  
2583, 2586, 2588, 2597, 2600, 2603,  
2606, 2609, 2619, 2622, 2625, 2628, 2631  
`\fp_eval:n` ..... 845  
`\fp_to_int:n` ..... 1057
- G**
- `\g__doc_secpreamble_box` .....  
3183, 3187, 3192, 3193, 3194, 3196, 3203  
`\g_xframed_notikz_bool` ... 1280, 1282  
`\g_doc_macros_seq` . 3480, 3481, 3482, 3485  
`\GetIdInfo` ..... 17  
`\Github` ..... 3116  
`\global` ..... 1134, 1138  
`\group_begin:` .....  
... 90, 124, 642, 684, 711, 738, 1079,  
1671, 2040, 2081, 2139, 2186, 3338, 3403  
`\group_end:` .....  
.. 114, 133, 672, 699, 726, 753, 1081,  
1720, 2093, 2097, 2150, 2198, 3372, 3411
- H**
- `\hbox` ..... 3440, 3445  
`\hbox:n` ... 387, 389, 406, 408, 429, 2390,  
2400, 2417, 2421, 2442, 3295, 3323, 3377  
`\hbox_gset:Nn` ..... 3203  
`\hbox_overlap_left:n` ..... 3190  
`\hbox_to_wd:nn` ... 3280, 3309, 3335, 3389  
`\hfill` ..... 3189, 3292, 3320, 3374, 3400  
`\hline` ..... 645, 647,  
649, 652, 659, 666, 687, 689, 691, 714,  
716, 718, 741, 743, 745, 3285, 3287,  
3313, 3315, 3340, 3369, 3393, 3395, 3433  
`\hrulefill` ..... 3223
- `\hyperlink` ..... 3242, 3247, 3252  
`\hypersetup` ..... 3144  
`\hypertarget` . 3278, 3307, 3349, 3360, 3399
- I**
- `\if@inlabel` ..... 1132, 3436  
`\if@minipage` ..... 1861  
`\if@newlist` ..... 1136  
`\if@noparlist` ..... 1144  
`\ifdim` ..... 1145  
`\IfFileExists` ..... 43, 77  
`\ifhmode` ..... 1140  
`\ifluatex` ..... 3069  
`\IfNoValueF` ..... 3293, 3321, 3375, 3401  
`\IfNoValueTF` ..... 2963, 3209  
`\ifnum` ..... 3069, 3439  
`\ifoot` ..... 3136  
`\ifxetex` ..... 3069  
`\ignorespaces` ..... 3499  
`\ihead` ..... 3131  
`\index` ..... 3515, 3517  
`\input` ..... 44, 78, 1721  
`\int_case:nnn` ..... 1838  
`\int_compare:nNnT` ..... 2249  
`\int_compare_p:nNn` ..... 1863  
`\int_gdecr:N` ..... 3498  
`\int_gincr:N` ..... 3474  
`\int_incr:N` ..... 2235, 3421  
`\int_new:N` ..... 1247  
`\int_set:Nn` ..... 1014, 1019, 1055, 2230  
`\int_set_eq:NN` ... 186, 1254, 1260, 1266  
`\int_use:N` ..... 1013, 2248, 3151  
`\item` ..... 1159, 3470

- 
- `\itemindent` ..... 1125  
`\itshape` ..... 3224
- J**
- `\jobname` ..... 1721, 3136
- K**
- `\keys_define:nn` ..... 1276,  
 1301, 1347, 1424, 1461, 1494, 1510,  
 1539, 1580, 1591, 1604, 1649, 3085, 3093  
`\keys_set:nn` .....  
 .... 1306, 1429, 1466, 1623, 1665, 1670
- L**
- `\l__xframed_allowbreaking_bool` ..  
 ..... 298, 327, 329, 1554,  
 1814, 1816, 1819, 1864, 1867, 1874, 1880  
`\l__xframed_bottomline_bool` ....  
 1545, 1895, 1899, 1919, 1923, 2062, 2173  
`\l__xframed_code_first_frame_tl` 1519  
`\l__xframed_code_last_frame_tl` . 1521  
`\l__xframed_code_middle_frame_tl` 1520  
`\l__xframed_code_single_frame_tl` 1518  
`\l__xframed_codeafter_tl` 229, 1513, 1517  
`\l__xframed_codebefore_tl` .....  
 ..... 158, 1512, 1516  
`\l__xframed_codebegin_tl` ... 195, 1514  
`\l__xframed_codeend_tl` .... 201, 1515  
`\l__xframed_coffin_width_dim` 101,  
 143, 162, 169, 174, 242, 1204, 2085,  
 2142, 2190, 2258, 2685, 2699, 2739, 2751  
`\l__xframed_color_option_prop` ..  
 ..... 669, 750,  
 976, 1452, 1463, 2985, 2995, 3005, 3015
- `\l__xframed_computed_coffin_height_dim`  
 ..... 303, 319, 325, 333, 334, 1219  
`\l__xframed_descenders_bool` 213, 1562  
`\l__xframed_developer_info_bool` .  
 ..... 507, 616, 1565, 2542  
`\l__xframed_draw_coffin` ..... 1192  
`\l__xframed_draweveryline_bool` ..  
 1556, 1893, 1917, 1956, 2060, 2127, 2166  
`\l__xframed_environment_width_dim`  
 ..... 1205  
`\l__xframed_firsttikz_tl` ..... 1524  
`\l__xframed_firsttitle_coffin` . 1186  
`\l__xframed_firsttitle_htdp_dim` .  
 ..... 1209, 2005  
`\l__xframed_firsttitle_tl` .....  
 ..... 396, 477, 554,  
 1584, 1936, 1969, 2041, 2407, 2506, 2594  
`\l__xframed_foot_coffin` . 428, 1187,  
 2440, 2730, 2738, 2750, 2755, 2760, 2761  
`\l__xframed_foot_font_tl` .. 1502, 2743  
`\l__xframed_foot_htdp_dim` .....  
 . 309, 1210, 1991, 2005, 2731, 2758, 2764  
`\l__xframed_foot_tl` .....  
 ..... 1585, 1903, 1939, 2042, 2154  
`\l__xframed_footline_bool` .....  
 .. 480, 491, 1551, 2510, 2524, 2734, 2765  
`\l__xframed_footnoteinside_bool` 1559  
`\l__xframed_footnotes_coffin` .. 1189  
`\l__xframed_footpostcode_tl` 1534, 2747  
`\l__xframed_footprecode_tl` 1533, 2742  
`\l__xframed_free_vspace_dim` ....  
 ..... 325, 337, 338, 1082,

- 1084, 1085, 1086, 1097, 1098, 1104,  
1107, 1218, 2002, 2033, 2047, 2118, 2157
- `\l__xframed_head_bool` . . . . . 141, 1228
- `\l__xframed_head_coffin` . . . . . 140, 1183
- `\l__xframed_head_font_tl` . . . . . 130, 1498
- `\l__xframed_head_tl` . . . . . 122, 131, 1582
- `\l__xframed_headpostcode_tl` . . . . . 132, 1529
- `\l__xframed_headprecode_tl` . . . . . 125, 1528
- `\l__xframed_ignore_lastskip_bool`  
. . . . . 205, 1563
- `\l__xframed_lastfoot_coffin` . . . . . 1188
- `\l__xframed_lastfoot_htdp_dim` . . . . . 1211
- `\l__xframed_lastfoot_tl` . . . . .  
. . . . . 416, 488, 571,  
1586, 1903, 1939, 2114, 2428, 2520, 2616
- `\l__xframed_lasttikz_tl` . . . . . 1526
- `\l__xframed_leftline_bool` . . . . . 1543
- `\l__xframed_length_option_prop` . .  
. . . . . 655,  
696, 812, 1292, 1303, 1897, 1906, 1921,  
1927, 1933, 1942, 1945, 1960, 1966,  
1972, 2663, 2665, 2675, 2678, 2711,  
2715, 2732, 2763, 2767, 2875, 2885, 2896
- `\l__xframed_listings_bool` . . . . . 1568
- `\l__xframed_main_coffin` . . . . .  
. . . . . 100, 140, 142, 253, 257, 283, 290,  
291, 388, 919, 1184, 2083, 2084, 2089,  
2107, 2108, 2135, 2141, 2146, 2188,  
2189, 2194, 2216, 2234, 2240, 2261, 2395
- `\l__xframed_main_font_tl` . . . . . 193, 1496
- `\l__xframed_maincoffin_htdp_dim` .  
. . . . . 288, 305, 1213
- `\l__xframed_maximum_coffin_height_dim`  
. . . . . 1220
- `\l__xframed_mdframed_bool` . . . . . 1566, 1572
- `\l__xframed_middletikz_tl` . . . . . 1525
- `\l__xframed_minted_bool` . . . . . 1567
- `\l__xframed_minted_caption_tl` . .  
. . . . . 1651, 1688, 1700
- `\l__xframed_minted_hook_tl` . . . . . 1660, 1674
- `\l__xframed_minted_label_tl` . . . . .  
. . . . . 1652, 1701, 1704
- `\l__xframed_minted_language_tl` . .  
. . . . . 1655, 1712
- `\l__xframed_minted_minted_tl` . . . . .  
. . . . . 1653, 1711
- `\l__xframed_minted_result_bool` . .  
. . . . . 1657, 1721
- `\l__xframed_minted_xframed_tl` . .  
. . . . . 1659, 1709
- `\l__xframed_posttikz_tl` . . . . . 373, 1522, 2376
- `\l__xframed_pstricks_bool` . . . . . 1571
- `\l__xframed_rightline_bool` . . . . . 1547
- `\l__xframed_save_coffin` . . . . . 1196, 2234
- `\l__xframed_shadow_bool` . . . . . 1561
- `\l__xframed_singletikz_tl` . . . . .  
. . . . . 374, 1523, 2377
- `\l__xframed_skip_option_prop` . . .  
. . . . . 662, 723, 799,  
1415, 1426, 1909, 1948, 2923, 2933, 2943
- `\l__xframed_splitheight_dim` . . . . .  
. . . . . 1215, 2047, 2055,  
2059, 2065, 2071, 2072, 2075, 2118,  
2125, 2131, 2137, 2157, 2164, 2171,  
2176, 2182, 2183, 2217, 2224, 2232, 2241

<code>\l__xframed_subsubtitle_coffin</code> . 1200	<code>\l__xframed_two_coffin</code> . . . . . 1195
<code>\l__xframed_subtitle_coffin</code> . . . 1199	<code>\l__xframed_usetwoside_bool</code> . . . 1560
<code>\l__xframed_subtitle_font_tl</code> . . 1504	<code>\l__xframed_vbadness_tl</code> 1010, 1013, 1019
<code>\l__xframed_subtitleline_bool</code> . 1553	<code>\l__codedoc_at_replaced_macro_tl</code> .
<code>\l__xframed_temp_coffin</code> . . . . . 241,	. 3423, 3424, 3425, 3463, 3471, 3480,
254, 282, 1194, 2083, 2188, 2257, 2260	3481, 3482, 3485, 3490, 3491, 3494, 3495
<code>\l__xframed_tempfoot_tl</code> . . . . .	<code>\l__codedoc_macro_aux_bool</code> . . . . .
. . . . 1234, 2042, 2114, 2154, 2728, 2744	. . . . . 3452, 3461, 3476
<code>\l__xframed_temptitle_tl</code> . . . . .	<code>\l__codedoc_macro_int</code> . . . . . 3421
. . . . 1233, 2041, 2113, 2153, 2671, 2690	<code>\l__codedoc_macro_TF_bool</code> . . . . .
<code>\l__xframed_theorem_bool</code> . . . . . 1573	. . . . . 3456, 3478, 3488
<code>\l__xframed_tikz_bool</code> . . . . . 1569	<code>\l__codedoc_macro_tl</code> . . 3463, 3464, 3465
<code>\l__xframed_title_coffin</code> . . . . .	<code>\l__mdxex_temp_tl</code> . . . . . 1672, 1714
. . . . . 407, 1185, 2419,	<code>\l__xframed_firsttitle_tl</code> . . . . . 284
2673, 2684, 2695, 2698, 2703, 2708, 2709	<code>\l__xframed_lastfoot_tl</code> . . . . . 285
<code>\l__xframed_title_font_tl</code> . 1500, 2688	<code>\l__xframed_tempfoot_tl</code> . . . . . 285
<code>\l__xframed_title_htdp_dim</code> . . . . .	<code>\l__xframed_temptitle_tl</code> . . . . . 284
. . . . . 307, 1208, 1991, 2674, 2706, 2712	<code>\l__xframeddoc_showcode_bool</code> . . . 3089
<code>\l__xframed_title_tl</code> . . . . .	<code>\l__xframeddoc_tocdepth_int</code> 3087, 3151
. . . . . 1583, 1936, 1969, 2113, 2153	<code>\l__keys_key_tl</code> . . . . . 1596, 1614, 3097
<code>\l__xframed_titleline_bool</code> . . . . .	<code>\l__tmpa_dim</code> . . . . . 764, 765,
. . . . . 1549, 2677, 2713	880, 883, 892, 895, 897, 1068, 1072,
<code>\l__xframed_titlepostcode_tl</code> . . .	1087, 1099, 1100, 1104, 2057, 2059,
. . . . . 1532, 2693	2231, 2236, 2241, 2642, 2643, 2644,
<code>\l__xframed_titleprecode_tl</code> 1531, 2687	2645, 2893, 2894, 2906, 2907, 3192, 3195
<code>\l__xframed_tmpa_box</code> . . . . . 1225	<code>\l__tmpa_int</code> 1055, 1070, 2230, 2235, 2248, 2249
<code>\l__xframed_tmpa_dim</code> . . . . . 1222,	<code>\l__tmpa_skip</code> 769, 770, 2940, 2941, 2953, 2954
2220, 2224, 2232, 2244, 2252, 2265, 2266	<code>\l__tmpa_tl</code> . . . . .
<code>\l__xframed_tmpb_box</code> 1226, 2215, 2218,	640, 652, 653, 658, 660, 665, 667, 672,
2219, 2222, 2239, 2242, 2243, 2246, 2259	673, 682, 694, 699, 700, 709, 721, 726,
<code>\l__xframed_tmpb_dim</code> . . . . . 1223	727, 736, 748, 753, 754, 1250, 1251,
<code>\l__xframed_topline_bool</code> . . . . .	1257, 1263, 1269, 3340, 3347, 3355,
1541, 1925, 1929, 1958, 1962, 2129, 2168	3358, 3369, 3370, 3404, 3407, 3409, 3410

- 
- \l\_tmpb\_dim . . . . . 880, 884, 892, 896
  - \l\_tmpb\_tl . . . . . 3345, 3346, 3349, 3351
  - \label . . . . . 1703
  - \labelwidth . . . . . 1123
  - \Large . . . . . 3177
  - \large . . . . . 1501, 3180
  - \lastskip . . . . . 1145, 1146
  - \ldots . . . . . 647, 689, 716, 743
  - \leavevmode . . . . . 1133
  - \leftmargin . . . . . 1124
  - \leftmark . . . . . 3132
  - \let . . . . . 1126
  - \levelchar . . . . . 3517
  - \linewidth . . . . . 174, 1330, 3211, 3219
  - \llap . . . . . 3181, 3445
  - \loop . . . . . 3439
  - \lst@RequireAspects . . . . . 3140
- M**
- \m@ne . . . . . 3441
  - \macro@cnt . . . . . 3438, 3447, 3449
  - \MacroFont . . . . . 3235, 3242, 3247,  
3252, 3286, 3287, 3314, 3351, 3362, 3394
  - \MacroTopsep . . . . . 3234, 3427
  - \makebox . . . . . 3181
  - \makelabel . . . . . 1127, 3429, 3443
  - \MakePercentComment . . . . . 1710
  - \MakePercentIgnore . . . . . 1718
  - \MArgs . . . . . 3262
  - \markboth . . . . . 3160
  - \mbox . . . . . 3472
  - \MessageBreak . . . . . 3051, 3063, 3074
  - \Metakey . . . . . 3267, 3351
- \minisec . . . . . 3169
  - \mode\_if\_inner\_p: . . . . . 1862
  - \msg\_error:nnn . . . . . 2971
  - \msg\_error:nnx 45, 79, 1269, 1595, 1613, 3096
  - \msg\_line\_number: . . . . . 332, 627, 1091
  - \msg\_log:n . . . . . 330, 626, 1089
  - \msg\_new:nnn . . . . . 1735, 1742, 1748,  
1754, 1760, 1767, 1775, 1783, 1786, 1790
  - \msg\_new:nnnn . . . . . 47, 3100
  - \msg\_warning:nn . . . . . 1869
  - \msg\_warning:nnnn . . . . .  
. . . . . 2878, 2898, 2926, 2945, 2987, 3007
  - \msg\_warning:nnx . . . . . 2827, 2844, 2855
  - \multicolumn 647, 652, 659, 666, 689, 716, 743
- N**
- \newcommand . . . . . 3175
  - \NewDocumentCommand . 1621, 1663, 2797,  
2810, 2823, 2837, 2850, 2862, 2871,  
2890, 2919, 2937, 2961, 2981, 3001,  
3022, 3029, 3116, 3154, 3162, 3169,  
3185, 3201, 3207, 3240, 3245, 3250,  
3258, 3262, 3267, 3273, 3302, 3330, 3384
  - \NewDocumentEnvironment . 88, 1668, 2799
  - \Newxframedenv . . . . . 2796, 2797
  - \newxframedstyle . 1764, 2823, 2845, 2856
  - \nobreak . 3297, 3325, 3379, 3413, 3490, 3494
  - \node 385, 403, 423, 444, 2388, 2414, 2435, 2465
  - \noindent . . . . . 3277, 3306, 3334, 3388
  - \normalcolor . . . . . 3213, 3221
  - \normalfont 1497, 1499, 3177, 3180, 3213, 3221
  - \null . . . . . 3175, 3292, 3320, 3374, 3400

**O**

\OArgs ..... 3258  
 \ofoot ..... 3133  
 \ohead ..... 3132  
 \onehalfspacing ..... 3119  
 \Opt ..... 3240

**P**

\Pack ..... 3255  
 \PackageError ..... 25, 3048, 3059, 3072  
 \pagemark ..... 3133  
 \pagestyle ..... 3129  
 \par ..... 207, 215, 217, 1049, 1051,  
     1078, 1140, 3223, 3225, 3275, 3297,  
     3304, 3325, 3332, 3379, 3386, 3413, 3472  
 \parbox ..... 3211, 3219  
 \parsep ..... 1120  
 \parskip ..... 192, 230, 1120, 1147  
 \path ..... 448, 457, 460, 463, 466, 475,  
     479, 482, 490, 493, 2470, 2480, 2484,  
     2488, 2492, 2503, 2508, 2512, 2522, 2526  
 \pgfnodealias 364, 398, 418, 2367, 2409, 2430  
 \pgfqkeys ..... 2289, 2290, 3031  
 \pgfresetboundingbox ..... 366, 2369  
 \phantomsection ..... 3157, 3164  
 \prevdepth ..... 1059  
 \prg\_new\_conditional:Npnn ..... 964  
 \prg\_return\_false: ..... 966  
 \prg\_return\_true: ..... 966  
 \ProcessKeysOptions ..... 1601, 3107  
 \prop\_get:cn ..... 954  
 \prop\_get:Nn .....  
     .... 799, 812, 976, 2875, 2885, 2896,

2923, 2933, 2943, 2985, 2995, 3005, 3015

\prop\_map\_inline:Nn .....  
     ..... 655, 662, 669, 696, 723, 750  
 \prop\_new:N ..... 1292, 1415, 1452  
 \prop\_put:Nnn ..... 942  
 \protect ..... 3515, 3517  
 \ProvidesExplPackage ..... 20, 3043

**Q**

\q\_stop .....  
     1296, 1299, 1419, 1422, 1456, 1459, 1983  
 \quad ..... 3269

**R**

\raggedleft ..... 3224  
 \raggedright ..... 3214, 3222  
 \relax ..... 1159  
 \renewcommand ..... 643, 685, 712, 739  
 \RenewDocumentCommand ..... 1724  
 \RenewDocumentEnvironment ..... 2812  
 \Renewxframedenv ..... 2809, 2810  
 \renewxframedstyle ..... 2837  
 \repeat ..... 3442  
 \RequirePackage ..... 16,  
     33, 34, 36, 39, 41, 1633, 1648, 3041,  
     3082, 3109, 3111, 3112, 3113, 3114,  
     3115, 3119, 3121, 3123, 3127, 3138, 3139  
 \rightmark ..... 3131  
 \rule ..... 346

**S**

\saved@macroname ..... 3425  
 \scan\_stop: ..... 266, 860, 871, 1690  
 \secpreamble ..... 3201





<code>\thesection</code> . . . . .	3178	<code>\tl_set:cn</code> . . . . .	2832, 2841
<code>\thesubsection</code> . . . . .	3181	<code>\tl_set:Nn</code> . . . . .	640, 682, 709, 736, 1253, 1259, 1265, 3340, 3345, 3404
<code>\thispagestyle</code> . . . . .	3175	<code>\tl_set:Nx</code> . . . . .	1013, 1250, 1672, 3423
<code>\tikz</code> . . . . .	448, 2470	<code>\tl_set_eq:NN</code> . . . . .	. . . 284, 285, 1903, 1936, 1939, 1969, 2041, 2042, 2113, 2114, 2153, 2154, 3425
<code>\tikzset</code> . . . . .	384, 402, 422, 443, 2387, 2413, 2434, 2464	<code>\tl_to_str:N</code> . . . . .	3463, 3471, 3480, 3481, 3482, 3485, 3490, 3491, 3494, 3495
<code>\tiny</code> . . . . .	3269	<code>\tl_to_str:n</code> . . . . .	3480, 3481, 3482
<code>\titleformat</code> . . . . .	3177, 3180	<code>\tl_use:c</code> . . . . .	1449
<code>\titlerule</code> . . . . .	3179	<code>\tl_use:N</code> . . . . .	125, 130, 131, 132, 158, 193, 195, 201, 229, 373, 673, 700, 727, 754, 2376, 2377, 2687, 2688, 2690, 2693, 2742, 2743, 2744, 2747, 2864, 3370, 3410
<code>\tl_expandable_lowercase:n</code> . . . . .	1250	<code>\token_to_str:N</code> . . . . .	3423, 3464
<code>\tl_gput_left:Nn</code> . . . . .	3233	<code>\topsep</code> . . . . .	1119, 3427
<code>\tl_gput_right:Nn</code> . . . . .	3235	<code>\topskip</code> . . . . .	1070
<code>\tl_greplace_all:Nnn</code> . . . . .	3464, 3465	<code>\trivlist</code> . . . . .	3428
<code>\tl_gset:Nx</code> . . . . .	3463	<code>\ttfamily</code> . . . . .	527, 529, 531, 533, 535, 541, 543, 545, 547, 549, 557, 559, 561, 563, 565, 574, 576, 578, 580, 582, 2562, 2564, 2566, 2568, 2570, 2577, 2580, 2583, 2586, 2588, 2597, 2600, 2603, 2606, 2609, 2619, 2622, 2625, 2628, 2631, 3295, 3323, 3377, 3403, 3515, 3517
<code>\tl_if_blank:VF</code> . . . . .	122, 477, 488, 554, 571, 2506, 2520, 2594, 2616	<b>U</b>	
<code>\tl_if_blank:VTF</code> . . . . .	. . . . . 396, 416, 2407, 2428, 2671, 2728		
<code>\tl_if_empty:fTF</code> . . . . .	. . . . . 2874, 2895, 2922, 2942, 2984, 3004	<code>\unskip</code> . . . . .	1140
<code>\tl_if_empty:NF</code> . . . . .	1701	<code>\use:c</code> . . . . .	1610
<code>\tl_if_empty:NTF</code> . . . . .	1688	<code>\use:x</code> . . . . .	3468
<code>\tl_if_empty:nTF</code> . . . . .	1002	<code>\useasboundingbox</code> . . . . .	366, 2369
<code>\tl_if_exist:cTF</code> . . . . .	2825, 2839, 2852	<code>\usesecpreamble</code> . . . . .	3178, 3185
<code>\tl_if_in:nnTF</code> . . . . .	3343		
<code>\tl_new:c</code> . . . . .	2831		
<code>\tl_new:N</code> . . . . .	1010, 1233, 1234, 1246		
<code>\tl_put_right:cn</code> . . . . .	2853		
<code>\tl_put_right:Nn</code> . . . . .	652, 653, 658, 660, 665, 667, 672, 694, 699, 721, 726, 748, 753, 3355, 3358, 3369, 3407, 3409		
<code>\tl_put_right:Nx</code> . . . . .	3347		
<code>\tl_remove_once:Nn</code> . . . . .	3346		

<code>\usetikzlibrary</code> . . . . .	37	<code>\vspace</code> . . . . .	3179
<code>\usexframendcolor</code> . . . . .	2979, 2981	<code>\vss</code> . . . . .	3445
<code>\usexframendlength</code> . . . . .	2869, 2871	<code>\vtop</code> . . . . .	3445
<code>\usexframendskip</code> . . . . .	2919		
<code>\usexframendskips</code> . . . . .	2917		
		<b>X</b>	
<b>V</b>		<code>\xframed</code> . . . . .	88
<code>\vbox_set:Nn</code> . . . . .	2218, 2242	<code>\xframeddivide</code> . . . . .	136, 136
<code>\vbox_set_split_to_ht:NNn</code> . .	2214, 2238	<code>\xframedmethod</code> . . . . .	2862
<code>\vbox_unpack_clear:N</code> . . . .	249, 921, 2089, 2146, 2194, 2219, 2243, 2259, 2703, 2755	<code>\xframedmintedsetup</code> . . . . .	1663
<code>\vcoffin_set:Nnn</code> . . . . .	241, 918, 2084, 2141, 2189, 2256, 2683, 2697, 2737, 2749	<code>\xframedprintalloption</code> . . . .	2960, 2961
<code>\vcoffin_set:Nnw</code> . . . . .	100, 142	<code>\xframedsetup</code> . . . . .	
<code>\vcoffin_set_end:</code> . . . . .	110, 139	. . . . .	91, 1610, 1621, 1676, 1693, 2801, 2814
<code>\VerbatimEnvironment</code> . . . . .	1675	<code>\xframedsetuptikz</code> . . . . .	1527, 2289, 3029
<code>\vfill</code> . . . . .	1106, 2032	<code>\xframed__pagebreak:</code> . . . . .	
<code>\vsize</code> . . . . .	1085, 1107, 1988, 2033	. . . . .	2014, 2030, 2078, 2094, 2199
<code>\vskip</code> . . . . .	1146, 1148, 3223	<code>\xspace</code> . . . . .	3116, 3242, 3247, 3252
		<b>Z</b>	
		<code>\z@</code> . . . . .	1080, 1123, 1124, 1125, 1145, 3439