The latex-lab-sec package

Changes related to the tagging of sectioning commands

LATEX Project* v0.84f 2024-10-04

Abstract

The following code implements a first draft for the tagging of sectioning commands.

1 Limitations

Sectioning commands are in not defined by the format but by the classes. Their implementation vary: some are defined with the help of \@startsection, some are like \chapter handcrafted, some build with the help of extension packages or as in the KOMA classes with class code that extends the \@startsection functionality.

The following code can therefore currently be used only with the standard classes or with classes which do not overwrite the changed definitions.

2 Introduction

Tagging of sectioning commands consist of two parts:

- The heading/title text of the section should be surrounded by a heading tag, typically Hn with some value of n. The number of the section command can optionally be put in a Lbl. The number of the Hn tag should reflect the "natural" level. So in an article \section will use H1, in a book \chapter will use H1 and \section H2. Titles of \part are a bit out of this system as they are normally not part of the hierarchy: often only some chapters are grouped under a part. Their title is therefore tagged as Title.
- The whole section should normally be surrounded by a Sect tag. Parts should be surrounded by Part. It is a bit unclear if the headings should be inside or outside of these structures—the best practice guide puts them outside—but on the whole it sounds more logical to group the heading with the text inside the Sect. For the part this is actually required, as there can be only one Title in a structure, so the part title can't be at the same level as the document Title.

Starting such an enclosing Sect structure is rather easy, but closing it requires code in various place, for example the commands \mainmatter, \backmatter,

 $^{^*}$ Initial implementation done by Ulrike Fischer

\frontmatter and \appendix should typically close everything. Following sectioning commands should close all previous structures with a level equal or higher than their own level.

3 Technical details and problems

The implementation has to take care of various details.

- As sections in IATEX are not environments, the <Sect> structures can be wrongly nested with other structures. For example if a document puts a sectioning command into a list or a trivlist or a minipage then it can no longer close previous <Sect> structures correctly. The problem can be detected by checking the structure stack and a warning can be issued, but the author then has to close the structures manually before the list or minipage.
 - Thus there have to be user interfaces to handle such cases. It should also be possible not to create all the <Sect> structures automatically but to tag only the headings so that the author can handle special cases manually.
- If hyperref is used, targets for links should be inserted, either with \refstepcounter or manually with \MakeLinkTarget. These targets must be in the correct structure for the structure destinations. They replace some of the current patches in hyperref.
- With lualatex the mc-commands set attributes *locally*, so the commands must be at the right grouping level.

3.1 Functions and keys

\tag_tool:n \tagtool

3.2 TODO

- A dedicated command to close a sectioning unit should be provided.
- A dedicated command to open a sectioning unit should be provided too.
- It should also be possible to suppress the sectioning unit in sectioning commands to allow e.g. to put an epigraph or similar in front.
- The number in \part and \chapter is currently not correctly tagged as a Lbl as this requires to redefine the internal (class dependent) commands too.

1 (*package)

4 Implementation

2 \ProvidesExplPackage {latex-lab-testphase-sec} {\ltlabsecdate} {\ltlabsecversion}
3 {Code related to the tagging of sectioning commands}

4.1 Surrounding by Sect structures

We use a stack to record the levels of the open Sect. The first item has level -100. A sectioning command will take a record from the stack. If its level is greater or equal it closes this structure and takes the next record from the stack. If the record has a smaller level then it puts it back and stops. The stack is compared with the main structure stack, if they don't match it means we can't safely close the Sect and so we issue a warning and do nothing.

4.1.1 Loading general kernel changes

[kernel?] Also loaded in the toc-tagging code.

- 4 \RequirePackage{latex-lab-kernel-changes}
- 5 (/package)

4.1.2 Glyphtounicode improvements

As lualatex runs with legacy encodings in the test files, we enable and load glyphtounicode. For the math we load additional definitions.

4.1.3 updating \@currentHref

[kernel?]

We must ensure that manual targets (e.g. in unnumbered sections) correctly update \@currentHref. For this we extend the kernel definition of \MakeLinkTarget TODO: remove after release 2024/11

```
\special{}%
      \else
28
         \@savsf\spacefactor
29
         \sh {} \
30
         \spacefactor\@savsf
31
32
      \IfBooleanTF {#1}
33
          \tl_gset:Ne \@currentHref {#3}
35
       }
36
37
          \int_gincr:N\g__kernel_target_int
38
          \tl_gset:Ne \@currentHref {target*.\int_use:N\g_kernel_target_int}
39
40
     }
41
42
43 \ExplSyntaxOff
  ⟨/kernelchange⟩
45 (*package)
46 (@@=tag)
```

4.1.4 Tagging commands

```
\g__tag_sec_stack_seq The stack holds the tag, the level and the structure number.
                                         \g__tag_sec_stack_seq
                        47 \seq_new:N
                        \label{eq:locument} $$ \seq_gpush: Nn\g_tag_sec_stack_seq {\{Document\}_{-100}_{2}\}}$
                       This allows to retrieve the number of the current Sect structure (or Document if we are
\__tag_get_data_current_Sect:
                       outside any Sect) with \tag_get:n{current_Sect}
                        49 \cs_new:Npn \__tag_get_data_current_Sect:
                            {
                              \label{lem:nnn} $$ \exp_last\_unbraced: Ne\use_iii:nnn{\seq_item:Nn\g_tag_sec_stack_seq{1}} $$
                        51
                       (End of definition for \__tag_get_data_current_Sect:.)
\l__tag_sec_Sect_bool This boolean controls if a Sect structure is opened.
                                            \l__tag_sec_Sect_bool
                        53 \bool_new:N
                        This starts a sectioning structure. Currently the tag is fix, either Sect or Part, depending
 \__tag_sec_begin:nn
                       on the level, but this will perhaps change. The second argument is currently unused.
                           \cs_new_protected:Npn\__tag_sec_begin:nn #1 #2 %#1 level #2 keyval
                               \tag_struct_begin:n
                        57
                        58
                                    tag= {\int_compare:nNnTF {#1}={-1}{Part}{Sect}}
                        60
                                 }
                        61
```

```
\seq_gpush:Ne \g__tag_sec_stack_seq
                                      \{ \{ \_\text{tag\_struct\_tag\_tl} \{ \_\text{eval:n\{\#1\}} \} \{ \_\text{tag\_struct\_stack\_current\_tl} \} \} 
                            63
                           (End of definition for \__tag_sec_begin:nn.)
       \__tag_sec_end:n
                              \msg_new:nnn { tag } {wrong-sect-nesting}
                                {
                            66
                                   The~structure~#1~can~not~be~closed.\\
                            67
                                   It~is~not~equal~to~the~current~structure~#2~on~the~main~stack
                            68
                            69
                            70
                              \cs_new_protected:Npn\__tag_sec_end:n #1 % #1 level
                            71
                            72
                                   \seq_get:NN \g__tag_sec_stack_seq \l__tag_tmpa_tl
                            73
                                   \int_compare:nNnT {#1}<{\exp_last_unbraced:NV\use_ii:nnn\l__tag_tmpa_tl+1}</pre>
                            74
                            75
                                       \seq_get:NN\g__tag_struct_tag_stack_seq \l__tag_tmpb_tl
                            76
                                       \exp_args:Nee
                            77
                                          \tl_if_eq:nnTF
                            78
                                            {\exp_last_unbraced:NV\use_i:nnn\l__tag_tmpa_tl}
                                            {\exp_last_unbraced:NV\use_i:nn\l__tag_tmpb_tl}
                                              \seq_gpop:NN \g__tag_sec_stack_seq \l__tag_tmpa_tl
                                              \tag_struct_end:
                                              \_tag_sec_end:n {#1}
                                           }
                            85
                            86
                                              \msg_warning:nnee {tag}{wrong-sect-nesting}
                            87
                                               { \exp_last_unbraced:NV\use_i:nnn \l__tag_tmpa_tl }
                            88
                                               { \exp_last_unbraced:NV\use_i:nn \l__tag_tmpb_tl }
                            89
                            90
                                     }
                            91
                                }
                           (End of definition for \__tag_sec_end:n.)
\__tag_tool_para_split:
                          Runin-sectioning command must separate the heading from the following text.
                            93 \cs_new_protected:Npn \__tag_tool_para_split:
                                 {
                            94
                                   \tag_mc_end:
                            95
                                   \tag_struct_end:
                            96
                                   \tag_struct_begin:n{tag=\l__tag_para_tag_default_tl}
                                   \tag_mc_begin:n{}
                                   \__tag_setup_restore_para_default:
                           (End\ of\ definition\ for\ \verb|\__tag_tool_para_split:.)
                           We change the para tagging in the sectioning code. This here restores the default.
\ tag setup restore para default:
                           Currently it only resets the tag, but perhaps more will be needed later.
                           101 \cs_new_protected:Npn \__tag_setup_restore_para_default:
```

{

```
\tl_set:Nn \l__tag_para_main_tag_tl {text-unit}

\tl_set_eq:NN\l__tag_para_tag_tl\l__tag_para_tag_default_tl

\tl_set_eq:NN\l__tag_para_tag_tl\l__tag_para_tag_default_tl

\tl_set_eq:NN\l__tag_para_tag_tl\l__tag_para_tag_default_tl

\tl_set_eq:NN\l__tag_setup_restore_para_default:.)

\tl_set_eq:NN\l__tag_setup_restore_para_default:.)

\tl_set_eq:NN\l__tag_setup_restore_para_default:.)

\tl_set_eq:NN\l__tag_setup_restore_para_default:

\tl_set_eq:NN\l__tag_para_main_tag_tl {text-unit}

\tl_set_eq:NN\l__tag_para_tag_tl\l_1_tag_para_tag_default:.)

\tl_set_eq:NN\l__tag_setup_restore_para_default:

\tl_set_eq:NN\l__tag_setup_restore_para_default:

\tl_set_eq:NN\l_1_tag_para_main_tag_tl {text-unit}

\tl_set_eq:NN\l_1_tag_para_tag_tl\l_1_tag_para_tag_default:.)

\tl_set_eq:NN\l_1_tag_setup_restore_para_default:

\tl_set_eq:NN\l_1_tag_setup_restore_para_default:

\tl_set_eq:NN\l_1_tag_setup_restore_para_default:

\tl_set_eq:NN\l_1_tag_setup_restore_para_default:

\tl_set_eq:NN\l_1_tag_setup_restore_para_default:

\tl_set_eq:NN\l_1_tag_setup_restore_para_default:

\tl_set_eq:NN\l_1_tag_set_eq:NN\l_1_tag_set_eq:NN\l_1_tag_set_eq:NN\l_1_tag_set_eq:NN\l_1_tag_set_eq:NN\l_1_tag_set_eq:NN\l_1_tag_set_eq:NN\l_1_tag_set_eq:NN\l_1_tag_set_eq:NN\l_1_tag_set_eq:NN\l_1_tag_set_eq:NN\l_1_tag_set_eq:NN\l_1_tag_set_eq:NN\l_1_tag_set_eq:NN\l_1_tag_set_eq:NN\l_1_tag_set_eq:NN\l_1_tag_set_eq:NN\l_1_tag_set_eq:NN\l_1_tag_set_eq:NN\l_1_tag_set_eq:NN\l_1_tag_set_eq:NN\l_1_tag_set_eq:NN\l_1_tag_set_eq:NN\l_1_tag_set_eq:NN\l_1_tag_set_eq:NN\l_1_tag_set_eq:NN\l_1_tag_set_eq:NN\l_1_tag_set_eq:NN\l_1_tag_set_eq:NN\l_1_tag_set_eq:NN\l_1_tag_set_eq:NN\l_1_tag_set_eq:NN\l_1_tag_set_eq:NN\l_1_tag_set_eq:NN\l_1_tag_set_eq:NN\l_1_tag_set_eq:NN\l_1_tag_set_eq:NN\l_1_tag_set_eq:NN\l_1_tag_set_eq:NN\l_1_tag_set_eq:NN\l_1_tag_set_eq:NN\l_1_tag_set_eq:NN\l_1_tag_set_eq:NN\l_1_tag_set_eq:NN\l_1_tag_set_eq:NN\l_1_tag_set_eq:NN\l_1_tag_set_eq:NN\l_1_tag_set_eq:NN\l_1_tag_set_eq:NN\l_1_tag_set_eq:NN\l_1_tag_set_eq:NN\l_1_tag_set_eq:NN\l_1_tag_set_eq:NN\l
```

Open sec structures should be closed at the end of the document. This should be done before tagpdf closes the Document structure.

```
$^{111} \rightarrow \frac{1}{2} \end{nnn} \end{finish/before} \end{n-10} $$ $^{12} \rightarrow \frac{1}{2} \end{nnn} \end{finish/before} \end{n-10} $$ \end{finish/before} \
```

The commands \mainmatter, \backmatter, \frontmatter and \appendix close all Sect and Part structures.

```
\AddToHook{cmd/frontmatter/before}{\__tag_sec_end:n{-10}} 
\AddToHook{cmd/mainmatter/before} {\__tag_sec_end:n{-10}} 
\AddToHook{cmd/backmatter/before} {\__tag_sec_end:n{-10}} 
\AddToHook{cmd/appendix/before} {\__tag_sec_end:n{-10}}
```

4.2 Tagging tools

_tag_sec_end_display:

We need to provide user and package level commands

(End of definition for __tag_sec_end_display:.)

```
117 \cs_if_free:NT \tag_tool:n
118
      \cs_new_protected:Npn \tag_tool:n #1
119
120
         \tag_if_active:T { \keys_set:nn {tag / tool}{#1} }
121
      \cs_set_eq:NN\tagtool\tag_tool:n
   }
124
  \keys_define:nn { tag / tool}
125
126
       ,sec-start-part .code:n =
127
           \bool_if:NT\l__tag_sec_Sect_bool
                \_tag_sec_end:n {-1}
               \__tag_sec_begin:nn{-1}{tag=Part}
            \tag_struct_begin:n{tag=part,title=#1}
```

We remap here the text-unit from the paragraph to NonStruct. It would be better to suppress it completely as with the other sectioning commands, but this would require to redefine \@spart and \@part, as there is the grouping, and these commands are all slightly different in the standard classes. So this is delayed to the time when sectioning commands are redefined with templates.

```
135 \tl_set:\Nn\l__tag_para_main_tag_tl {\NonStruct}
```

```
136
             \tl_set:Nn\l__tag_para_tag_tl {Span}
         }
       ,sec-stop-part .code:n = {\__tag_sec_end_display:}
138
       ,sec-start-chapter .code:n =
139
140
           \bool_if:NT\l__tag_sec_Sect_bool
141
142
               __tag_sec_end:n
143
               \__tag_sec_begin:nn{0}{tag=Sect}
            }
145
           \tag_struct_begin:n{tag=chapter,title=#1}
similar to part we remap to NonStruct for now ...
           \tl_set:Nn\l__tag_para_main_tag_tl {NonStruct}
            \tl_set:Nn\l__tag_para_tag_tl {Span}
148
149
       ,sec-stop-chapter .meta:n = { sec-stop-part}
150
       ,sec-start .code:n = % #1 is a name like "section"
152
           \bool_if:NT\l__tag_sec_Sect_bool
154
                  _tag_sec_end:n
                                     {\cs_if_exist_use:c{toclevel@#1}+0}
                \__tag_sec_begin:nn {\cs_if_exist_use:c{toclevel@#1}+0}{tag=Sect}
156
            \tl_set:Nn\l__tag_para_tag_tl{#1}
         }
       ,sec-start .value_required:n = true
       ,sec-split-para .code:n = {\__tag_tool_para_split:}
       ,restore-para .code:n = {\__tag_setup_restore_para_default:}
162
       ,sec-stop .code:n =
163
164
            \par\__tag_sec_end:n
                                  {\cs_if_exist_use:c{toclevel@#1}+0}
165
166
       ,sec-stop .value_required:n = true
167
       ,sec-add-grouping .bool_set:N = \l__tag_sec_Sect_bool
168
```

5 Sectioning commands

5.1 \part and \chapter

\part and \chapter are defined by the classes. To tag them we redefine the user commands. This will probably break with various classes and with titlesec. The tagging inside relies on the para tagging. We do not yet use keyval in the optional argument, as this requires latex-dev and the naming of the keys and their key family is unclear.

```
170 \AddToHook{class/after}
171 {
172 \@ifundefined{chapter}
173 {
This redefines \part in article class.
174 \@ifundefined{part}{}
175 {
```

This are the tagging commands needed at the begin. They open a Part structure and the structure for the title of the heading.

This adds a manual target if the part is unnumbered or starred. It replaces the hyperref patches.

The main call to the underlying commands.

```
195 \IfBooleanTF
196 \{#1\}
197 \{\@spart\{#3\}\}
198 \{\@part\[{#2\]\{#3\}\}
```

and now the closing command for the tagging of the title.

```
199 \tag_tool:n {sec-stop-part}
200 }
201 }
202 }
```

Redefinitions for book and report

```
{
| Compared to the content of the c
```

This are the tagging commands needed at the begin. They open a Sect structure and the structure for the title of the heading.

```
\tag_tool:n { sec-start-chapter= #2 }
```

This adds a manual target if the chapter is unnumbered or starred. It replaces the hyperref patches.

```
211 \bool_lazy_any:nT
212 {
213 { #1 }
```

```
{
214
                  \int_compare_p:nNn {\c@secnumdepth}<{0}
                }
216
                  %in book target also needed in frontmatter
218
                  \bool_lazy_and_p:nn
219
                    { \cs_if_exist_p:c { @mainmattertrue } }
220
                    { ! \legacy_if_p:n { @mainmatter } }
221
                }
              }
223
224
The relation target-struct is stored internally by the MakeLinkTarget commands
                \MakeLinkTarget[chapter]{}
              }
226
The main call to the underlying commands.
            \IfBooleanTF
              {#1}
228
              { \@schapter {#3} }
              { \@chapter [{#2}]{#3} }
and now the closing command for the tagging of the title.
            \tag_tool:n {sec-stop-chapter}
232
and similar for \part
```

\text{\text{\text{\text{\text{\text{RenewDocumentCommand\part{\s 0{#3} m }}}}} \\ \text{\tin}\text{\texi\text{\texi}\text{\text{\text{\text{\text{\text{\texi}\tiex{\text{\texi}\tiex{\text{\text{\text{\texi\tiex{\text{\ti}\tiex{\texi}\text{\text{\

\cleardoublepage 236 \else \clearpage 239 \fi 240 \thispagestyle{plain}% \if@twocolumn 241 \onecolumn 242 \@tempswatrue 243 \else 244

244 \else
245 \@tempswafalse
246 \fi
247 \null\vfil

This are the tagging commands needed at the begin. They open a Part structure and the structure for the title of the heading.

```
\tag_tool:n {sec-start-part=#2}
```

This adds a manual target if the part is unnumbered or starred. It replaces the hyperref patches.

```
%in book target also needed in frontmatter
                  \bool_lazy_and_p:nn
257
                    { \cs_if_exist_p:c { @mainmattertrue } }
                    { ! \legacy_if_p:n { @mainmatter } }
259
260
              }
261
              {
                \MakeLinkTarget[part]{}
The main call to the underlying commands.
            \IfBooleanTF
              {#1}
266
              { \@spart {#3} }
              { \@part [{#2}]{#3} }
and now the closing command for the tagging of the title.
            \tag_tool:n{sec-stop-part}
       }
271
    }
```

5.2 Sectioning commands based on \@startsection

The tagging relies again on the para tagging: we simply exchange the tag name by the one given as #1. This assumes that a tag with the name of the sectioning type is defined. We don't try to pass the title, this will be done together with the new keyval handling in the user command.

5.2.1 Hyperref code

hyperref has to insert anchors. If the sectioning is numbered this is done by \refstepcounter (and so in vmode). For unnumbered section hyperref injects the anchor in hmode before the text, it also inserts a kern to compensate the indent.

This means that the target of numbered and unnumbered sectioning commands differ, both regarding the location and in relation to the tagging structure: The anchor from the \refstepcounter is outside of the structure created by the heading title if the para tags are used, while the other anchors are inside and so the structure destinations are different.

We unify this by suppressing the anchor from the refstep counter. Also we only go back if the indent is positive.

At first suppress all hyperref patches related to sectioning:

273 \def\hyper@nopatch@sectioning{}

\@hyp@section@target@nnn

A simple internal command. There is no need for something public, as packages defining their own version of \@startsection will probably need something slightly different based on \MakeLinkTarget.

```
280 \MakeLinkTarget#1{#2}
281 }
282 }
```

(End of definition for \Chyp@section@target@nnn. This function is documented on page ??.)

5.3 Adaption of the heading commands

We add to \Ostartsection the commands to open the Sect structure and to change the para tag.

```
\def\@startsection#1#2#3#4#5#6{%
     \if@noskipsec \leavevmode \fi
284
     \par
285
     \Otempskipa #4\relax
286
     \@afterindenttrue
     \ifdim \@tempskipa <\z@
       \@tempskipa -\@tempskipa \@afterindentfalse
     \fi
     \if@nobreak
291
       \everypar{}%
     \else
293
       \addpenalty\@secpenalty\addvspace\@tempskipa
294
295
     \tag_tool:n { sec-start=#1}%new
296
     \@ifstar
297
       {\@ssect{#3}{#4}{#5}{#6}}%
       {\@dblarg{\@sect{#1}{#2}{#3}{#4}{#5}{#6}}}}
```

To be able to correctly tag the number we need a special \Ohangfrom variant. This is a bit tricky: As the paragraph starts after the \setbox luatex attributes are not set yet and numbers are unmarked if one doesn't pay attention. The code assumes that we are in vmode!

```
300 \cs_new_protected:Npn \@kernel@tag@hangfrom #1
301 {
302     \tagstructbegin{tag=\l__tag_para_tag_tl}
303     \cs_if_exist_use:N \__tag_gincr_para_begin_int:
304     \tagstructbegin{tag=Lbl}
305     \setbox\@tempboxa
306     \hbox
307     {
```

In lua mode we have to set the attributes inside the box!

We stop tagging now, to avoid that the \noindent triggers the paratagging. We do not disable paratagging completely, to avoid that the numbering goes wrong.

```
\tag_suspend:n{hangfrom}
hangindent \wd\@tempboxa\noindent
```

Restart tagging and insert the box.

```
\tag_resume:n{hangfrom}
tagmcbegin{}\box\@tempboxa\tagmcend\tagstructend\tagmcbegin{}}
```

This command is used to tag the numbers of runin. We do not try to avoid the empty container from the paratagging, this would require more changes.

```
\cs_new_protected:Npn \@kernel@tag@svsec
     {
319
       \tag_mc_end_push:
320
       \tag_struct_begin:n{tag=Lbl}
321
       \tag_mc_begin:n{}
322
       \@svsec
323
       \tag_mc_end:
324
       \tag_struct_end:
325
       \tag_mc_begin_pop:n{}
326
327
```

 $\label{lem:condition} $$ \ensuremath{\tt Q}$ esct is only changed to replace the hyperref patches and to use the new $$ \ensuremath{\tt Q}$ eschaped to replace the hyperref patches and to use the new $$ \ensuremath{\tt Q}$ eschaped to replace the hyperref patches and to use the new $$ \ensuremath{\tt Q}$ eschaped to replace the hyperref patches and to use the new $$ \ensuremath{\tt Q}$ eschaped to replace the hyperref patches and to use the new $$ \ensuremath{\tt Q}$ eschaped to replace the hyperref patches and to use the new $$ \ensuremath{\tt Q}$ eschaped to replace the hyperref patches and to use the new $$ \ensuremath{\tt Q}$ eschaped to replace the hyperref patches and to use the new $$ \ensuremath{\tt Q}$ eschaped to replace the hyperref patches and to use the new $$ \ensuremath{\tt Q}$ eschaped to replace the hyperref patches and to use the new $$ \ensuremath{\tt Q}$ eschaped to replace the hyperref patches and to use the new $$ \ensuremath{\tt Q}$ eschaped to replace the hyperref patches and to use the new $$ \ensuremath{\tt Q}$ eschaped to replace the hyperref patches and the hyperref patches are the new $$ \ensuremath{\tt Q}$ eschaped to replace the hyperref patches and the hyperref patches are the hyperref patches and the hyperref patches are the hyperref patches ar$

```
328 (@@=)
  \def\@sect#1#2#3#4#5#6[#7]#8{%
329
     \ifnum #2>\c@secnumdepth
330
       \def\@svsec{\@hyp@section@target@nnn{[section]}{}{#3}}
331
     \else
332
       \LinkTargetOff
       \refstepcounter{#1}%
334
       \LinkTargetOn
       \protected@edef\@svsec{\@hyp@section@target@nnn{}{#1}{#3}\@seccntformat{#1}\relax}%
336
     \fi
     \@tempskipa #5\relax
     \ifdim \@tempskipa>\z@
339
       \begingroup
340
       \tagtool{para-flattened=true} % or \bool_set_true\l_@0_para_flattened_bool
341
         #6{%
342
            \ifnum #2>\c@secnumdepth
343
             \@hangfrom {\hskip #3\relax\@svsec}%
344
            \else
345
             \@kernel@tag@hangfrom{\hskip #3\relax\@svsec}%
346
            \fi
348
             \interlinepenalty \@M #8\@@par}%
349
       \endgroup
350
       \csname #1mark\endcsname{#7}%
       \addcontentsline{toc}{#1}{%
351
         \ifnum #2>\c@secnumdepth \else
352
           \protect\numberline{\csname the#1\endcsname}%
353
         \fi
354
         #7}%
355
356
       \def\@svsechd{%
357
         #6{\hskip #3\relax
358
         \ifnum #2>\c@secnumdepth
          \@svsec
         \else
361
          \@kernel@tag@svsec
362
```

```
\fi #8}%
363
          \csname #1mark\endcsname{#7}%
364
          \addcontentsline{toc}{#1}{%
365
            \ifnum #2>\c@secnumdepth \else
366
              \protect\numberline{\csname the#1\endcsname}%
367
            \fi
            #7}}%
     \fi
370
     \c \xspace (#5)
371
similar for \@ssect
372 \def\@ssect#1#2#3#4#5{%
     \@tempskipa #3\relax
     \ifdim \@tempskipa>\z@
       \begingroup
       \tagtool{para-flattened=true}
376
         #4{%
377
            \@hangfrom{\hskip #1\relax\@hyp@section@target@nnn{[section]}{}{#1}}%
378
              \interlinepenalty \@M #5\@@par}%
379
       \endgroup
380
     \else
381
       \def\@svsechd{#4{\hskip #1\relax\@hyp@section@target@nnn{[section]}{}{#3}\relax #5}}%
382
     \fi
383
     \0xsect{#3}}
```

At last **\@xsect** needs code in two places. For display headings it has to restore the default para code, for run in headings it has to separated the heading from the following text.

```
385 \def\@xsect#1{%
     \@tempskipa #1\relax
386
     \ifdim \@tempskipa>\z@
387
       \par \nobreak
388
       \vskip \@tempskipa
389
       \tag_tool:n {restore-para}
390
       \@afterheading
391
392
       \@nobreakfalse
393
       \global\@noskipsectrue
       \everypar{%
         \if@noskipsec
            \global\@noskipsecfalse
397
           {\setbox\z@\lastbox}%
           \clubpenalty\@M
399
           \begingroup \@svsechd \endgroup
400
           \unskip
401
           \tag_tool:n {sec-split-para}
402
           \@tempskipa #1\relax
403
           \hskip -\@tempskipa
           \clubpenalty \@clubpenalty
           \everypar{}%
407
         \fi}%
408
     \fi
409
     \ignorespaces}
410
411 (/package)
```