

# The **zref-vario** package<sup>\*</sup>

## Code documentation

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**EXPERIMENTAL**

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<sup>\*</sup>This file describes v0.1.1-alpha, released 2022-02-01.

<sup>†</sup><https://github.com/gusbrs/zref-vario>

# 1 Initial setup

Start the DocStrip guards.

```

1 <*package>
   Identify the internal prefix (LATEX3 DocStrip convention).
2 <@@=zrefvario>
   Identify the package.
3 \ProvidesExplPackage {zref-vario} {2022-02-01} {0.1.1-alpha}
4   {Extended LATEX page cross-references with varioref and zref-clever}
   Required packages.
5 \AddToHook { begindocument/before }
6   {
7     \RequirePackage { varioref }
8     \RequirePackage { zref-clever } [ 2022-01-28 ] % v0.2.0-alpha
9   }

```

# 2 Customization

Provide some functions to define options names in a standard form.

```

\__zrefvario_ref_opt_default_cs:nn      \__zrefvario_ref_opt_default_cs:nn {\<option>} {\<signature>}
10 \cs_new:Npn \__zrefvario_ref_opt_default_cs:nn #1#2
11   { \__zrefvario_ref_opt_default_ #1 : #2 }

(End definition for \__zrefvario_ref_opt_default_cs:nn.)

```

```

\__zrefvario_base_lang:n                \__zrefvario_base_lang:n {\<language>}
12 \cs_new:Npn \__zrefvario_base_lang:n #1
13   {
14     \zrefclever_language_if_declared:nTF {#1}
15       { \tl_use:c { \zrefclever_language_varname:n {#1} } }
16       { zv_unknown_language }
17   }
18 \cs_generate_variant:Nn \__zrefvario_base_lang:n { e }

(End definition for \__zrefvario_base_lang:n.)

```

```

\l_zrefvario_ref_language_tl            An internal version of \l_zrefclever_ref_language_tl, since we need to retrieve the
current value of the variable in multiple places.
19 \tl_new:N \l__zrefvario_ref_language_tl
20 \tl_set:Nn \l__zrefvario_ref_language_tl { \l_zrefclever_ref_language_tl }

(End definition for \l__zrefvario_ref_language_tl.)

```

```

\__zrefvario_ref_opt_name_lang_tl:nn    \__zrefvario_ref_opt_name_lang_tl:nn {\<lang>} {\<option>}
21 \cs_new:Npn \__zrefvario_ref_opt_name_lang_tl:nn #1#2
22   { g__zrefvario_ref_opt_lang_ \__zrefvario_base_lang:n {#1} _ #2 _tl }
23 \cs_generate_variant:Nn \__zrefvario_ref_opt_name_lang_tl:nn { en }

(End definition for \__zrefvario_ref_opt_name_lang_tl:nn.)

```

```

\__zrefvario_ref_opt_name_lang_cs:nnn {\lang} {\option} {\signature}}
24 \cs_new:Npn \__zrefvario_ref_opt_name_lang_cs:nnn #1#2#3
25   { \__zrefvario_ref_opt_lang_ \__zrefvario_base_lang:n {#1} _ #2 : #3 }
26 \cs_generate_variant:Nn \__zrefvario_ref_opt_name_lang_cs:nnn { enn }

```

(End definition for \\_\_zrefvario\_ref\_opt\_name\_lang\_cs:nnn.)

Retrieving options values.

```

\__zrefvario_ref_opt_tl_get:nnN \__zrefvario_ref_opt_tl_get:nnN {\lang} {\option} {\tl var to set}}
\__zrefvario_ref_opt_cs_get:nnnN \__zrefvario_ref_opt_cs_get:nnnN {\lang} {\option}
{\cs signature} {\cs to set}}
27 \cs_new_protected:Npn \__zrefvario_ref_opt_tl_get:nnN #1#2#3
28   {
29     \tl_if_exist:cTF
30     { \__zrefvario_ref_opt_name_lang_tl:nn {#1} {#2} }
31     {
32       \tl_set_eq:Nc #3
33       { \__zrefvario_ref_opt_name_lang_tl:nn {#1} {#2} }
34     }
35     {
36       \tl_set_eq:Nc #3
37       { \__zrefvario_ref_opt_name_lang_tl:nn { zv_unknown_language } {#2} }
38     }
39   }
40 \cs_generate_variant:Nn \__zrefvario_ref_opt_tl_get:nnN { xnN }
41 \cs_new_protected:Npn \__zrefvario_ref_opt_cs_get:nnnN #1#2#3#4
42   {
43     \cs_if_exist:cTF
44     { \__zrefvario_ref_opt_name_lang_cs:nnn {#1} {#2} {#3} }
45     {
46       \cs_set_eq:Nc #4
47       { \__zrefvario_ref_opt_name_lang_cs:nnn {#1} {#2} {#3} }
48     }
49     {
50       \cs_if_exist:cTF
51       { \__zrefvario_ref_opt_default_cs:nn {#2} {#3} }
52       {
53         \cs_set_eq:Nc #4
54         { \__zrefvario_ref_opt_default_cs:nn {#2} {#3} }
55       }
56       {
57         \cs_set_eq:Nc #4
58         {
59           \__zrefvario_ref_opt_name_lang_cs:nnn
60           { zv_unknown_language } {#2} {#3}
61         }
62       }
63     }
64   }
65 \cs_generate_variant:Nn \__zrefvario_ref_opt_cs_get:nnnN { xnnN }

```

(End definition for \\_\_zrefvario\_ref\_opt\_tl\_get:nnN and \\_\_zrefvario\_ref\_opt\_cs\_get:nnnN.)

Handle the options set of the user commands, and add support for varioref optional arguments. All commands can receive the same set of options \zcref can,

and these are processed the same way and “consumed” by any `\zcref` or `\zcpageref` calls. Besides those, `vother` is made available for `\zvpageref`, corresponding to its second optional argument, and `vcurrent` which is available to all commands except `\fullref`, corresponding to their first optional arguments. The distinction between `\l__zrefvario_reftextcurrent_tl` and `\l__zrefvario_vref_reftextcurrent_tl` is in their default/initial values. The default values for the optional arguments of `\vpageref`, `\vrefrange`, and `\vpagerefrange` are set to `\reftextcurrent`, while the default value of the optional argument of `\vref` is empty.

```

66 \tl_new:N \l__zrefvario_reftextcurrent_tl
67 \tl_set:Nn \l__zrefvario_reftextcurrent_tl { \reftextcurrent }
68 \tl_new:N \l__zrefvario_vref_reftextcurrent_tl
69 \tl_new:N \l__zrefvario_reftextother_tl
70 \keys_define:nn { zref-vario/current }
71 {
72   vcurrent .code:n =
73   {
74     \tl_set:Nn \l__zrefvario_reftextcurrent_tl {#1}
75     \tl_set:Nn \l__zrefvario_vref_reftextcurrent_tl {#1}
76   } ,
77   vcurrent .value_required:n = true ,
78 }
79 \keys_define:nn { zref-vario/other }
80 {
81   vother .tl_set:N = \l__zrefvario_reftextother_tl ,
82   vother .value_required:n = true ,
83 }
84 \keys_define:nn { }
85 {
86   zref-vario/ref .inherit:n =
87   { zref-clever/reference } ,
88   zref-vario/ref-oneoptarg .inherit:n =
89   { zref-clever/reference , zref-vario/current } ,
90   zref-vario/ref-twooptargs .inherit:n =
91   { zref-clever/reference , zref-vario/current , zref-vario/other } ,
92 }

```

`\zvLanguageSetup` User interface for setting “strings” (`reftext...` options) and “formats” (`...format` options) for each language.

```

\zvLanguageSetup{<language>}{<options>}

93 \tl_new:N \l__zrefvario_setup_language_tl
94 \seq_new:N \g__zrefvario_setup_languages_seq
95 \NewDocumentCommand \zvLanguageSetup { m m }
96 {
97   \AddToHook { begindocument/before }
98   {
99     \group_begin:
100     \zrefclever_language_if_declared:nTF {#1}
101     {
102       \tl_set:Nn \l__zrefvario_setup_language_tl {#1}
103       \keys_set:nn { zref-vario/langsetup } {#2}
104       \seq_gput_right:Nx \g__zrefvario_setup_languages_seq

```

```

105         { \_zrefvario_base_lang:n {#1} }
106     }
107     { \msg_warning:nnn { zref-vario } { unknown-language-setup } {#1} }
108     \group_end:
109 }
110 }
111 \msg_new:nnn { zref-vario } { unknown-language-setup }
112 {
113     Language~'~#1'~is-unknown~\msg_line_context:..~Can't-set-it~up.~
114     The~language~must~be-declared~for~'zref-clever',~see~its~documentation.
115 }
116 \@onlypreamble \zvLanguageSetup

```

(End definition for \zvLanguageSetup.)

```

117 \keys_define:nn { zref-vario/langsetup }
118 {
119     retextfaceafter .code:n =
120     {
121         \tl_gset:cn
122         {
123             \_zrefvario_ref_opt_name_lang_tl:en
124             { \l__zrefvario_setup_language_tl }
125             { retextfaceafter }
126         } {#1}
127     } ,
128     retextfacebefore .code:n =
129     {
130         \tl_gset:cn
131         {
132             \_zrefvario_ref_opt_name_lang_tl:en
133             { \l__zrefvario_setup_language_tl }
134             { retextfacebefore }
135         } {#1}
136     } ,
137     retextafter .code:n =
138     {
139         \tl_gset:cn
140         {
141             \_zrefvario_ref_opt_name_lang_tl:en
142             { \l__zrefvario_setup_language_tl }
143             { retextafter }
144         } {#1}
145     } ,
146     retextbefore .code:n =
147     {
148         \tl_gset:cn
149         {
150             \_zrefvario_ref_opt_name_lang_tl:en
151             { \l__zrefvario_setup_language_tl }
152             { retextbefore }
153         } {#1}
154     } ,
155     retextcurrent .code:n =
156     {

```

```

157     \tl_gset:cn
158     {
159         \__zrefvario_ref_opt_name_lang_tl:en
160         { \l__zrefvario_setup_language_tl }
161         { reftextcurrent }
162     } {#1}
163 },
164 reftextfaraway .code:n =
165 {
166     \cs_gset_nopar:cpn
167     {
168         \__zrefvario_ref_opt_name_lang_cs:enn
169         { \l__zrefvario_setup_language_tl }
170         { reftextfaraway } { n }
171     }
172     ##1
173     {#1}
174 },
175 reftextpagerange .code:n =
176 {
177     \cs_gset_nopar:cpn
178     {
179         \__zrefvario_ref_opt_name_lang_cs:enn
180         { \l__zrefvario_setup_language_tl }
181         { reftextpagerange } { nn }
182     }
183     ##1##2
184     {#1}
185 },
186 reftextlabelrange .code:n =
187 {
188     \cs_gset_nopar:cpn
189     {
190         \__zrefvario_ref_opt_name_lang_cs:enn
191         { \l__zrefvario_setup_language_tl }
192         { reftextlabelrange } { nn }
193     }
194     ##1##2
195     {#1}
196 },
197 vrefformat .code:n =
198 {
199     \cs_gset_nopar:cpn
200     {
201         \__zrefvario_ref_opt_name_lang_cs:enn
202         { \l__zrefvario_setup_language_tl }
203         { vrefformat } { nn }
204     }
205     ##1##2
206     {#1}
207 },
208 vrefrangeformat .code:n =
209 {
210     \cs_gset_nopar:cpn

```

```

211     {
212         \__zrefvario_ref_opt_name_lang_cs:enn
213         { \l__zrefvario_setup_language_tl }
214         { vrefrangeformat } { nnn }
215     }
216     ##1##2##3
217     {#1}
218 } ,
219 fullrefformat .code:n =
220 {
221     \cs_gset_nopar:cpn
222     {
223         \__zrefvario_ref_opt_name_lang_cs:enn
224         { \l__zrefvario_setup_language_tl }
225         { fullrefformat } { n }
226     }
227     ##1
228     {#1}
229 } ,
230 }

```

Default reference formats for all languages. These will be used by `\__zrefvario_ref_opt_cs_get:nnnN`, unless a language specific setting for the same format has been set. `\zreftextfaraway` is defined so it can be called with different arguments in `\zvpageref` (where it is alone) and in `\zfullref` (where it is the second of the pair).

```

231 \cs_new_nopar:cpn
232 { \__zrefvario_ref_opt_default_cs:nn { vrefformat } { nn } } #1#2
233 {
234     \zcref {#2} ~
235     \zvpageref [ S=false, typeset=both, vcurrent={#1} ] {#2}
236 }
237 \cs_new_nopar:cpn
238 { \__zrefvario_ref_opt_default_cs:nn { vrefrangeformat } { nnn } } #1#2#3
239 {
240     \reftextlabelrange {#2} {#3} ~
241     \zvpagerefrange [ S=false, typeset=both, vcurrent={#1} ] {#2} {#3}
242 }
243 \cs_new_nopar:cpn
244 { \__zrefvario_ref_opt_default_cs:nn { fullrefformat } { n } } #1
245 {
246     \zcref {#1} ~
247     \zreftextfaraway [ S=false, typeset=both ] {#1}
248 }
249 \NewDocumentCommand \zreftextfaraway { s O { } m }
250 { \zref@wrapper@babel \__zrefvario_zreftextfaraway:nnn {#3} {#1} {#2} }
251 \cs_new_protected:Npn \__zrefvario_zreftextfaraway:nnn #1#2#3
252 {
253     \group_begin:
254     \keys_set:nn { zref-vario/ref } {#3}
255     \bool_if:nT {#2}
256     { \keys_set:nn { zref-vario/ref } { nohyperref } }
257     \__zrefvario_varioref_setup:
258     \reftextfaraway {#1}
259     \group_end:

```

260 }

Warnings and values for missing strings / unknown languages.

```
261 \group_begin:
262 \tl_set:Nn \l__zrefvario_setup_language_tl { zv_unknown_language }
263 \AddToHook { begindocument/before }
264 {
265   \keys_set:nn { zref-vario/langsetup }
266   {
267     retextfaceafter =
268     {
269       \msg_warning:nxxx { zref-vario } { missing-string }
270       { retextfaceafter } { \l__zrefvario_ref_language_tl }
271       \zref@default
272     } ,
273     retextfacebefore =
274     {
275       \msg_warning:nxxx { zref-vario } { missing-string }
276       { retextfacebefore } { \l__zrefvario_ref_language_tl }
277       \zref@default
278     } ,
279     retextafter =
280     {
281       \msg_warning:nxxx { zref-vario } { missing-string }
282       { retextafter } { \l__zrefvario_ref_language_tl }
283       \zref@default
284     } ,
285     retextbefore =
286     {
287       \msg_warning:nxxx { zref-vario } { missing-string }
288       { retextbefore } { \l__zrefvario_ref_language_tl }
289       \zref@default
290     } ,
291     retextcurrent =
292     {
293       \msg_warning:nxxx { zref-vario } { missing-string }
294       { retextcurrent } { \l__zrefvario_ref_language_tl }
295       \zref@default
296     } ,
297     retextfaraway =
298     {
299       \msg_warning:nxxx { zref-vario } { missing-string }
300       { retextfaraway } { \l__zrefvario_ref_language_tl }
301       \zref@default
302     } ,
303     retextpagerange =
304     {
305       \msg_warning:nxxx { zref-vario } { missing-string }
306       { retextpagerange } { \l__zrefvario_ref_language_tl }
307       \zref@default
308     } ,
309     retextlabelrange =
310     {
311       \msg_warning:nxxx { zref-vario } { missing-string }
```



```

312         { reftextlabelrange } { \l__zrefvario_ref_language_tl }
313         \zref@default
314     } ,
315 }
316 }
317 \group_end:
318 \msg_new:nnn { zref-vario } { missing-string }
319 { Missing~'#1'~string~for~language~'#2'~\msg_line_context:. }

    A general initial warning in case the language is altogether not set up.

320 \AddToHook { begindocument/before }
321 {
322     \AddToHook { begindocument }
323     {
324         \seq_if_in:NxF \g__zrefvario_setup_languages_seq
325         { \__zrefvario_base_lang:e { \l__zrefvario_ref_language_tl } }
326         {
327             \msg_warning:nnx { zref-vario } { language-not-setup }
328             { \l__zrefvario_ref_language_tl }
329         }
330     }
331 }
332 \msg_new:nnn { zref-vario } { language-not-setup }
333 {
334     Language~'#1'~is~not~set~up~for~'zref-vario'.~
335     See~documentation~for~'\iow_char:N\zvLanguageSetup'.
336 }

```

### 3 User interface

`\__zrefvario_vref_pagenum:Nn` These three small functions are responsible for “connecting” varioref with zref, instead of with the standard referencing system. They are meant to locally replace their varioref counterparts: `\vref@pagenum`, `\vrefpagenum`, and `\vref@label`.

```

337 \cs_new_protected:Npn \__zrefvario_vref_pagenum:Nn #1#2
338 {
339     \exp_args:NNNo \exp_args:NNo \tl_set:Nn #1
340     { \zref@extractdefault {#2} { page } { ?? } }
341 }
342 \cs_new_protected:Npn \__zrefvario_vrefpagenum:Nn #1#2
343 {
344     \zref@refused {#2}
345     \__zrefvario_vref_pagenum:Nn #1 {#2}
346 }
347 \cs_new_protected:Npn \__zrefvario_vref_label:n #1
348 { \zref@labelbyprops {#1} { page } }

```

*(End definition for `\__zrefvario_vref_pagenum:Nn`, `\__zrefvario_vrefpagenum:Nn`, and `\__zrefvario_vref_label:n`.)*

`\__zrefvario_varioref_setup:` Sets things up for varioref to work with zref/zref-clever. It is pretty straightforward, but it is the core of the package. `\l__zrefvario_varioref_setup_bool` ensures this setup runs only once in case of nested calls to the package’s commands.

```

349 \bool_new:N \l__zrefvario_varioref_setup_bool

```

```

350 \cs_new_protected:Npn \__zrefvario_varioref_setup:
351 {
352   \bool_if:NF \l__zrefvario_varioref_setup_bool
353   {
354     \bool_set_true:N \l__zrefvario_varioref_setup_bool
355     \@vrefhandlespacefalse
356     \cs_set_eq:NN \vref@pagenum \__zrefvario_vref_pagenum:Nn
357     \cs_set_eq:NN \vrefpagenum \__zrefvario_vrefpagenum:Nn
358     \cs_set_eq:NN \vref@label \__zrefvario_vref_label:n
359     \__zrefvario_ref_opt_tl_get:xnN
360     { \l__zrefvario_ref_language_tl }
361     { retextfaceafter }
362     \retextfaceafter
363     \__zrefvario_ref_opt_tl_get:xnN
364     { \l__zrefvario_ref_language_tl }
365     { retextfacebefore }
366     \retextfacebefore
367     \__zrefvario_ref_opt_tl_get:xnN
368     { \l__zrefvario_ref_language_tl }
369     { retextafter }
370     \retextafter
371     \__zrefvario_ref_opt_tl_get:xnN
372     { \l__zrefvario_ref_language_tl }
373     { retextbefore }
374     \retextbefore
375     \__zrefvario_ref_opt_tl_get:xnN
376     { \l__zrefvario_ref_language_tl }
377     { retextcurrent }
378     \retextcurrent
379     \__zrefvario_ref_opt_cs_get:xnnN
380     { \l__zrefvario_ref_language_tl }
381     { retextfaraway } { n }
382     \retextfaraway
383     \__zrefvario_ref_opt_cs_get:xnnN
384     { \l__zrefvario_ref_language_tl }
385     { retextpagerange } { nn }
386     \retextpagerange
387     \__zrefvario_ref_opt_cs_get:xnnN
388     { \l__zrefvario_ref_language_tl }
389     { retextlabelrange } { nn }
390     \retextlabelrange
391     \__zrefvario_ref_opt_cs_get:xnnN
392     { \l__zrefvario_ref_language_tl }
393     { vrefformat } { nn }
394     \vrefformat
395     \__zrefvario_ref_opt_cs_get:xnnN
396     { \l__zrefvario_ref_language_tl }
397     { vrefrangeformat } { nnn }
398     \vrefrangeformat
399     \__zrefvario_ref_opt_cs_get:xnnN
400     { \l__zrefvario_ref_language_tl }
401     { fullrefformat } { n }
402     \fullrefformat
403   }

```

```

404 }
(End definition for \_zrefvario_varioref_setup:.)
User commands.

```

```

\zvref      \zvref<*>[<options>]{<label>}
405 \NewDocumentCommand \zvref { s O { } m }
406 { \zref@wrapper@babel \_zrefvario_zvref:nnn {#3} {#1} {#2} }
407 \cs_new_protected:Npn \_zrefvario_zvref:nnn #1#2#3
408 {
409   \group_begin:
410   \keys_set:nn { zref-vario/ref-oneoptarg } {#3}
411   \bool_if:nT {#2}
412     { \keys_set:nn { zref-vario/ref } { nohyperref } }
413   \_zrefvario_varioref_setup:
414   \_zrefvario_vref:Vn \l__zrefvario_vref_reftextcurrent_tl {#1}
415   \group_end:
416 }

```

“Ideally”, we’d be using `\vref` here, but `hyperref` redefines `\vref@star` and `\vr@f`, hard-coding what was supposed to be configurable..., so we use `\vrefformat` instead, which is the original definition of `\vref@star`, and `\vr@f` also boils down to `\vref@star` when `\@vrefhandlespace` is false, which is our case.

```

417 \cs_new_protected:Npn \_zrefvario_vref:nn #1#2
418 { \vrefformat {#1} {#2} }
419 \cs_generate_variant:Nn \_zrefvario_vref:nn { Vn }

```

(End definition for `\zvref`.)

```

\zvpageref      \zvpageref<*>[<options>]{<label>}
420 \NewDocumentCommand \zvpageref { s O { } m }
421 { \zref@wrapper@babel \_zrefvario_zvpageref:nnn {#3} {#1} {#2} }
422 \cs_new_protected:Npn \_zrefvario_zvpageref:nnn #1#2#3
423 {
424   \group_begin:
425   \keys_set:nn { zref-vario/ref-twooptargs } {#3}
426   \bool_if:nT {#2}
427     { \keys_set:nn { zref-vario/ref } { nohyperref } }
428   \_zrefvario_varioref_setup:
429   \_zrefvario_vpageref:VVn \l__zrefvario_reftextcurrent_tl
430     \l__zrefvario_reftextother_tl {#1}
431   \group_end:
432 }
433 \cs_new_protected:Npn \_zrefvario_vpageref:nnn #1#2#3
434 { \vpageref [{#1}] [{#2}] {#3} }
435 \cs_generate_variant:Nn \_zrefvario_vpageref:nnn { VVn }

```

(End definition for `\zvpageref`.)

```

\zvrefrange      \zvrefrange<*>[<options>]{<label>}{<label>}
436 \NewDocumentCommand \zvrefrange { s O { } m m }
437 {
438   \zref@wrapper@babel
439   { \zref@wrapper@babel \_zrefvario_zvrefrange:nnnn {#3} }

```

```

440     {#4} {#1} {#2}
441   }
442 \cs_new_protected:Npn \__zrefvario_zvrefrange:nnnn #1#2#3#4
443 {
444   \group_begin:
445   \keys_set:nn { zref-vario/ref-onoetarg } {#4}
446   \bool_if:nT {#3}
447     { \keys_set:nn { zref-vario/ref } { nohyperref } }
448   \__zrefvario_varioref_setup:
449   \__zrefvario_vrefrange:Vnn \l__zrefvario_reftextcurrent_tl {#1} {#2}
450   \group_end:
451 }
452 \cs_new_protected:Npn \__zrefvario_vrefrange:nnn #1#2#3
453 { \vrefrange [{#1}] {#2} {#3} }
454 \cs_generate_variant:Nn \__zrefvario_vrefrange:nnn { Vnn }
(End definition for \zvrefrange.)

```

```

\zvpagerefrange \zvpagerefrange{*}[\langle options \rangle]{\langle label \rangle}{\langle label \rangle}
455 \NewDocumentCommand \zvpagerefrange { s O { } m m }
456 {
457   \zref@wrapper@babel
458     { \zref@wrapper@babel \__zrefvario_zvpagerefrange:nnnn {#3} }
459     {#4} {#1} {#2}
460 }
461 \cs_new_protected:Npn \__zrefvario_zvpagerefrange:nnnn #1#2#3#4
462 {
463   \group_begin:
464   \keys_set:nn { zref-vario/ref-onoetarg } {#4}
465   \bool_if:nT {#3}
466     { \keys_set:nn { zref-vario/ref } { nohyperref } }
467   \__zrefvario_varioref_setup:
468   \__zrefvario_vpagerefrange:Vnn \l__zrefvario_reftextcurrent_tl {#1} {#2}
469   \group_end:
470 }
471 \cs_new_protected:Npn \__zrefvario_vpagerefrange:nnn #1#2#3
472 { \vpagerefrange [{#1}] {#2} {#3} }
473 \cs_generate_variant:Nn \__zrefvario_vpagerefrange:nnn { Vnn }
(End definition for \zvpagerefrange.)

```

```

\zfullref \zfullref{*}[\langle options \rangle]{\langle label \rangle}
474 \NewDocumentCommand \zfullref { s O { } m }
475 { \zref@wrapper@babel \__zrefvario_zfullref:nnn {#3} {#1} {#2} }
476 \cs_new_protected:Npn \__zrefvario_zfullref:nnn #1#2#3
477 {
478   \group_begin:
479   \keys_set:nn { zref-vario/ref } {#3}
480   \bool_if:nT {#2}
481     { \keys_set:nn { zref-vario/ref } { nohyperref } }
482   \__zrefvario_varioref_setup:
483   \fullref {#1}
484   \group_end:
485 }
(End definition for \zfullref.)

```

## 4 Languages

```

486 \zvLanguageSetup { english }
487 {
488   retextfaceafter = {on~the~\retextvario{facing}{next}~page} ,
489   retextfacebefore = {on~the~\retextvario{facing}{preceding}~page} ,
490   retextafter = {on~the~\retextvario{following}{next}~page} ,
491   retextbefore = {on~the~\retextvario{preceding}{previous}~page} ,
492   retextcurrent = {on~\retextvario{this}{the~current}~page} ,
493   retextfaraway = {on~\zcpageref{#1}} ,
494   retextpagerange = {on~\zcpageref[range]{#1,#2}} ,
495   retextlabelrange = {\zcref[range]{#1,#2}} ,
496 }
497 \zvLanguageSetup { german }
498 {
499   retextfaceafter = {auf~der~nächsten~Seite} ,
500   retextfacebefore = {auf~der~vorherigen~Seite} ,
501   retextafter = {auf~der~nächsten~Seite} ,
502   retextbefore = {auf~der~vorherigen~Seite} ,
503   retextcurrent = {auf~dieser~Seite} ,
504   retextfaraway = {auf~\zcpageref[d=D,g=f]{#1}} ,
505   retextpagerange = {auf~den~\zcpageref[range,d=D,g=f]{#1,#2}} ,
506   retextlabelrange = {\zcref[range]{#1,#2}} ,
507 }
508 \zvLanguageSetup { french }
509 {
510   retextfaceafter = {page~\retextvario{ci-contre}{suivante}} ,
511   retextfacebefore = {page~\retextvario{ci-contre}{précédente}} ,
512   retextafter = {page~suivante} ,
513   retextbefore = {page~précédente} ,
514   retextcurrent = {de~la~présente~page} ,
515   retextfaraway = {\zcpageref[g=f]{#1}} ,
516   retextpagerange = {\zcpageref[range,g=f]{#1,#2}} ,
517   retextlabelrange = {\zcref[range]{#1,#2}} ,
518 }
519 \zvLanguageSetup { portuguese }
520 {
521   retextfaceafter = {na~\retextvario{página-oposta}{próxima-página}} ,
522   retextfacebefore = {na~página~\retextvario{oposta}{anterior}} ,
523   retextafter = {na~\retextvario{página-seguinte}{próxima-página}} ,
524   retextbefore = {na~página~\retextvario{anterior}{precedente}} ,
525   retextcurrent = {nesta~página} ,
526   retextfaraway = {na~\zcpageref[g=f]{#1}} ,
527   retextpagerange = {nas~\zcpageref[range,g=f]{#1,#2}} ,
528   retextlabelrange = {\zcref[range]{#1,#2}} ,
529 }
530 \zvLanguageSetup { spanish }
531 {
532   retextfaceafter = {en~la~página~siguiente} ,
533   retextfacebefore = {en~la~página~anterior} ,
534   retextafter = {en~la~página~siguiente} ,
535   retextbefore = {en~la~página~anterior} ,
536   retextcurrent = {en~esta~página} ,

```

```

537   retextfaraway = {en~la~\zcpageref[g=f]{#1}} ,
538   retextpagerange = {en~las~\zcpageref[range,g=f]{#1,#2}} ,
539   retextlabelrange = {\zcref[range]{#1,#2}} ,
540 }
541 \zvLanguageSetup { dutch }
542 {
543   retextfaceafter = {op~de~\retextvario{rechter~pagina}{pagina~hiernaast}} ,
544   retextfacebefore = {op~de~\retextvario{linker~pagina}{pagina~hiernaast}} ,
545   retextafter = {op~de~\retextvario{volgende~pagina}{pagina~hierna}} ,
546   retextbefore = {op~de~\retextvario{vorige~pagina}{pagina~hiervoor}} ,
547   retextcurrent = {op~deze~pagina} ,
548   retextfaraway = {op~\zcpageref[g=f]{#1}} ,
549   retextpagerange = {op~\zcpageref[range,g=f]{#1,#2}} ,
550   retextlabelrange = {\zcref[range]{#1,#2}} ,
551 }
552 </package>

```

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