

Documented Code For glossaries v4.33

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This is the documented code for the glossaries package. This bundle comes with the following documentation:

glossariesbegin.pdf If you are a complete beginner, start with “The glossaries package: a guide for beginners”.

glossary2glossaries.pdf If you are moving over from the obsolete glossary package, read “Upgrading from the glossary package to the glossaries package”.

glossaries-user.pdf For the main user guide, read “glossaries.sty v4.33: L^AT_EX2_ε Package to Assist Generating Glossaries”.

mfirstuc-manual.pdf The commands provided by the mfirstuc package are briefly described in “mfirstuc.sty: uppercasing first letter”.

glossaries-code.pdf This document is for advanced users wishing to know more about the inner workings of the glossaries package.

INSTALL Installation instructions.

CHANGES Change log.

README Package summary.

The user level commands described in the user manual (glossaries-user.pdf) may be considered “future-proof”. Even if they become deprecated, they should still work for old documents (although they may not work in a document that also contains new commands introduced since the old commands were deprecated, and you may need to specify a compatibility mode).

The internal commands in *this* document that aren’t documented in the *user manual* should not be considered future-proof and are liable to change. If you want a new user level command, you can post a feature request at <http://www.dickimaw-books.com/feature-request.html>. If you are a package writer wanting to integrate your package with glossaries, it’s better to request a new user level command than to hack these internals.

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1 Main Package Code

1.1 Package Definition

This package requires $\text{\LaTeX}2_{\epsilon}$.

```
1 \NeedsTeXFormat{LaTeX2e}
2 \ProvidesPackage{glossaries}[2017/09/20 v4.33 (NLCT)]
```

Required packages:

```
3 \RequirePackage{ifthen}
4 \RequirePackage{xkeyval}[2006/11/18]
5 \RequirePackage{mfirstuc}
```

The textcase package has much better case changing handling, so use `\MakeTextUppercase` instead of `\MakeUppercase`

```
6 \RequirePackage{textcase}
7 \renewcommand*{\mfirstucMakeUppercase}{\MakeTextUppercase}%
8 \RequirePackage{xfor}
```

```
9 \RequirePackage{datatool-base}
```

Need to use `\new@ifnextchar` instead of `\@ifnextchar` in commands that have a final optional argument (such as `\gls`) so require `.` Thanks to Morten Høgholm for suggesting this. (This has replaced using the `xspace` package.)

```
10 \RequirePackage{amsgen}
```

As from v3.0, now loading `etoolbox`:

```
11 \RequirePackage{etoolbox}
```

Check if doc has been loaded.

```
f@gls@docloaded
```

```
12 \newif\if@gls@docloaded
13 \@ifpackageloaded{doc}%
14 {%
15   \@gls@docloadedtrue
16 }%
17 {%
18   \@ifclassloaded{nlctdoc}{\@gls@docloadedtrue}{\@gls@docloadedfalse}%
19 }
20 \if@gls@docloaded
```

\doc has been loaded, so some modifications need to be made to ensure both packages can work together. The amount of conflict has been reduced as from v4.11 and no longer involves patching internal commands.

\PrintChanges needs to use doc's version of theglossary, so save that.

org@theglossary

```
21 \let\glsorg@theglossary\theglossary
```

@endtheglossary

```
22 \let\glsorg@endtheglossary\endtheglossary
```

\PrintChanges Now redefine \PrintChanges so that it uses the original theglossary environment.

```
23 \let\glsorg@PrintChanges\PrintChanges
24 \renewcommand{\PrintChanges}{%
25   \begingroup
26     \let\theglossary\glsorg@theglossary
27     \let\endtheglossary\glsorg@endtheglossary
28     \glsorg@PrintChanges
29   \endgroup
30 }
```

End of doc stuff.

```
31 \fi
```

1.2 Package Options

debug Switch on debug mode. This will also cancel the nowarn option. This is now a choice key.

```
32 \newif\if@gls@debug
33 \define@choicekey{glossaries.sty}{debug}[\val\nr]{true,false,showtargets}[true]{%
34   \ifcase\nr\relax
35     \@gls@debugtrue
36     \renewcommand*{\GlossariesWarning}[1]{%
37       \PackageWarning{glossaries}{##1}%
38     }%
39     \renewcommand*{\GlossariesWarningNoLine}[1]{%
40       \PackageWarningNoLine{glossaries}{##1}%
41     }%
42     \let\@glsshowtarget\@gobble
43     \PackageInfo{glossaries}{debug mode ON (nowarn option disabled)}%
44   \or
45     \@gls@debugfalse
46     \let\@glsshowtarget\@gobble
47     \PackageInfo{glossaries}{debug mode OFF}%
48   \or
49     \@gls@debugtrue
50     \renewcommand*{\GlossariesWarning}[1]{%
51       \PackageWarning{glossaries}{##1}%
```

```

52 }%
53 \renewcommand*{\GlossariesWarningNoLine}[1]{%
54   \PackageWarningNoLine{glossaries}{##1}%
55 }%
56 \PackageInfo{glossaries}{debug mode ON (nowarn option disabled)}%
57 \renewcommand{\@glsshowtarget}{\glsshowtarget}%
58 \fi
59 }

```

`\glsshowtarget` If `debug=showtargets`, show the hyperlink target name in the margin.

```

60 \newcommand*{\glsshowtarget}[1]{\marginpar{\texttt{\small #1}}}

```

`\@glsshowtarget` `debug=showtargets` will redefine this.

```

61 \newcommand*{\@glsshowtarget}[1]{

```

Determine what to do if the `see` key is used before `\makeglossaries`. The default is to produce an error.

`gls@see@noindex`

```

62 \newcommand*{\@gls@see@noindex}{%
63   \PackageError{glossaries}%
64   {'\gls@xr@key' key may only be used after \string\makeglossaries\space
65   or \string\makenoidxglossaries\space (or move
66   \string\newglossaryentry\space
67   definitions into the preamble)}}%
68 {You must use \string\makeglossaries\space
69   or \string\makenoidxglossaries\space before defining
70   any entries that have a '\gls@xr@key' key. It may
71   be that the 'see' key has been written to the .glsdefs
72   file from the previous run, in which case you need to
73   move your definitions
74   to the preamble if you don't want to use
75   \string\makeglossaries\space
76   or \string\makenoidxglossaries}%
77 }

```

`seenoinindex`

```

78 \define@choicekey{glossaries.sty}{seenoinindex}[\val\nr]{error,warn,ignore}{%
79   \ifcase\nr
80     \renewcommand*{\@gls@see@noindex}{%
81       \PackageError{glossaries}%
82       {'\gls@xr@key' key may only be used after \string\makeglossaries\space
83       or \string\makenoidxglossaries}%
84       {You must use \string\makeglossaries\space
85       or \string\makenoidxglossaries\space before defining
86       any entries that have a '\gls@xr@key' key}%
87     }%
88   \or
89     \renewcommand*{\@gls@see@noindex}{%

```

```

90      \GlossariesWarning{'\gls@xr@key' key ignored}%
91    }%
92  \or
93    \renewcommand*{\@gls@see@noindex}{}%
94  \fi
95}

```

toc The toc package option will add the glossaries to the table of contents. This is a boolean key, if the value is omitted it is taken to be true.

```

96 \define@boolkey{glossaries.sty}[gls]{toc}[true]{}

```

numberline The numberline package option adds \numberline to \addcontentsline. Note that this option only has an effect if used in with toc=true.

```

97 \define@boolkey{glossaries.sty}[gls]{numberline}[true]{}

```

\@glossarysec The sectional unit used to start the glossary is stored in \@glossarysec. If chapters are defined, this is initialised to chapter, otherwise it is initialised to section.

```

98 \ifcsundef{chapter}%
99   {\newcommand*{\@glossarysec}{section}}%
100  {\newcommand*{\@glossarysec}{chapter}}

```

section The section key can be used to set the sectional unit. If no unit is specified, use section as the default. The starred form of the named sectional unit will be used. If you want some other way to start the glossary section (e.g. a numbered section) you will have to redefine \glossarysection.

```

101 \define@choicekey{glossaries.sty}{section}{part,chapter,section,%
102 subsection,subsubsection,paragraph,subparagraph}[section]{}%
103   \renewcommand*{\@glossarysec}{#1}}

```

Determine whether or not to use numbered sections.

glossarysecstar

```

104 \newcommand*{\@glossarysecstar}{*}

```

glossaryseclabel

```

105 \newcommand*{\@glossaryseclabel}{}

```

\glsautoprefix Prefix to add before label if automatically generated:

```

106 \newcommand*{\glsautoprefix}{}

```

numberedsection

```

107 \define@choicekey{glossaries.sty}{numberedsection}[\val\nr]{}%
108 false,nolabel,autolabel,nameref}[nolabel]{}%
109   \ifcase\nr\relax
110     \renewcommand*{\@glossarysecstar}{*}%
111     \renewcommand*{\@glossaryseclabel}{}%
112   \or

```

```

113 \renewcommand*{\@glossarysecstar}{}%
114 \renewcommand*{\@glossaryseclabel}{}%
115 \or
116 \renewcommand*{\@glossarysecstar}{}%
117 \renewcommand*{\@glossaryseclabel}{%
118 \label{\glsautoprefix\@glo@type}}%
119 \or
120 \renewcommand*{\@glossarysecstar}{*}%
121 \renewcommand*{\@glossaryseclabel}{%
122 \protected@edef\@currentlabelname{\glossarytoctitle}%
123 \label{\glsautoprefix\@glo@type}}%
124 \fi
125 }

```

The default glossary style is stored in `\@glossary@default@style`. This is initialised to `list`. (The `list` style is defined in the accompanying package described in [section 1.19](#).) Note that the `list` style is incompatible with `classicthesis` so change the default to `index` if that package has been loaded.

`y@default@style`

```

126 \ifpackageloaded{classicthesis}
127 {\newcommand*{\@glossary@default@style}{index}}
128 {\newcommand*{\@glossary@default@style}{list}}

```

style The default glossary style can be changed using the `style` package option. The value can be the name of any defined glossary style. The glossary style is set at the beginning of the document, so you can still use the `style` key to set a style that is defined in another package. This package comes with some predefined styles that are defined in [section 1.19](#). This now uses `\def` instead of `\renewcommand` as `\@glossary@default@style` may have been set to `\relax`.

```

129 \define@key{glossaries.sty}{style}{%
130 \def\@glossary@default@style{#1}%
131 }

```

Each `\DeclareOptionX` needs a corresponding `\DeclareOption` so that it can be passed as a document class option, so define a command that will implement both.

`s@declareoption`

```

132 \newcommand*{\@gls@declareoption}[2]{%
133 \DeclareOptionX{#1}{#2}%
134 \DeclareOption{#1}{#2}%
135 }

```

Each entry within a given glossary will have an associated number list. By default, this refers to the page numbers on which that entry has been used, but it can also refer to any counter used in the document (such as the section or equation counters). The default number list format displays the number list “as is”:

`aryentrynumbers`

```

136 \newcommand*{\glossaryentrynumbers}[1]{#1\gls@save@numberlist{#1}}

```


nonumberlist Note that the entire number list for a given entry will be passed to `\glossaryentrynumbers` so any font changes will also be applied to the delimiters. The `nonumberlist` package option suppresses the number lists (this simply redefines `\glossaryentrynumbers` to ignore its argument).

```

137 \@gls@declareoption{nonumberlist}{%
138   \renewcommand*{\glossaryentrynumbers}[1]{\gls@save@numberlist{#1}}%
139 }

```

savenumberlist Provide means to store the number list for entries.

```

140 \define@boolkey{glossaries.sty}[gls]{savenumberlist}[true]{}
141 \glssavenumberlistfalse

```

eautionumberlist

```

142 \newcommand*{\@glo@seeautonumberlist}{}

```

eautionumberlist Automatically activates number list for entries containing the `see` key.

```

143 \@gls@declareoption{seeautonumberlist}{%
144   \renewcommand*{\@glo@seeautonumberlist}{%
145     \def\@glo@prefix{\glsnextpages}%
146   }%
147 }

```

esclocations When using `makeindex` or `xindy`, the locations may need to be adjusted to ensure they're in a format that's allowed by the indexing application. This involves a bit of hackery and isn't needed if the locations are all guaranteed to be in the correct form (or if the user is prepared to post-process the glossary file before calling the relevant indexing application) so `esclocations=false` will switch off this mechanism allowing for a faster and more stable approach.

```

148 \define@boolkey{glossaries.sty}[gls]{esclocations}[true]{}
149 \glsclocationstrue

```

\@gls@loadlong

```

150 \newcommand*{\@gls@loadlong}{\RequirePackage{glossary-long}}

```

nolong This option prevents from being loaded. This means that the glossary styles that use the `longtable` environment will not be available. This option is provided to reduce overhead caused by loading unrequired packages.

```

151 \@gls@declareoption{nolong}{\renewcommand*{\@gls@loadlong}{} }

```

\@gls@loadsuper The package isn't loaded if isn't installed.

```

152 \IfFileExists{supertabular.sty}{%
153   \newcommand*{\@gls@loadsuper}{\RequirePackage{glossary-super}}{%
154     \newcommand*{\@gls@loadsuper}{} }

```

nosuper This option prevents from being loaded. This means that the glossary styles that use the `supertabular` environment will not be available. This option is provided to reduce overhead caused by loading unrequired packages.

```

155 \@gls@declareoption{nosuper}{\renewcommand*{\@gls@loadsuper}{} }

```

`\@gls@loadlist`

```

156 \newcommand*{\@gls@loadlist}{\RequirePackage{glossary-list}}

nolist This option prevents from being loaded (to reduce overheads if required). Naturally, the styles
defined in will not be available if this option is used. If the style is still set to list, the default
must be set to \relax.
157 \@gls@declareoption{nolist}{%
158 \renewcommand*{\@gls@loadlist}{%
159 \ifdefstring{\@glossary@default@style}{list}%
160 {\let\@glossary@default@style\relax}%
161 }%
162 }%
163 }

```

`\@gls@loadtree`

```

164 \newcommand*{\@gls@loadtree}{\RequirePackage{glossary-tree}}

notree This option prevents from being loaded (to reduce overheads if required). Naturally, the styles
defined in will not be available if this option is used.
165 \@gls@declareoption{notree}{\renewcommand*{\@gls@loadtree}{}}

nostyles Provide an option to suppress all the predefined styles (in the event that the user has custom
styles that are not dependent on the predefined styles).
166 \@gls@declareoption{nostyles}{%
167 \renewcommand*{\@gls@loadlong}{}%
168 \renewcommand*{\@gls@loadsuper}{}%
169 \renewcommand*{\@gls@loadlist}{}%
170 \renewcommand*{\@gls@loadtree}{}%
171 \let\@glossary@default@style\relax
172 }

```

`postdescription` The description terminator is given by `\glspostdescription` (except for the 3 and 4 column styles). This is a full stop by default. The spacefactor is adjusted in case the description ends with an upper case letter. (Patch provided by Michael Pock.)

```

173 \newcommand*{\glspostdescription}{%
174 \ifglsnopostdot\else.\spacefactor\sfcode'\. \fi
175 }

```

`nopostdot` Boolean option to suppress post description dot

```

176 \define@boolkey{glossaries.sty}[gls]{nopostdot}[true]{}
177 \glsnopostdotfalse

```

`nogroupskip` Boolean option to suppress vertical space between groups in the pre-defined styles.

```

178 \define@boolkey{glossaries.sty}[gls]{nogroupskip}[true]{}
179 \glsnogroupskipfalse

```

`ucmark` Boolean option to determine whether or not to use upper case in definition of `\glsglossarymark`

```
180 \define@boolkey{glossaries.sty}[gls]{ucmark}[true]{}
181 \@ifclassloaded{memoir}
182 {%
183   \glsucmarktrue
184 }%
185 {%
186   \glsucmarkfalse
187 }
```

`entrycounter` Defines a counter that can be used in the standard glossary styles to number each (main) entry. If true, this will define a counter called `glossaryentry`.

```
188 \define@boolkey{glossaries.sty}[gls]{entrycounter}[true]{}
189 \glsentrycounterfalse
```

`entrycounterwithin` This option can be used to set a parent counter for `glossaryentry`. This option automatically sets `entrycounter=true`.

```
190 \define@key{glossaries.sty}{counterwithin}{%
191   \renewcommand*{\@gls@counterwithin}{#1}%
192   \glsentrycountertrue
193 }
```

`s@counterwithin` The default value is no parent counter:

```
194 \newcommand*{\@gls@counterwithin}{}%
```

`subentrycounter` Define a counter that can be used in the standard glossary styles to number each level 1 entry. If true, this will define a counter called `glossarysubentry`.

```
195 \define@boolkey{glossaries.sty}[gls]{subentrycounter}[true]{}
196 \glssubentrycounterfalse
```

`default@sorttype` Initialise default sort for `\printnoidxglossary`

```
197 \newcommand*{\@gls@default@sorttype}{standard}
```

`sort` Define the sort method: `sort=standard` (default), `sort=def` (order of definition) or `sort=use` (order of use).

```
198 \define@choicekey{glossaries.sty}{sort}{standard,def,use,none}{%
199   \renewcommand*{\@gls@default@sorttype}{#1}%
200   \csname @gls@setupsort@#1\endcsname
201 }
```

`sprestandardsort`

```
\glsprestandardsort{<sort cs>}{<type>}{<label>}
```

Allow user to hook into sort mechanism. The first argument `<sort cs>` is the temporary control sequence containing the sort value before it has been sanitized and had `makeindex/xindy` special characters escaped.

```

202 \newcommand*{\glsprestandardsort}[3]{%
203   \glsdosanitizesort
204 }

eck@sortallowed
205 \newcommand*{\@glo@check@sortallowed}[1]{%

upsort@standard  Set up the macros for default sorting.
206 \newcommand*{\@gls@setupsort@standard}{%
  Store entry information when it's defined.
207   \def\do@glo@storeentry{\@glo@storeentry}%
  No count register required for standard sort.
208   \def\@gls@defsortcount##1{%
  Sort according to sort key (\@glo@sort) if provided otherwise sort according to the entry's
  name (\@glo@name). (First argument glossary type, second argument entry label.)
209   \def\@gls@defsort##1##2{%
210     \ifx\@glo@sort\@glsdefaultsort
211       \let\@glo@sort\@glo@name
212     \fi
213     \let\glsdosanitizesort\@gls@sanitizesort
214     \glsprestandardsort{\@glo@sort}{##1}{##2}%
215     \expandafter\protected@xdef\csname glo@##2@sort\endcsname{\@glo@sort}%
216   }%
  Don't need to do anything when the entry is used.
217   \def\@gls@setsort##1{%
  This sort option is allowed with \makeglossaries and \makenoidxglossaries.
218   \let\@glo@check@sortallowed\@gobble
219 }
  Set standard sort as the default:
220 \@gls@setupsort@standard

lssortnumberfmt  Format the number used as the sort key by sort=def and sort=use. Defaults to six digit num-
bering.
221 \newcommand*\glssortnumberfmt[1]{%
222   \ifnum#1<100000 0\fi
223   \ifnum#1<10000 0\fi
224   \ifnum#1<1000 0\fi
225   \ifnum#1<100 0\fi
226   \ifnum#1<10 0\fi
227   \number#1%
228 }

s@setupsort@def  Set up the macros for order of definition sorting.
229 \newcommand*{\@gls@setupsort@def}{%

```

Store entry information when it's defined.

```
230 \def\do@glo@storeentry{\@glo@storeentry}%
```

Defined count register associated with the glossary.

```
231 \def\@gls@defsortcount##1{%
232   \expandafter\global
233   \expandafter\newcount\csname glossary@##1@sortcount\endcsname
234 }%
```

Increment count register associated with the glossary and use as the sort key.

```
235 \def\@gls@defsort##1##2{%
```

It may be that the sort order was changed after the glossary was defined, so check if the count register has been defined.

```
236   \ifcsundef{glossary@##1@sortcount}%
237   {\@gls@defsortcount{##1}}%
238   {}%
239   \expandafter\global\expandafter
240   \advance\csname glossary@##1@sortcount\endcsname by 1\relax
241   \expandafter\protected@xdef\csname glo@##2@sort\endcsname{%
242     \expandafter\glssortnumberfmt
243     {\csname glossary@##1@sortcount\endcsname}}%
244 }%
```

Don't need to do anything when the entry is used.

```
245 \def\@gls@setsort##1{%
```

This sort option is allowed with `\makeglossaries` and `\makenoidxglossaries`.

```
246 \let\@glo@check@sortallowed\@gobble
247 }
```

`s@setupsort@use` Set up the macros for order of use sorting.

```
248 \newcommand*{\@gls@setupsort@use}{%
```

Don't store entry information when it's defined.

```
249 \let\do@glo@storeentry\@gobble
```

Defined count register associated with the glossary.

```
250 \def\@gls@defsortcount##1{%
251   \expandafter\global
252   \expandafter\newcount\csname glossary@##1@sortcount\endcsname
253 }%
```

Initialise the sort key to empty.

```
254 \def\@gls@defsort##1##2{%
255   \expandafter\gdef\csname glo@##2@sort\endcsname{%
256   }%
```

If the sort key hasn't been set, increment the counter associated with the glossary and set the sort key.

```
257 \def\@gls@setsort##1{%
```

Get the parent, if one exists

```
258 \edef\@glo@parent{\csname glo@##1@parent\endcsname}%
```

Set the information for the parent entry if not already done.

```
259 \ifx\@glo@parent\@empty
```

```
260 \else
```

```
261 \expandafter\@gls@setsort\expandafter{\@glo@parent}%
```

```
262 \fi
```

Set index information for this entry

```
263 \edef\@glo@type{\csname glo@##1@type\endcsname}%
```

```
264 \edef\@gls@tmp{\csname glo@##1@sort\endcsname}%
```

```
265 \ifx\@gls@tmp\@empty
```

```
266 \expandafter\global\expandafter
```

```
267 \advance\csname glossary@\@glo@type @sortcount\endcsname by 1\relax
```

```
268 \expandafter\protected\edef\csname glo@##1@sort\endcsname{%
```

```
269 \expandafter\glssortnumberfmt
```

```
270 {\csname glossary@\@glo@type @sortcount\endcsname}}%
```

```
271 \@glo@storeentry{##1}%
```

```
272 \fi
```

```
273 }%
```

This sort option is allowed with `\makeglossaries` and `\makenoidxglossaries`.

```
274 \let\@glo@check@sortallowed\@gobble
```

```
275 }
```

`@setupsort@none` Slightly improves efficiency in the event that no indexing is required.

```
276 \newcommand*{\@gls@setupsort@none}{%
```

Don't store entry index information.

```
277 \def\do@glo@storeentry##1{}%
```

No count register required for standard sort.

```
278 \def\@gls@defsortcount##1{}%
```

Don't modify sort value.

```
279 \def\@gls@defsort##1##2{%
```

```
280 \expandafter\global\expandafter\let\csname glo@##2@sort\endcsname\@glo@sort
```

```
281 }%
```

Don't need to do anything when the entry is used.

```
282 \def\@gls@setsort##1{}%
```

This sort option isn't allowed with `\makeglossaries` or `\makenoidxglossaries`.

```
283 \renewcommand\@glo@check@sortallowed[1]{\PackageError{glossaries}
```

```
284 {Option sort=none not allowed with \string##1}%
```

```
285 {(Use sort=def instead)}}%
```

```
286 }
```

`\glsdefmain` Define the main glossary. This will be the first glossary to be displayed when using `\printglossaries`. The default extensions conflict if used with `doc`, so provide different

extensions if doc loaded. (If these extensions are inappropriate, use `nomain` and manually define the main glossary with the desired extensions.)

```
287 \newcommand*{\glsdefmain}{%
288   \if@gls@docloaded
289     \newglossary[glg2]{main}{gls2}{glo2}{\glossaryname}%
290   \else
291     \newglossary{main}{gls}{glo}{\glossaryname}%
292   \fi
```

Define hook to set the toc title when translator is in use.

```
293 \newcommand*{\gls@tr@set@main@toctitle}{%
294   \translatelet{\glossarytoctitle}{Glossary}%
295 }%
296 }
```

Keep track of the default glossary. This is initialised to the main glossary, but can be changed if for some reason you want to make a secondary glossary the main glossary. This affects any commands that can optionally take a glossary name as an argument (or as the value of the type key in a key-value list). This was mainly done so that `\loadglsentries` can temporarily change `\glsdefaulttype` while it loads a file containing new glossary entries (see [section 1.10](#)).

`\glsdefaulttype`

```
297 \newcommand*{\glsdefaulttype}{main}
```

Keep track of which glossary the acronyms are in. This is initialised to `\glsdefaulttype`, but is changed by the acronym package option.

`\acronymtype`

```
298 \newcommand*{\acronymtype}{\glsdefaulttype}
```

`nomain` The `nomain` option suppress the creation of the main glossary.

```
299 \@gls@declareoption{nomain}{%
300   \let\glsdefaulttype\relax
301   \renewcommand*{\glsdefmain}{}%
302 }
```

`acronym` The `acronym` option sets an associated conditional which is used in [section 1.17](#) to determine whether or not to define a separate glossary for acronyms.

```
303 \define@boolkey{glossaries.sty}[gls]{acronym}[true]{%
304   \ifglsacronym
305     \renewcommand{\@gls@do@acronymsdef}{%
306       \DeclareAcronymList{acronym}%
307       \newglossary[alg]{acronym}{acr}{acn}{\acronymname}%
308       \renewcommand*{\acronymtype}{acronym}%
309     }
```

Define hook to set the toc title when translator is in use.

```
309 \newcommand*{\gls@tr@set@acronym@toctitle}{%
310   \translatelet{\glossarytoctitle}{Acronyms}%
311 }
```

```

311     }%
312 }%
313 \else
314   \let\@gls@do@acronymsdef\relax
315 \fi
316 }

```

`\printacronyms` Define `\printacronyms` at the start of the document if acronym is set and compatibility mode isn't on and `\printacronyms` hasn't already been defined.

```

317 \AtBeginDocument{%
318   \ifglsacronym
319     \ifbool{glscompatible-3.07}%
320     {}%
321     {%
322       \providecommand*\printacronyms[1][ ]{%
323         \printglossary[type=\acronymtype,#1]}%
324     }%
325 \fi
326 }

```

`@do@acronymsdef` Set default value

```

327 \newcommand*\@gls@do@acronymsdef{}

```

`acronyms` Provide a synonym for `acronym=true` that can be passed via the document class options.

```

328 \@gls@declareoption{acronyms}{%
329   \glsacronymtrue
330   \renewcommand*\@gls@do@acronymsdef{}%
331   \DeclareAcronymList{acronym}%
332   \newglossary[alg]{acronym}{acr}{acn}{\acronymname}%
333   \renewcommand*\acronymtype{acronym}%

```

Define hook to set the toc title when translator is in use.

```

334   \newcommand*\@gls@tr@set@acronym@toctitle{%
335     \translatelet{\glossarytoctitle}{Acronyms}%
336   }%
337 }%
338 }

```

`glsacronymlists` Comma-separated list of glossary labels indicating which glossaries contain acronyms. Note that `\SetAcronymStyle` must be used after adding labels to this macro.

```

339 \newcommand*\@glsacronymlists{}

```

`dtoacronymlists`

```

340 \newcommand*\@addtoacronymlists[1]{%
341   \ifx\@glsacronymlists\@empty
342     \protected@xdef\@glsacronymlists{#1}%
343   \else
344     \protected@xdef\@glsacronymlists{\@glsacronymlists,#1}%
345   \fi
346 }

```


`\DeclareAcronymList` Identifies the named glossary as a list of acronyms and adds to the list. (Doesn't check if the glossary exists, but checks if label already in list. Use `\SetAcronymStyle` after identifying all the acronym lists.)

```
347 \newcommand*{\DeclareAcronymList}[1]{%
348   \glsIfListOfAcronyms{#1}{\@addtoacronymlists{#1}}%
349 }
```

`\IfListOfAcronyms`

`\glsIfListOfAcronyms{<label>}{<true part>}{<false part>}`

Determines if the glossary with the given label has been identified as being a list of acronyms.

```
350 \newcommand{\glsIfListOfAcronyms}[1]{%
351   \edef\@do@gls@islistofacronyms{%
352     \noexpand\@gls@islistofacronyms{#1}{\@glsacronymlists}}%
353   \@do@gls@islistofacronyms
354 }
```

Internal command requires label and list to be expanded:

```
355 \newcommand{\@gls@islistofacronyms}[4]{%
356   \def\gls@islistofacronyms##1,#1,##2\end@gls@islistofacronyms{%
357     \def\@before{##1}\def\@after{##2}}%
358   \gls@islistofacronyms,#2,#1,\@nil\end@gls@islistofacronyms
359   \ifx\@after\@nnil
```

Not found

```
360   #4%
361   \else
```

Found

```
362   #3%
363   \fi
364 }
```

`\glsisacronymlist` Convenient boolean.

```
365 \newif\if@glsisacronymlist
```

`\chkisacronymlist` Sets the above boolean if argument is a label representing a list of acronyms.

```
366 \newcommand*{\chkisacronymlist}[1]{%
367   \glsIfListOfAcronyms{#1}%
368   {\@glsisacronymlisttrue}{\@glsisacronymlistfalse}%
369 }
```

`\SetAcronymLists` Sets the “list of acronyms” list. Argument must be a comma-separated list of glossary labels. (Doesn't check at this point if the glossaries exists.)

```
370 \newcommand*{\SetAcronymLists}[1]{%
371   \renewcommand*{\@glsacronymlists}{#1}%
372 }
```

acronymlists

```
373 \define@key{glossaries.sty}{acronymlists}{%
374   \DeclareAcronymList{#1}%
375 }
```

The default counter associated with the numbers in the glossary is stored in `\glscounter`. This is initialised to the page counter. This is used as the default counter when a new glossary is defined, unless a different counter is specified in the optional argument to `\newglossary` (see [section 1.6](#)).

`\glscounter`

```
376 \newcommand{\glscounter}{page}
```

counter The counter option changes the default counter. (This just redefines `\glscounter`.)

```
377 \define@key{glossaries.sty}{counter}{%
378   \renewcommand*\glscounter{#1}%
379 }
```

`gls@nohyperlist`

```
380 \newcommand*\gls@nohyperlist{}
```

`lareNoHyperList`

```
381 \newcommand*\GlsDeclareNoHyperList[1]{%
382   \ifdefempty\gls@nohyperlist
383   {%
384     \renewcommand*\gls@nohyperlist{#1}%
385   }%
386   {%
387     \appto\gls@nohyperlist{,#1}%
388   }%
389 }
```

`nohypertypes`

```
390 \define@key{glossaries.sty}{nohypertypes}{%
391   \GlsDeclareNoHyperList{#1}%
392 }
```

`ossariesWarning` Prints a warning message.

```
393 \newcommand*\GlossariesWarning[1]{%
394   \PackageWarning{glossaries}{#1}%
395 }
```

`esWarningNoLine` Prints a warning message without the line number.

```
396 \newcommand*\GlossariesWarningNoLine[1]{%
397   \PackageWarningNoLine{glossaries}{#1}%
398 }
```

tentrieswarning Warn user that sorting may take a long time. This is actually an informational message rather than a warning so just use \typeout.

```
399 \newcommand{\glosortentrieswarning}{%
400 \typeout{Using TeX to sort glossary entries---this may
401 take a while}%
402 }
```

nowarn Define package option to suppress warnings

```
403 \@gls@declareoption{nowarn}{%
404 \ifgls@debug
405 \GlossariesWarning{Warnings can't be suppressed in debug mode}%
406 \else
407 \renewcommand*{\GlossariesWarning}[1]{}%
408 \renewcommand*{\GlossariesWarningNoLine}[1]{}%
409 \renewcommand*{\glosortentrieswarning}{}%
410 \renewcommand*{\@gls@missinglang@warn}[2]{}%
411 \fi
412 }
```

issinglang@warn Missing language warning.

```
413 \newcommand*{\@gls@missinglang@warn}[2]{%
414 \PackageWarningNoLine{glossaries}%
415 {No language module detected for '#1'.\MessageBreak
416 Language modules need to be installed separately.\MessageBreak
417 Please check on CTAN for a bundle called\MessageBreak
418 'glossaries-#2' or similar}%
419 }
```

nolangwarn Suppress warning if language support not found.

```
420 \@gls@declareoption{nolangwarn}{%
421 \renewcommand*{\@gls@missinglang@warn}[2]{}%
422 }
```

nonglossdefined Issue a warning if overriding \printglossary

```
423 \newcommand*{\@gls@warnonglossdefined}{%
424 \GlossariesWarning{Overriding \string\printglossary}%
425 }
```

theglossdefined Issue a warning if overriding theglossary

```
426 \newcommand*{\@gls@warnontheglossdefined}{%
427 \GlossariesWarning{Overriding 'theglossary' environment}%
428 }
```

noredefwarn Suppress warning on redefinition of \printglossary

```
429 \@gls@declareoption{noredefwarn}{%
430 \renewcommand*{\@gls@warnonglossdefined}{}%
431 \renewcommand*{\@gls@warnontheglossdefined}{}%
432 }
```

As from version 3.08a, the only information written to the external glossary files are the label and sort values. Therefore, now, the only sanitize option that makes sense is the one for the sort key. so the sanitize option is now deprecated and there is only a sanitizesort option.

ls@sanitizedesc

```
433 \newcommand*{\@gls@sanitizedesc}{%
434 }
```

glssetexpandfield

```
\glssetexpandfield{<field>}
```

Sets field to always expand.

```
435 \newcommand*{\glssetexpandfield}[1]{%
436   \csdef{gls@assign@#1@field}##1##2{%
437     \@gls@expand@field{##1}{#1}{##2}%
438   }%
439 }
```

glssetnoexpandfield

```
\glssetnoexpandfield{<field>}
```

Sets field to never expand.

```
440 \newcommand*{\glssetnoexpandfield}[1]{%
441   \csdef{gls@assign@#1@field}##1##2{%
442     \@gls@noexpand@field{##1}{#1}{##2}%
443   }%
444 }
```

sign@type@field The type must always be expandable.

```
445 \glssetexpandfield{type}
```

sign@desc@field The description is not expanded by default:

```
446 \glssetnoexpandfield{desc}
```

descplural@field

```
447 \glssetnoexpandfield{descplural}
```

ls@sanitizename

```
448 \newcommand*{\@gls@sanitizename}{}
```

sign@name@field Don't expand name by default.

```
449 \glssetnoexpandfield{name}
```

@sanitizesymbol

```
450 \newcommand*{\@gls@sanitizesymbol}{}
```

gn@symbol@field Don't expand symbol by default.
451 \glssetnoexpandfield{symbol}

bolplural@field
452 \glssetnoexpandfield{symbolplural}

Sanitizing stuff:

ls@sanitizesort
453 \newcommand*{\@gls@sanitizesort}{%
454 \ifglssanitizesort
455 \@gls@sanitizesort
456 \else
457 \@gls@nosanitizesort
458 \fi
459 }

ls@sanitizesort
460 \newcommand*{\@gls@sanitizesort{%
461 \@onelevel@sanitize\@glo@sort
462 }

@nosanitizesort
463 \newcommand*{\@gls@nosanitizesort}{}

dx@sanitizesort Remove braces around first character (if present) before sanitizing.
464 \newcommand*{\@gls@noidx@sanitizesort{%
465 \ifdefvoid\@glo@sort
466 {}%
467 {%
468 \expandafter\@gls@noidx@sanitizesort\@glo@sort\gls@end@sanitizesort
469 }%
470 }
471 \def\@gls@noidx@sanitizesort#1#2\gls@end@sanitizesort{%
472 \def\@glo@sort{#1#2}%
473 \@onelevel@sanitize\@glo@sort
474 }

@nosanitizesort
475 \newcommand*{\@gls@noidx@nosanitizesort}{%
476 \ifdefvoid\@glo@sort
477 {}%
478 {%
479 \expandafter\@gls@noidx@no@sanitizesort\@glo@sort\gls@end@sanitizesort
480 }%
481 }
482 \def\@gls@noidx@no@sanitizesort#1#2\gls@end@sanitizesort{%
483 \bgroup

```

484 \glsnoidxstripaccents
485 \protected@xdef\@glo@sort{#1#2}%
486 \egroup
487 \let\@glo@sort\@glo@sort
488 }

```

`idxstripaccents` This strips accents by redefining the standard accent commands to just do their argument. (This will be localised since `\glsnoidxstripaccents` is used within a group.) Anything outside this standard set really shouldn't be using `\makenoidxglossaries`.

```

489 \newcommand*\glsnoidxstripaccents{%
490 \let\IeC\@firstofone
491 \let\'\@firstofone
492 \let\'\@firstofone
493 \let\~\@firstofone
494 \let\"@firstofone
495 \let\u\@firstofone
496 \let\t\@firstofone
497 \let\d\@firstofone
498 \let\r\@firstofone
499 \let\=\@firstofone
500 \let\.\@firstofone
501 \let\~\@firstofone
502 \let\v\@firstofone
503 \let\H\@firstofone
504 \let\c\@firstofone
505 \let\b\@firstofone

506 \let\a\@secondoftwo
507 \def\AE{AE}%
508 \def\ae{ae}%
509 \def\OE{OE}%
510 \def\oe{oe}%
511 \def\AA{AA}%
512 \def\aa{aa}%
513 \def\L{L}%
514 \def\l{l}%
515 \def\O{O}%
516 \def\o{o}%
517 \def\SS{SS}%
518 \def\ss{ss}%
519 \def\th{th}%

520 \def\TH{TH}%
521 \def\dh{dh}%
522 \def\DH{DH}%
523 }

```

Before defining the `sanitize` package option, The key-value list for the `sanitize` value needs to be defined. These are all boolean keys. If they are not given a value, assume true.

```

524 \define@boolkey[glS]{sanitize}{description}[true]{%
525   \GlossariesWarning{sanitize={description} package option deprecated}%
526   \ifglS@sanitize@description
527     \glSsetnoexpandfield{desc}%
528     \glSsetnoexpandfield{descplural}%
529   \else
530     \glSsetexpandfield{desc}%
531     \glSsetexpandfield{descplural}%
532   \fi
533 }

534 \define@boolkey[glS]{sanitize}{name}[true]{%
535   \GlossariesWarning{sanitize={name} package option deprecated}%
536   \ifglS@sanitize@name
537     \glSsetnoexpandfield{name}%
538   \else
539     \glSsetexpandfield{name}%
540   \fi
541 }

542 \define@boolkey[glS]{sanitize}{symbol}[true]{%
543   \GlossariesWarning{sanitize={symbol} package option deprecated}%
544   \ifglS@sanitize@symbol
545     \glSsetnoexpandfield{symbol}%
546     \glSsetnoexpandfield{symbolplural}%
547   \else
548     \glSsetexpandfield{symbol}%
549     \glSsetexpandfield{symbolplural}%
550   \fi
551 }

```

sanitizesort

```

552 \define@boolkey{glossaries.sty}[glS]{sanitizesort}[true]{%
553   \ifglssanitizesort
554     \glSsetnoexpandfield{sortvalue}%
555     \renewcommand*{\@glS@noidx@setsanitizesort}{%
556       \glssanitizesorttrue
557       \glSsetnoexpandfield{sortvalue}%
558     }%
559   \else
560     \glSsetexpandfield{sortvalue}%
561     \renewcommand*{\@glS@noidx@setsanitizesort}{%
562       \glssanitizesortfalse
563       \glSsetexpandfield{sortvalue}%
564     }%
565   \fi
566 }

```

Default setting:

```

567 \glssanitizesorttrue
568 \glSsetnoexpandfield{sortvalue}%

```

setsanitizesort Default behaviour for \makenoidxglossaries is sanitizesort=false.

```
569 \newcommand*{\@gls@noidx@setsanitizesort}{%
570   \glssanitizesortfalse
571   \glssetexpandfield{sortvalue}%
572 }

573 \define@choicekey[gls]{sanitize}{sort}{true,false}[true]{%
574   \setbool{glssanitizesort}{#1}%
575   \ifglssanitizesort
576     \glssetnoexpandfield{sortvalue}%
577   \else
578     \glssetexpandfield{sortvalue}%
579   \fi
580   \GlossariesWarning{sanitize={sort} package option
581     deprecated. Use sanitizesort instead}%
582 }
```

sanitize

```
583 \define@key{glossaries.sty}{sanitize}[description=true,symbol=true,name=true]{%
584   \ifthenelse{\equal{#1}{none}}{%
585     {%
586       \GlossariesWarning{sanitize package option deprecated}%
587       \glssetexpandfield{name}%
588       \glssetexpandfield{symbol}%
589       \glssetexpandfield{symbolplural}%
590       \glssetexpandfield{desc}%
591       \glssetexpandfield{descplural}%
592     }%
593   }{%
594     \setkeys[gls]{sanitize}{#1}%
595   }%
596 }
```

\ifglstranslate As from version 3.13a, the translator package option is a choice rather than boolean option so now need to define conditional:

```
597 \newif\ifglstranslate
```

otranslatorhook \@gls@notranslatorhook has been removed.

s@usetranslator

```
598 \newcommand*{\@gls@usetranslator{%
polyglossia tricks \@ifpackageloaded into thinking that babel has been loaded, so check for
polyglossia as well.
599   \@ifpackageloaded{polyglossia}%
600   {%
601     \let\glsifusetranslator\@secondoftwo
602   }%
603   {%
```



```

604 \ifpackageloaded{babel}%
605 {%
606 \IfFileExists{translator.sty}%
607 {%
608 \RequirePackage{translator}%
609 \let\glsifusetranslator\@firstoftwo
610 }%
611 }%
612 }%
613 {}%
614 }%
615 }

```

dtranslatordict Checks if given translator dictionary has been loaded.

```

616 \newcommand{\glsifusedtranslator}{3}{%
617 \glsifusetranslator
618 {\ifcsdef{ver@glossaries-dictionary-#1.dict}{#2}{#3}}%
619 {#3}%
620 }

```

notranslate Provide a synonym for `translate=false` that can be passed via the document class.

```

621 \@gls@declareoption{notranslate}{%
622 \glstranslatefalse
623 \let\@gls@usetranslator\relax
624 \let\glsifusetranslator\@secondoftwo
625 }

```

translate Define `translate` option. If false don't set up multi-lingual support.

```

626 \define@choicekey{glossaries.sty}{translate}[\val\nr]%
627 {true,false,babel}[true]%
628 {%
629 \ifcase\nr\relax
630 \glstranslatetrue
631 \renewcommand*\@gls@usetranslator{%
632 \@ifpackageloaded{polyglossia}%
633 {%
634 \let\glsifusetranslator\@secondoftwo
635 }%
636 {%
637 \@ifpackageloaded{babel}%
638 {%
639 \IfFileExists{translator.sty}%
640 {%
641 \RequirePackage{translator}%
642 \let\glsifusetranslator\@firstoftwo
643 }%
644 }%
645 }%
646 {}%

```

```

647     }%
648 }%
649 \or
650   \glstranslatefalse
651   \let\@gls@usetranslator\relax
652   \let\glsifusetranslator\@secondoftwo
653 \or
654   \glstranslatetrue
655   \let\@gls@usetranslator\relax
656   \let\glsifusetranslator\@secondoftwo
657 \fi
658 }

```

Set the default value:

```

659 \glstranslatefalse
660 \let\glsifusetranslator\@secondoftwo
661 \@ifpackageloaded{translator}%
662 {%
663   \glstranslatetrue
664   \let\glsifusetranslator\@firstoftwo
665 }%
666 {%
667   \@for\gls@thissty:=tracklang,babel,ngerman,polyglossia\do
668   {
669     \@ifpackageloaded{\gls@thissty}%
670     {%
671       \glstranslatetrue
672       \@endfortrue
673     }%
674     {}%
675   }
676 }

```

indexonlyfirst Set whether to only index on first use.

```

677 \define@boolkey{glossaries.sty}[gls]{indexonlyfirst}[true]{}
678 \glsindexonlyfirstfalse

```

hyperfirst Set whether or not terms should have a hyperlink on first use.

```

679 \define@boolkey{glossaries.sty}[gls]{hyperfirst}[true]{}
680 \glshyperfirsttrue

```

gls@setacrstyle Keep track of whether an acronym style has been set (for the benefit of \setupglossaries):

```

681 \newcommand*{\@gls@setacrstyle}{}

```

footnote Set the long form of the acronym in footnote on first use.

```

682 \define@boolkey{glossaries.sty}[glsacr]{footnote}[true]{}
683 \ifbool{glsacrdescription}%
684 {}%
685 {%

```

```

686 \renewcommand*{\@gls@sanitizedesc}{}%
687 }%
688 \renewcommand*{\@gls@setacrstyle}{\SetAcronymStyle}%
689 }

```

description Allow acronyms to have a description (needs to be set using the description key in the optional argument of `\newacronym`).

```

690 \define@boolkey{glossaries.sty}[glsacr]{description}[true]{%
691 \renewcommand*{\@gls@sanitizesymbol}{}%
692 \renewcommand*{\@gls@setacrstyle}{\SetAcronymStyle}%
693 }

```

smallcaps Define `\newacronym` to set the short form in small capitals.

```

694 \define@boolkey{glossaries.sty}[glsacr]{smallcaps}[true]{%
695 \renewcommand*{\@gls@sanitizesymbol}{}%
696 \renewcommand*{\@gls@setacrstyle}{\SetAcronymStyle}%
697 }

```

smaller Define `\newacronym` to set the short form using `\smaller` which obviously needs to be defined by loading the appropriate package.

```

698 \define@boolkey{glossaries.sty}[glsacr]{smaller}[true]{%
699 \renewcommand*{\@gls@sanitizesymbol}{}%
700 \renewcommand*{\@gls@setacrstyle}{\SetAcronymStyle}%
701 }

```

dua Define `\newacronym` to always use the long forms (i.e. don't use acronyms)

```

702 \define@boolkey{glossaries.sty}[glsacr]{dua}[true]{%
703 \renewcommand*{\@gls@sanitizesymbol}{}%
704 \renewcommand*{\@gls@setacrstyle}{\SetAcronymStyle}%
705 }

```

shortcuts Define acronym shortcuts.

```

706 \define@boolkey{glossaries.sty}[glsacr]{shortcuts}[true]{%

```

\glsorder Stores the glossary ordering. This may either be “word” or “letter”. This passes the relevant information to `makeglossaries`. The default is word ordering.

```

707 \newcommand*{\glsorder}{word}

```

\@glsorder The ordering information is written to the auxiliary file for `makeglossaries`, so ignore the auxiliary information.

```

708 \newcommand*{\@glsorder}[1]{}

```

order

```

709 \define@choicekey{glossaries.sty}{order}{word,letter}{%
710 \def\glsorder{#1}}

```

`\ifglxindy` Provide boolean to determine whether `xindy` or `makeindex` will be used to sort the glossaries.

```
711 \newif\ifglxindy
```

The default is `makeindex`:

```
712 \glxindyfalse
```

`makeindex` Define package option to specify that `makeindex` will be used to sort the glossaries:

```
713 \@gls@declareoption{makeindex}{\glxindyfalse}
```

The `xindy` package option may have a value which in turn can be a key=value list. First define the keys for this sub-list. The boolean `glsnumbers` determines whether to automatically add the `glsnumbers` letter group.

```
714 \define@boolkey[gls]{xindy}{glsnumbers}[true]{}
715 \gls@xindy@glsnumberstrue
```

`y@main@language` Define what language to use for each glossary type (if a language is not defined for a particular glossary type the language specified for the main glossary is used.)

```
716 \def\xdy@main@language{\language}%
```

Define key to set the language

```
717 \define@key[gls]{xindy}{language}{\def\xdy@main@language{#1}}
```

`\gls@codepage` Define the code page. If `\inputencodingname` is defined use that, otherwise have initialise with no codepage.

```
718 \ifcsundef{inputencodingname}{%
719   \def\gls@codepage{}}{%
720   \def\gls@codepage{\inputencodingname}
721 }
```

Define a key to set the code page.

```
722 \define@key[gls]{xindy}{codepage}{\def\gls@codepage{#1}}
```

`xindy` Define package option to specify that `xindy` will be used to sort the glossaries:

```
723 \define@key{glossaries.sty}{xindy}[]{}%
724   \glxindytrue
725   \setkeys[gls]{xindy}{#1}%
726 }
```

`xindygloss` Provide a synonym for `xindy` that can be passed via the document class options.

```
727 \@gls@declareoption{xindygloss}{%
728   \glxindytrue
729 }
```

`ndynoglsnumbers` Provide a synonym for `xindy=glsnumbers=false` that can be passed via the document class options.

```
730 \@gls@declareoption{xindynoglsnumbers}{%
731   \glxindytrue
732   \gls@xindy@glsnumbersfalse
733 }
```

automake If this setting is on, automatically run **makeindex/xindy** at the end of the document. Must be used with `\makeglossaries`. Default is false.

```

734 \define@boolkey{glossaries.sty}[gls]{automake}[true]{%
735   \ifglssautomake
736     \renewcommand*{\@gls@doautomake}{%
737       \PackageError{glossaries}{You must use
738       \string\makeglossaries\space with automake=true}
739       {%
740         Either remove the automake=true setting or
741         add \string\makeglossaries\space to your document preamble.%
742       }%
743     }%
744   \else
745     \renewcommand*{\@gls@doautomake}{}%
746   \fi
747 }
748 \glssautomakefalse

```

@gls@doautomake

```

749 \newcommand*{\@gls@doautomake}{}
750 \AtEndDocument{\@gls@doautomake}

```

savewrites The savewrites package option is provided to save on the number of write registers.

```

751 \define@boolkey{glossaries.sty}[gls]{savewrites}[true]{%
752   \ifglssavewrites
753     \renewcommand*{\glswritefiles}{\@glswritefiles}%
754   \else
755     \let\glswritefiles\@empty
756   \fi
757 }

```

Set default:

```

758 \glssavewritesfalse
759 \let\glswritefiles\@empty

```

compatible-3.07

```

760 \define@boolkey{glossaries.sty}[gls]{compatible-3.07}[true]{}
761 \boolfalse{glscpatible-3.07}

```

compatible-2.07

```

762 \define@boolkey{glossaries.sty}[gls]{compatible-2.07}[true]{%
  Also set 3.07 compatibility if this option is set.
763   \ifbool{glscpatible-2.07}{%
764     {%
765       \booltrue{glscpatible-3.07}%
766     }%
767   }%
768 }
769 \boolfalse{glscpatible-2.07}

```

symbols Create a “symbols” glossary type

```
770 \@gls@declareoption{symbols}{%  
771 \let\@gls@do@symbolsdef\@gls@symbolsdef  
772 }
```

Default is not to define the symbols glossary:

```
773 \newcommand*{\@gls@do@symbolsdef}{}
```

@gls@symbolsdef

```
774 \newcommand*{\@gls@symbolsdef}{%  
775 \newglossary[slg]{symbols}{sls}{slo}{\glssymbolsgroupname}%  
776 \newcommand*{\printsymbols}[1] [] {\printglossary[type=symbols,##1]}%
```

Define hook to set the toc title when translator is in use.

```
777 \newcommand*{\gls@tr@set@symbols@toctitle}{%  
778 \translatelet{\glossarytoctitle}{Symbols (glossaries)}%  
779 }%  
780 }%
```

numbers Create a “symbols” glossary type

```
781 \@gls@declareoption{numbers}{%  
782 \let\@gls@do@numbersdef\@gls@numbersdef  
783 }
```

Default is not to define the numbers glossary:

```
784 \newcommand*{\@gls@do@numbersdef}{}
```

@gls@numbersdef

```
785 \newcommand*{\@gls@numbersdef}{%  
786 \newglossary[nlg]{numbers}{nls}{nlo}{\glsnumbersgroupname}%  
787 \newcommand*{\printnumbers}[1] [] {\printglossary[type=numbers,##1]}%
```

Define hook to set the toc title when translator is in use.

```
788 \newcommand*{\gls@tr@set@numbers@toctitle}{%  
789 \translatelet{\glossarytoctitle}{Numbers (glossaries)}%  
790 }%  
791 }%
```

index Create an “index” glossary type

```
792 \@gls@declareoption{index}{%  
793 \let\@gls@do@indexdef\@gls@indexdef  
794 }
```

Default is not to define index glossary:

```
795 \newcommand*{\@gls@do@indexdef}{}
```

@gls@indexdef \indexname isn't set by glossaries.

```
796 \newcommand*{\@gls@indexdef}{%  
797 \newglossary[ilg]{index}{ind}{idx}{\indexname}%  
798 \newcommand*{\printindex}[1] [] {\printglossary[type=index,##1]}%
```

```

799 \newcommand*{\newterm}[2] [] {%
800   \newglossaryentry{##2}%
801   {type={index},name={##2},description={\nopostdesc},##1}}
802 }%

```

Process package options. First process any options that have been passed via the document class.

```

803 \@for\CurrentOption := \@declaredoptions\do{%
804   \ifx\CurrentOption \@empty
805   \else
806     \expandtwoargs
807     \in@ {,\CurrentOption ,}{,\@classoptionslist,\@curroptions,}%
808     \ifin@
809     \@use@option
810     \expandafter \let\csname ds@\CurrentOption\endcsname \@empty
811   \fi
812 \fi
813 }

```

Now process options passed to the package:

```
814 \ProcessOptionsX
```

Load backward compatibility stuff:

```
815 \RequirePackage{glossaries-compatible-307}
```

`setupglossaries` Provide way to set options after package has been loaded. However, some options must be set before `\ProcessOptionsX`, so they have to be disabled:

```

816 \disable@keys{glossaries.sty}{compatible-2.07,%
817 xindy,xindygloss,xindynoglnumbers,makeindex,%
818 acronym,translate,notranslate,nolong,nosuper,notree,nostyles,nomain}

```

Now define `\setupglossaries`:

```

819 \newcommand*{\setupglossaries}[1] {%
820   \renewcommand*{\@gls@setacrstyle}{}%
821   \ifglsacrshortcuts
822     \def\@gls@setupshortcuts{\glsacrshortcutstrue}%
823   \else
824     \def\@gls@setupshortcuts{%
825       \ifglsacrshortcuts
826         \DefineAcronymSynonyms
827       \fi
828     }%
829   \fi
830   \glsacrshortcutsfalse
831   \let\@gls@do@numbersdef\relax
832   \let\@gls@do@symbolssdef\relax
833   \let\@gls@do@indexdef\relax
834   \let\@gls@do@acronymsdef\relax
835   \setkeys{glossaries.sty}{#1}%
836   \@gls@setacrstyle

```

```

837 \@gls@setupshortcuts
838 \@gls@do@acronymsdef
839 \@gls@do@numbersdef
840 \@gls@do@symbolssdef
841 \@gls@do@indexdef
842 }

```

If chapters are defined and the user has requested the section counter as a package option, `\@chapter` will be modified so that it adds a `section.⟨n⟩.0` target, otherwise entries placed before the first section of a chapter will have undefined links.

The same problem will also occur if a lower sectional unit is used, but this is less likely to happen. If it does, or if you change `\glscounter` to `section` later, you will have to specify a different counter for the entries that give rise to a name`{⟨section-level⟩.⟨n⟩.0}` non-existent warning (e.g. `\gls[counter=chapter]{label}`).

```

843 \ifthenelse{\equal{\glscounter}{section}}{%
844 {%
845   \ifcsundef{chapter}{}%
846   {%
847     \let\@gls@old@chapter\@chapter
848     \def\@chapter[#1]#2{\@gls@old@chapter[#1]{#2}%
849     \ifcsundef{hyperdef}{}{\hyperdef{section}{\thesection}{}}}%
850   }%
851 }%
852 {}

```

`\@onlypremakeg` Some commands only have an effect when used before `\makeglossaries`. So define a list of commands that should be disabled after `\makeglossaries`

```

853 \newcommand*{\@gls@onlypremakeg}{}

```

`\@onlypremakeg` Adds the specified control sequence to the list of commands that must be disabled after `\makeglossaries`.

```

854 \newcommand*{\@onlypremakeg}[1]{%
855   \ifx\@gls@onlypremakeg\@empty
856     \def\@gls@onlypremakeg{#1}%
857   \else
858     \expandafter\toks@\expandafter{\@gls@onlypremakeg}%
859     \edef\@gls@onlypremakeg{\the\toks@,\noexpand#1}%
860   \fi
861 }

```

`\@onlypremakeg` Disable all commands listed in `\@gls@onlypremakeg`

```

862 \newcommand*{\@disable@onlypremakeg}{%
863   \@for\@thiscs:=\@gls@onlypremakeg\do{%
864     \expandafter\@disable@premakecs\@thiscs%
865   }}

```

`\@disable@premakecs` Disables the given command.


```

866 \newcommand*{\@disable@premakecs}[1]{%
867   \def#1{\PackageError{glossaries}{\string#1\space may only be
868     used before \string\makeglossaries}{You can't use
869     \string#1\space after \string\makeglossaries}}}%
870 }

```

1.3 Predefined Text

Set up default textual tags that are used by this package. Some of the names may already be defined (e.g. by) so \providecommand is used.

Main glossary title:

\glossaryname

```
871 \providecommand*{\glossaryname}{Glossary}
```

The title for the acronym glossary type (which is defined if acronym package option is used) is given by \acronymname. If the acronym package option is not used, \acronymname won't be used.

\acronymname

```
872 \providecommand*{\acronymname}{Acronyms}
```

\glstocctitle Sets the TOC title for the given glossary.

```

873 \newcommand*{\glstocctitle}[1]{%
874   \def\glossarytocctitle{\csname @glotype@#1@title\endcsname}}

```

The following commands provide text for the headers used by some of the tabular-like glossary styles. Whether or not they get used in the glossary depends on the glossary style.

\entryname

```
875 \providecommand*{\entryname}{Notation}
```

\descriptionname

```
876 \providecommand*{\descriptionname}{Description}
```

\symbolname

```
877 \providecommand*{\symbolname}{Symbol}
```

\pagelistname

```
878 \providecommand*{\pagelistname}{Page List}
```

Labels for makeindex's symbol and number groups:

\symbolsgroupname

```
879 \providecommand*{\glsymbolsgroupname}{Symbols}
```

\numbersgroupname

```
880 \providecommand*{\glnumbersgroupname}{Numbers}
```

`glspluralsuffix` The default plural is formed by appending `\glspluralsuffix` to the singular form.

```
881 \newcommand*{\glspluralsuffix}{s}
```

`acrpluralsuffix` Default plural suffix for acronyms

```
882 \newcommand*{\glsacrpluralsuffix}{\glspluralsuffix}
```

`acrpluralsuffix`

```
883 \newcommand*{\glsupacrpluralsuffix}{\glstextup{\glsacrpluralsuffix}}
```

`\seename`

```
884 \providecommand*{\seename}{see}
```

`\andname`

```
885 \providecommand*{\andname}{\&}
```

Add multi-lingual support. Thanks to everyone who contributed to the translations from both `comp.text.tex` and via email.

`eGlossariesLang`

```
886 \newcommand*{\RequireGlossariesLang}[1]{%
887   \@ifundefined{ver@glossaries-#1.ldf}{\input{glossaries-#1.ldf}}{}%
888 }
```

`sGlossariesLang`

```
889 \newcommand*{\ProvidesGlossariesLang}[1]{%
890   \ProvidesFile{glossaries-#1.ldf}%
891 }
```

`ssarytocaptions` Does nothing if translator hasn't been loaded.

```
892 \newcommand*{\addglossarytocaptions}[1]{}
```

As from v4.12, multilingual support has been split off into independently-maintained language modules.

```
893 \ifglstranslate
```

Load tracklang

```
894 \RequirePackage{tracklang}
```

Load translator if required.

```
895 \@gls@usetranslator
```

If using `\glossaryname` should be defined in terms of `\translate`, but if `babel` is also loaded, it will redefine `\glossaryname` whenever the language is set, so override it. (Don't use `\addto` as doesn't define it.)

```
896 \@ifpackageloaded{translator}
897   {%
```

If the language options have been specified through the document class, then translator can pick them up. If not, translator will default to English and any language option passed to babel won't be detected, so if `\trans@languages` is just English and `\bbl@loaded` isn't simply english, then don't use the translator dictionaries.

```

898   \ifboolexpr
899   {
900     test {\ifdefstring{\trans@languages}{English}}
901     and not
902     test {\ifdefstring{\bbl@loaded}{english}}
903   }
904   {%
905     \let\glsifusetranslator\@secondoftwo
906   }%
907   {%
908     \usedictionary{glossaries-dictionary}%
909     \renewcommand*{\addglossarytocaptions}[1]{%
910       \ifcsundef{captions#1}{}%
911       {%
912         \expandafter\let\expandafter\@gls@tmp\csname captions#1\endcsname
913         \expandafter\toks@\expandafter{\@gls@tmp
914         \renewcommand*{\glossaryname}{\translate{Glossary}}}%
915       }%
916       \expandafter\edef\csname captions#1\endcsname{\the\toks@}%
917     }%
918   }%
919 }%
920 }%
921 {}%
```

Check for tracked languages

```

922 \AnyTrackedLanguages
923 {%
924   \ForEachTrackedDialect{\this@dialect}{%
925     \IfTrackedLanguageFileExists{\this@dialect}%
926     {glossaries-}% prefix
927     {.ldf}%
928     {%
929       \RequireGlossariesLang{\CurrentTrackedTag}%
930     }%
931     {%
932       \@gls@missinglang@warn\this@dialect\CurrentTrackedLanguage
933     }%
934   }%
935 }%
936 {}%
```

if using translator use translator interface.

```

937 \glsifusetranslator
938 {%
939   \renewcommand*{\glssettoctitle}[1]{%
```

```

940     \ifcsdef{gls@tr@set@#1@toctitle}%
941     {%
942     \csuse{gls@tr@set@#1@toctitle}%
943     }%
944     {%
945     \def\glossarytoctitle{\csname @glotype@#1@title\endcsname}%
946     }%
947     }%
948     \renewcommand*{\glossaryname}{\translate{Glossary}}}%
949     \renewcommand*{\acronymname}{\translate{Acronyms}}}%
950     \renewcommand*{\entryname}{\translate{Notation (glossaries)}}}%
951     \renewcommand*{\descriptionname}{%
952     \translate{Description (glossaries)}}}%
953     \renewcommand*{\symbolname}{\translate{Symbol (glossaries)}}}%
954     \renewcommand*{\pagelistname}{%
955     \translate{Page List (glossaries)}}}%
956     \renewcommand*{\glssymbolsgroupname}{%
957     \translate{Symbols (glossaries)}}}%
958     \renewcommand*{\glsnumbersgroupname}{%
959     \translate{Numbers (glossaries)}}}%
960     }{}%
961 \fi

```

`\nopostdesc` Provide a means to suppress description terminator for a given entry. (Useful for entries with no description.) Has no effect outside the glossaries.

```
962 \DeclareRobustCommand*{\nopostdesc}{}

```

`\@nopostdesc` Suppress next description terminator.

```

963 \newcommand*{\@nopostdesc}{%
964   \let\org@glspostdescription\glspostdescription
965   \def\glspostdescription{%
966     \let\glspostdescription\org@glspostdescription}%
967 }

```

`\@no@post@desc` Used for comparison purposes.

```
968 \newcommand*{\@no@post@desc}{\nopostdesc}

```

`\glspar` Provide means of having a paragraph break in glossary entries

```
969 \newcommand{\glspar}{\par}

```

`\setStyleFile` Sets the style file. The relevant extension is appended.

```

970 \newcommand{\setStyleFile}[1]{%
971   \renewcommand*{\gls@istfilebase}{#1}%
972   Just in case \istfilename has been modified.
973   \ifglxsindy
974     \def\istfilename{\gls@istfilebase.xdy}
975   \else
976     \def\istfilename{\gls@istfilebase.ist}

```

```
976 \fi
977 }
```

This command only has an effect prior to using `\makeglossaries`.

```
978 \@onlypremakeg\setStyleFile
```

The name of the `makeindex` or `xindy` style file is given by `\istfilename`. This file is created by `\writeist` (which is used by `\makeglossaries`) so redefining this command will only have an effect if it is done *before* `\makeglossaries`. As from v1.17, use `\setStyleFile` instead of directly redefining `\istfilename`.

```
\istfilename
```

```
979 \ifglsxindy
980 \def\istfilename{\gls@istfilebase.xdy}
981 \else
982 \def\istfilename{\gls@istfilebase.ist}
983 \fi
```

```
gls@istfilebase
```

```
984 \newcommand*{\gls@istfilebase}{\jobname}
```

The `makeglossaries` Perl script picks up this name from the auxiliary file. If the name ends with `.xdy` it calls `xindy` otherwise it calls `makeindex`. Since its not required by \TeX , `\@istfilename` ignores its argument.

```
\@istfilename
```

```
985 \newcommand*{\@istfilename}[1]{}%
```

This command is the value of the `page_compositor` `makeindex` key. Again, any redefinition of this command must take place *before* `\writeist` otherwise it will have no effect. As from 1.17, use `\glsSetCompositor` instead of directly redefining `\glscompositor`.

```
\glscompositor
```

```
986 \newcommand*{\glscompositor}{.}%
```

```
lsSetCompositor Sets the compositor.
```

```
987 \newcommand*{\glsSetCompositor}[1]{%
988 \renewcommand*{\glscompositor}{#1}}%
```

Only use before `\makeglossaries`

```
989 \@onlypremakeg\glsSetCompositor
```

(The page compositor is usually defined as a dash when using `makeindex`, but most of the standard counters used by \TeX use a full stop as the compositor, which is why I have used it as the default.) If `xindy` is used `\glscompositor` only affects the `arabic-page-numbers` location class.

Alphacompositor This is only used by xindy. It specifies the compositor to use when location numbers are in the form $\langle letter \rangle \langle compositor \rangle \langle number \rangle$. For example, if `\@glsAlphacompositor` is set to “.” then it allows locations such as A.1 whereas if `\@glsAlphacompositor` is set to “-” then it allows locations such as A-1.

```
990 \newcommand*{\@glsAlphacompositor}{\glscompositor}
```

AlphaCompositor Sets the alpha compositor.

```
991 \ifglsxindy
992   \newcommand*\glsSetAlphaCompositor[1]{%
993     \renewcommand*\@glsAlphacompositor{#1}}
994 \else
995   \newcommand*\glsSetAlphaCompositor[1]{%
996     \glsnxindywarning\glsSetAlphaCompositor}
997 \fi
```

Can only be used before `\makeglossaries`

```
998 \@onlypremakeg\glsSetAlphaCompositor
```

\gls@suffixF Suffix to use for a two page list. This overrides the separator and the closing page number if set to something other than an empty macro.

```
999 \newcommand*{\gls@suffixF}{}
```

\glsSetSuffixF Sets the suffix to use for a two page list.

```
1000 \newcommand*{\glsSetSuffixF}[1]{%
1001   \renewcommand*{\gls@suffixF}{#1}}
```

Only has an effect when used before `\makeglossaries`

```
1002 \@onlypremakeg\glsSetSuffixF
```

\gls@suffixFF Suffix to use for a three page list. This overrides the separator and the closing page number if set to something other than an empty macro.

```
1003 \newcommand*{\gls@suffixFF}{}
```

\glsSetSuffixFF Sets the suffix to use for a three page list.

```
1004 \newcommand*{\glsSetSuffixFF}[1]{%
1005   \renewcommand*{\gls@suffixFF}{#1}%
1006 }
```

glsnumberformat The command `\glsnumberformat` indicates the default format for the page numbers in the glossary. (Note that this is not the same as `\glossaryentrynumbers`, but applies to individual numbers or groups of numbers within an entry’s associated number list.) If hyperlinks are defined, it will use `\glshypernumber`, otherwise it will simply display its argument “as is”.

```
1007 \ifcsundef{hyperlink}%
1008 {%
1009   \newcommand*\glsnumberformat[1]{#1}%
1010 }%
1011 {%
```

```

1012 \newcommand*{\glsnumberformat}[1]{\glshyphernumber{#1}}%
1013 }

```

Individual numbers in an entry's associated number list are delimited using `\delimN` (which corresponds to the `delim_n` makeindex keyword). The default value is a comma followed by a space.

```

\delimN
1014 \newcommand{\delimN}{, }

```

A range of numbers within an entry's associated number list is delimited using `\delimR` (which corresponds to the `delim_r` makeindex keyword). The default is an en-dash.

```

\delimR
1015 \newcommand{\delimR}{--}

```

The glossary preamble is given by `\glossarypreamble`. This will appear after the glossary sectioning command, and before the `theglossary` environment. It is designed to allow the user to add information pertaining to the glossary (e.g. “page numbers in italic indicate the primary definition”) therefore `\glossarypreamble` shouldn't be affected by the glossary style. (So if you define your own glossary style, don't have it change `\glossarypreamble`.) The preamble is empty by default. If you have multiple glossaries, and you want a different preamble for each glossary, you will need to use `\printglossary` for each glossary type, instead of `\printglossaries`, and redefine `\glossarypreamble` before each `\printglossary`.

```

\glossarypreamble
1016 \newcommand*{\glossarypreamble}{%
1017   \csuse{@glossarypreamble@currentglossary}%
1018 }

```

```

\glossarypreamble \setglossarypreamble[<type>]{<text>}

```

Code provided by Michael Pock.

```

1019 \newcommand{\setglossarypreamble}[2][\glsdefaultttype]{%
1020   \ifglossaryexists{#1}{%
1021     \csgdef{@glossarypreamble@#1}{#2}%
1022   }{%
1023     \GlossariesWarning{%
1024       Glossary ‘#1’ is not defined%
1025     }%
1026   }%
1027 }

```

The glossary postamble is given by `\glossarypostamble`. This is provided to allow the user to add something after the end of the `theglossary` environment (again, this shouldn't be affected by the glossary style). It is, of course, possible to simply add the text after

`\printglossary`, but if you only want the postamble to appear after the first glossary, but not after subsequent glossaries, you can do something like:

```
\renewcommand{\glossarypostamble}{For a complete list of terms
see \cite{blah}\gdef\glossarypreamble{}}
```

`glossarypostamble`

```
1028 \newcommand*{\glossarypostamble}{}%
```

`glossarysection` The sectioning command that starts a glossary is given by `\glossarysection`. (This does not form part of the glossary style, and so should not be changed by a glossary style.) If `\phantomsection` is defined, it uses `\p@glossarysection`, otherwise it uses `\@glossarysection`.

```
1029 \newcommand*{\glossarysection}[2][\@gls@title]{%
1030   \def\@gls@title{#2}%
1031   \ifcsundef{phantomsection}%
1032   {%
1033     \@glossarysection{#1}{#2}%
1034   }%
1035   {%
1036     \p@glossarysection{#1}{#2}%
1037   }%

1038   \glsglossarymark{\glossarytoctitle}%
1039 }
```

`glsglossarymark` Sets the header mark for the glossary. Takes the glossary short (TOC) title as the argument.

```
1040 \ifcsundef{glossarymark}%
1041 {%
1042   \newcommand{\glsglossarymark}[1]{\glossarymark{#1}}
1043 }%
1044 {%
1045   \@ifclassloaded{memoir}
1046   {%
1047     \newcommand{\glsglossarymark}[1]{%
1048       \ifglsucmark
1049         \markboth{\memUHead{#1}}{\memUHead{#1}}%
1050       \else
1051         \markboth{#1}{#1}%
1052       \fi
1053     }
1054   }%
1055   {%
1056     \newcommand{\glsglossarymark}[1]{%
1057       \ifglsucmark
1058         \@mkboth{\mfirstucMakeUppercase{#1}}{\mfirstucMakeUppercase{#1}}%
1059       \else
1060         \@mkboth{#1}{#1}%
1061       \fi
1062     }
1063   }%
1064 }
```



```

1062   }
1063 }
1064 }

```

`\glossarymark` Provided for backward compatibility:

```

1065 \providecommand{\glossarymark}[1]{%
1066   \ifglsucmark
1067     \mkboth{\mfirstucMakeUppercase{#1}}{\mfirstucMakeUppercase{#1}}%
1068   \else
1069     \mkboth{#1}{#1}%
1070   \fi
1071 }

```

The required sectional unit is given by `\@glossarysec` which was defined by the section package option. The starred form of the command is chosen. If you don't want any sectional command, you will need to redefine `\glossarysection`. The sectional unit can be changed, if different sectional units are required.

`glossarysection`

```

1072 \newcommand*{\setglossarysection}[1]{%
1073 \setkeys{glossaries.sty}{section=#1}}

```

The command `\@glossarysection` indicates how to start the glossary section if `\phantomsection` is not defined.

`glossarysection`

```

1074 \newcommand*{\@glossarysection}[2]{%
1075   \ifdefempty\@glossarysecstar
1076   {%
1077     \csname\@glossarysec\endcsname[#1]{#2}%
1078   }%
1079   {%
1080     \csname\@glossarysec\endcsname*{#2}%
1081     \gls@toc{#1}{\@glossarysec}%
1082   }%

```

Do automatic labelling if required

```

1083   \@glossaryseclabel
1084 }

```

As `\@glossarysection`, but put in `\phantomsection`, and swap where `\gls@toc` goes. If using chapters do a `\clearpage`. This ensures that the hyper link from the table of contents leads to the line above the heading, rather than the line below it.

`glossarysection`

```

1085 \newcommand*{\@pglossarysection}[2]{%
1086   \glsclearpage
1087   \phantomsection
1088   \ifdefempty\@glossarysecstar
1089   {%

```

```

1090     \csname\@glossarysec\endcsname{#2}%
1091 }%
1092 {%
1093     \@gls@toc{#1}{\@glossarysec}%
1094     \csname\@glossarysec\endcsname*{#2}%
1095 }%

```

Do automatic labelling if required

```

1096 \@glossaryseclabel
1097 }

```

`\gls@doclearpage` The `\gls@doclearpage` command is used to issue a `\clearpage` (or `\cleardoublepage`) depending on whether the glossary sectional unit is a chapter. If the sectional unit is something else, do nothing.

```

1098 \newcommand*{\gls@doclearpage}{%
1099     \ifthenelse{\equal{\@glossarysec}{chapter}}{%
1100     {%
1101         \ifcsundef{cleardoublepage}%
1102         {%
1103             \clearpage
1104         }%
1105     {%
1106         \ifcsdef{if@openright}%
1107         {%
1108             \if@openright
1109                 \cleardoublepage
1110             \else
1111                 \clearpage
1112             \fi
1113         }%
1114     {%
1115         \cleardoublepage
1116     }%
1117 }%
1118 }%
1119 {}%
1120 }

```

`\glsclearpage` This just calls `\gls@doclearpage`, but it makes it easier to have a user command so that the user can override it.

```

1121 \newcommand*{\glsclearpage}{\gls@doclearpage}

```

The glossary is added to the table of contents if `glstoc` flag set. If it is set, `\@gls@toc` will add a line to the `.toc` file, otherwise it will do nothing. (The first argument to `\@gls@toc` is the title for the table of contents, the second argument is the sectioning type.)

`\@gls@toc`

```

1122 \newcommand*{\@gls@toc}[2]{%
1123     \ifglstoc

```

```

1124 \ifglslnumberline
1125 \addcontentsline{toc}{#2}{\protect\numberline{#1}%
1126 \else
1127 \addcontentsline{toc}{#2}{#1}%
1128 \fi
1129 \fi
1130 }

```

1.4 Xindy

This section defines commands that only have an effect if xindy is used to sort the glossaries.

glsnoxywarning Issues a warning if xindy hasn't been specified. These warnings can be suppressed by re-defining `\glsnoxywarning` to ignore its argument

```

1131 \newcommand*{\glsnoxywarning}[1]{%
1132 \GlossariesWarning{Not in xindy mode --- ignoring \string#1}%
1133 }

```

makeindexwarning Reverse for commands that may only be used with makeindex.

```

1134 \newcommand*{\glsnomakeindexwarning}[1]{%
1135 \GlossariesWarning{Not in makeindex mode --- ignoring \string#1}%
1136 }

```

\@xdyattributes Define list of attributes (`\string` is used in case the double quote character has been made active)

```

1137 \ifglslxindy
1138 \edef\@xdyattributes{\string"default\string"}%
1139 \fi

```

dyattributelist Comma-separated list of attributes.

```

1140 \ifglslxindy
1141 \edef\dyattributelist{}%
1142 \fi

```

\@xdylocref Define list of markup location references.

```

1143 \ifglslxindy
1144 \def\@xdylocref{}
1145 \fi

```

\@gls@ifinlist

```

1146 \newcommand*{\@gls@ifinlist}[4]{%
1147 \def\@do@ifinlist##1,#1,##2\end@do@ifinlist{%
1148 \def\@gls@listsuffix{##2}%
1149 \ifx\@gls@listsuffix\@empty
1150 #4%
1151 \else
1152 #3%

```

```

1153     \fi
1154   }%
1155   \@do@ifinlist,#2,#1,\end@do@ifinlist
1156 }

```

sAddXdyCounters Need to know all the counters that will be used in location numbers for Xindy. Argument may be a single counter name or a comma-separated list of counter names.

```

1157 \ifglxindy
1158   \newcommand*{\@xdycounters}{\@glscounter}
1159   \newcommand*\GlsAddXdyCounters[1]{%
1160     \@for\@gls@ctr:=#1\do{%
1161       \edef\@do@addcounter{%
1162         \noexpand\@gls@ifinlist{\@gls@ctr}{\@xdycounters}{}%
1163         {%
1164           \noexpand\edef\noexpand\@xdycounters{\@xdycounters,%
1165             \noexpand\@gls@ctr}%
1166         }%
1167       }%
1168       \@do@addcounter
1169     }
1170   }

```

Only has an effect before `\writeist`:

```

1171   \@onlypremakeg\GlsAddXdyCounters
1172 \else
1173   \newcommand*\GlsAddXdyCounters[1]{%
1174     \glsnoxindywarning\GlsAddXdyAttribute
1175   }
1176 \fi

```

saddxdycounters Counters must all be identified before adding attributes.

```

1177 \newcommand*\@disabled@glssaddxdycounters{%
1178   \PackageError{glossaries}{\string\GlsAddXdyCounters\space
1179     can't be used after \string\GlsAddXdyAttribute}{Move all
1180     occurrences of \string\GlsAddXdyCounters\space before the first
1181     instance of \string\GlsAddXdyAttribute}%
1182 }

```

AddXdyAttribute Adds an attribute.

```

1183 \ifglxindy
1184   \newcommand*\@glssaddxdyattribute[2]{%
1185     \edef\@xdyattributes{\@xdyattributes ^^J \string"#1\string" ^^J
1186       \string"#2#1\string"}%

```

First define internal command that adds an attribute for a given counter (2nd argument is the counter):

Add to xindy attribute list

Add to xindy markup location.

```

1187 \expandafter\toks@\expandafter{\@xdylocref}%
1188 \edef\@xdylocref{\the\toks@ ^^J%
1189 (markup-locref
1190 :open \string"glstildechar n%
1191 \expandafter\string\csname glsX#2X#1\endcsname
1192 \string" ^^J
1193 :close \string"\string" ^^J
1194 :attr \string"#2#1\string")}%

```

Define associated attribute command $\text{\glsX}\langle counter \rangle X \langle attribute \rangle \{ \langle Hprefix \rangle \} \{ \langle n \rangle \}$

```

1195 \expandafter\gdef\csname glsX#2X#1\endcsname##1##2{%
1196 \setentrycounter{##1}{#2}\csname #1\endcsname{##2}%
1197 }%
1198 }

```

High-level command:

```

1199 \newcommand*\GlsAddXdyAttribute[1]{%

```

Add to comma-separated attribute list

```

1200 \ifx\@xdyattributelist\@empty
1201 \edef\@xdyattributelist{#1}%
1202 \else
1203 \edef\@xdyattributelist{\@xdyattributelist,#1}%
1204 \fi

```

Iterate through all specified counters and add counter-dependent attributes:

```

1205 \@for\@this@counter:=\@xdycounters\do{%
1206 \protected@edef\gls@do@addxdyattribute{%
1207 \noexpand\@glsaddxdyattribute{#1}{\@this@counter}%
1208 }
1209 \gls@do@addxdyattribute
1210 }%

```

All occurrences of `\GlsAddXdyCounters` must be used before this command

```

1211 \let\GlsAddXdyCounters\@disabled@glsaddxdycounters
1212 }

```

Only has an effect before `\writeist`:

```

1213 \@onlypremakeg\GlsAddXdyAttribute
1214 \else
1215 \newcommand*\GlsAddXdyAttribute[1]{%
1216 \glsnoxindywarning\GlsAddXdyAttribute}
1217 \fi

```

`\definedattributes` Add known attributes for all defined counters

```

1218 \ifglsxindy
1219 \newcommand*\@gls@addpredefinedattributes{%
1220 \GlsAddXdyAttribute{glsnumberformat}
1221 \GlsAddXdyAttribute{textrm}
1222 \GlsAddXdyAttribute{textsf}

```

```

1223 \GlsAddXdyAttribute{texttt}
1224 \GlsAddXdyAttribute{textbf}
1225 \GlsAddXdyAttribute{textmd}
1226 \GlsAddXdyAttribute{textit}
1227 \GlsAddXdyAttribute{textup}
1228 \GlsAddXdyAttribute{textsl}
1229 \GlsAddXdyAttribute{textsc}
1230 \GlsAddXdyAttribute{emph}
1231 \GlsAddXdyAttribute{glshypernumber}
1232 \GlsAddXdyAttribute{hyperrrm}
1233 \GlsAddXdyAttribute{hypersf}
1234 \GlsAddXdyAttribute{hypertt}
1235 \GlsAddXdyAttribute{hyperbf}
1236 \GlsAddXdyAttribute{hypermd}
1237 \GlsAddXdyAttribute{hyperit}
1238 \GlsAddXdyAttribute{hyperup}
1239 \GlsAddXdyAttribute{hypersl}
1240 \GlsAddXdyAttribute{hypersc}
1241 \GlsAddXdyAttribute{hyperemph}

1242 \GlsAddXdyAttribute{glsglignore}
1243 }
1244 \else
1245 \let\@gls@addpredefinedattributes\relax
1246 \fi

```

`\dyuseralphabets` List of additional alphabets

```

1247 \def\@xdyuseralphabets{}

```

`\GlsAddXdyAlphabet` `\GlsAddXdyAlphabet{<name>}{<definition>}` adds a new alphabet called *<name>*. The definition must use xindy syntax.

```

1248 \ifglsxindy
1249 \newcommand*{\GlsAddXdyAlphabet}[2]{%
1250 \edef\@xdyuseralphabets{%
1251 \@xdyuseralphabets ^^J
1252 (define-alphabet "#1" (#2))}}
1253 \else
1254 \newcommand*{\GlsAddXdyAlphabet}[2]{%
1255 \glsnnoxindywarning\GlsAddXdyAlphabet}
1256 \fi

```

This code is only required for xindy:

```

1257 \ifglsxindy

```

`\dy@locationlist` List of predefined location names.

```

1258 \newcommand*{\@gls@xdy@locationlist}{%
1259 roman-page-numbers,%
1260 Roman-page-numbers,%
1261 arabic-page-numbers,%

```

```

1262     alpha-page-numbers,%
1263     Alpha-page-numbers,%
1264     Appendix-page-numbers,%
1265     arabic-section-numbers%
1266 }

```

Each location class *<name>* has the format stored in `\@gls@xdy@Lclass@<name>`. Set up pre-defined formats.

an-page-numbers Lower case Roman numerals (i, ii, ...). In the event that `\roman` has been redefined to produce a fancy form of roman numerals, attempt to work out how it will be written to the output file.

```

1267 \protected@edef\@gls@roman{\@roman{0}\string"
1268     \string"roman-numbers-lowercase\string" :sep \string"}}%
1269 \@onelevel@sanitize\@gls@roman
1270 \edef\@tmp{\string" \string"roman-numbers-lowercase\string"
1271     :sep \string"%}
1272 \@onelevel@sanitize\@tmp
1273 \ifx\@tmp\@gls@roman
1274     \expandafter
1275         \edef\csname @gls@xdy@Lclass@roman-page-numbers\endcsname{%
1276             \string"roman-numbers-lowercase\string"%
1277         }%
1278 \else
1279     \expandafter
1280         \edef\csname @gls@xdy@Lclass@roman-page-numbers\endcsname{
1281             :sep \string"\@gls@roman\string"%
1282         }%
1283 \fi

```

an-page-numbers Upper case Roman numerals (I, II, ...).

```

1284 \expandafter\def\csname @gls@xdy@Lclass@Roman-page-numbers\endcsname{%
1285     \string"roman-numbers-uppercase\string"%
1286 }%

```

ic-page-numbers Arabic numbers (1, 2, ...).

```

1287 \expandafter\def\csname @gls@xdy@Lclass@arabic-page-numbers\endcsname{%
1288     \string"arabic-numbers\string"%
1289 }%

```

ha-page-numbers Lower case alphabetical (a, b, ...).

```

1290 \expandafter\def\csname @gls@xdy@Lclass@alpha-page-numbers\endcsname{%
1291     \string"alpha\string"%
1292 }%

```

ha-page-numbers Upper case alphabetical (A, B, ...).

```

1293 \expandafter\def\csname @gls@xdy@Lclass@Alpha-page-numbers\endcsname{%
1294     \string"ALPHA\string"%
1295 }%

```

ix-page-numbers Appendix style locations (e.g. A-1, A-2, ..., B-1, B-2, ...). The separator is given by `\@glsAlphacompositor`.

```
1296 \expandafter\def\csname @gls@xdy@Lclass@Appendix-page-numbers\endcsname{%
1297   \string"ALPHA\string"
1298   :sep \string"\@glsAlphacompositor\string"
1299   \string"arabic-numbers\string"%
1300 }
```

section-numbers Section number style locations (e.g. 1.1, 1.2, ...). The compositor is given by `\glscompositor`.

```
1301 \expandafter\def\csname @gls@xdy@Lclass@arabic-section-numbers\endcsname{%
1302   \string"arabic-numbers\string"
1303   :sep \string"\glscompositor\string"
1304   \string"arabic-numbers\string"%
1305 }%
```

serlocationdefs List of additional location definitions (separated by `^^J`)

```
1306 \def\@xdyuserlocationdefs{}
```

erlocationnames List of additional user location names

```
1307 \def\@xdyuserlocationnames{}
```

End of xindy-only block:

```
1308 \fi
```

xdycrossrefhook Hook used after writing cross-reference class information.

```
1309 \ifglsxindy
1310 \newcommand\@xdycrossrefhook{}
1311 \fi
```

sAddXdyLocation `\GlsAddXdyLocation[<prefix-loc>]{<name>}{<definition>}` Define a new location called *<name>*. The definition must use xindy syntax. (Note that this doesn't check to see if the location is already defined. That is left to xindy to complain about.)

```
1312 \ifglsxindy
1313   \newcommand*\GlsAddXdyLocation[3][[]]{%
1314     \def\@gls@tmp{#1}%
1315     \ifx\@gls@tmp\@empty
1316       \edef\@xdyuserlocationdefs{%
1317         \@xdyuserlocationdefs ^^J%
1318         (define-location-class \string"#2\string"^^J\space\space
1319         \space(:sep \string"{}\glsopenbrace\string" #3
1320         :sep \string"\glsclosebrace\string"))
1321       }%
1322     \else
1323       \edef\@xdyuserlocationdefs{%
1324         \@xdyuserlocationdefs ^^J%
1325         (define-location-class \string"#2\string"^^J\space\space
1326         \space(:sep "\glsopenbrace"
1327         #1
```



```

1328             :sep "\glsclosebrace\glsopenbrace" #3
1329             :sep "\glsclosebrace"))
1330     }%
1331 \fi

1332 \edef\@xdyuserlocationnames{%
1333     \@xdyuserlocationnames^^J\space\space\space
1334     \string"#2\string"}%
1335 }

```

Only has an effect before \writeist:

```

1336 \@onlypremakeg\GlsAddXdyLocation
1337 \else
1338 \newcommand*\GlsAddXdyLocation[2]{%
1339     \glsnoxindywarning\GlsAddXdyLocation}
1340 \fi

```

ationclassorder Define location class order

```

1341 \ifglxsindy
1342 \def\@xdylocationclassorder{^^J\space\space\space
1343     \string"roman-page-numbers\string"^^J\space\space\space
1344     \string"arabic-page-numbers\string"^^J\space\space\space
1345     \string"arabic-section-numbers\string"^^J\space\space\space
1346     \string"alpha-page-numbers\string"^^J\space\space\space
1347     \string"Roman-page-numbers\string"^^J\space\space\space
1348     \string"Alpha-page-numbers\string"^^J\space\space\space
1349     \string"Appendix-page-numbers\string"
1350     \@xdyuserlocationnames^^J\space\space\space
1351     \string"see\string"
1352 }
1353 \fi

```

Change the location order.

ationClassOrder

```

1354 \ifglxsindy
1355 \newcommand*\GlsSetXdyLocationClassOrder[1]{%
1356     \def\@xdylocationclassorder{#1}}
1357 \else
1358 \newcommand*\GlsSetXdyLocationClassOrder[1]{%
1359     \glsnoxindywarning\GlsSetXdyLocationClassOrder}
1360 \fi

```

\@xdysortrules Define sort rules

```

1361 \ifglxsindy
1362 \def\@xdysortrules{}
1363 \fi

```

\GlsAddSortRule Add a sort rule

```

1364 \ifglxindy
1365   \newcommand*\GlsAddSortRule[2]{%
1366     \expandafter\toks@\expandafter{\@xdysortrules}%
1367     \protected@edef\@xdysortrules{\the\toks@ ^^J
1368       (sort-rule \string"#1\string" \string"#2\string")}%
1369   }
1370 \else
1371   \newcommand*\GlsAddSortRule[2]{%
1372     \glsnxindywarning\GlsAddSortRule}
1373 \fi

```

yrequiredstyles Define list of required styles (this should be a comma-separated list of xindy styles)

```

1374 \ifglxindy
1375   \def\@xdyrequiredstyles{tex}
1376 \fi

```

\GlsAddXdyStyle Add a xindy style to the list of required styles

```

1377 \ifglxindy
1378   \newcommand*\GlsAddXdyStyle[1]{%
1379     \edef\@xdyrequiredstyles{\@xdyrequiredstyles,#1}}%
1380 \else
1381   \newcommand*\GlsAddXdyStyle[1]{%
1382     \glsnxindywarning\GlsAddXdyStyle}
1383 \fi

```

GlsSetXdyStyles Reset the list of required styles

```

1384 \ifglxindy
1385   \newcommand*\GlsSetXdyStyles[1]{%
1386     \edef\@xdyrequiredstyles{#1}}
1387 \else
1388   \newcommand*\GlsSetXdyStyles[1]{%
1389     \glsnxindywarning\GlsSetXdyStyles}
1390 \fi

```

indrootlanguage This used to determine the root language, using a bit of trickery since babel doesn't supply the information, but now that babel is once again actively maintained, we can't do this any more, so `\findrootlanguage` is no longer available. Now provide a command that does nothing (in case it's been patched), but this may be removed completely in the future.

```

1391 \newcommand*\findrootlanguage{}

```

\@xdylanguage The xindy language setting is required by `makeglossaries`, so provide a command for `makeglossaries` to pick up the information from the auxiliary file. This command is not needed by the `glossaries` package, so define it to ignore its arguments.

```

1392 \def\@xdylanguage#1#2{}

```

sSetXdyLanguage Define a command that allows the user to set the language for a given glossary type. The first argument indicates the glossary type. If omitted the main glossary is assumed.

```

1393 \ifglxindy
1394   \newcommand*\GlsSetXdyLanguage[2][\glsdefaultttype]{%
1395     \ifglossaryexists{#1}{%
1396       \expandafter\def\csname @xdy@#1@language\endcsname{#2}%
1397     }{%
1398       \PackageError{glossaries}{Can't set language type for
1399         glossary type '#1' --- no such glossary}{%
1400         You have specified a glossary type that doesn't exist}}
1401 \else
1402   \newcommand*\GlsSetXdyLanguage[2][{}]{%
1403     \glsnoxywarning\GlsSetXdyLanguage}
1404 \fi

```

`\@gls@codepage` The xindy codepage setting is required by `makeglossaries`, so provide a command for `makeglossaries` to pick up the information from the auxiliary file. This command is not needed by the `glossaries` package, so define it to ignore its arguments.

```

1405 \def\@gls@codepage#1#2{}

```

`sSetXdyCodePage` Define command to set the code page.

```

1406 \ifglxindy
1407   \newcommand*\GlsSetXdyCodePage[1]{%
1408     \renewcommand*\@gls@codepage{#1}%
1409   }

```

Suggested by egreg:

```

1410 \AtBeginDocument{%
1411   \ifx\gls@codepage\@empty
1412     \@ifpackageloaded{fontspec}{\def\gls@codepage{utf8}}{}%
1413   \fi
1414 }
1415 \else
1416   \newcommand*\GlsSetXdyCodePage[1]{%
1417     \glsnoxywarning\GlsSetXdyCodePage}
1418 \fi

```

`xdylettergroups` Store letter group definitions.

```

1419 \ifglxindy
1420   \ifglx@xindy@glsnumbers
1421     \def\@xdylettergroups{(define-letter-group
1422       \string"glxnumbers\string"^^J\space\space\space
1423       :prefixes (\string"0\string" \string"1\string"
1424       \string"2\string" \string"3\string" \string"4\string"
1425       \string"5\string" \string"6\string" \string"7\string"
1426       \string"8\string" \string"9\string")^^J\space\space\space
1427       \@xdynumbergrouporder)}
1428   \else
1429     \def\@xdylettergroups{}
1430   \fi
1431 \fi

```

`\GlsAddLetterGroup` Add a new letter group. The first argument is the name of the letter group. The second argument is the xindy code specifying prefixes and ordering.

```
1432 \newcommand*\GlsAddLetterGroup[2]{%
1433   \expandafter\toks@\expandafter{\@xdylettergroups}%
1434   \protected@edef\@xdylettergroups{\the\toks@^^J%
1435   (define-letter-group \string"#1\string"^^J\space\space\space#2)}%
1436 }
```

1.5 Loops and conditionals

`\forallglossaries` To iterate through all glossaries (or comma-separated list of glossary names given in optional argument) use:

```
\forallglossaries[<glossary list>]{<cmd>}{<code>}
```

where *<cmd>* is a control sequence which will be set to the name of the glossary in the current iteration.

```
1437 \newcommand*\forallglossaries[3][\@glo@types]{%
1438   \@for#2:=#1\do{\ifx#2\@empty\else#3\fi}%
1439 }
```

`\forallacronyms`

```
1440 \newcommand*\forallacronyms[2]{%
1441   \@for#1:=\@glsacronymlists\do{\ifx#1\@empty\else#2\fi}%
1442 }
```

`\forglentries` To iterate through all entries in a given glossary use:

```
\forglentries[<type>]{<cmd>}{<code>}
```

where *<type>* is the glossary label and *<cmd>* is a control sequence which will be set to the entry label in the current iteration.

```
1443 \newcommand*\forglentries[3][\glsdefaulttype]{%
1444   \edef\@glo@list{\csname glolist@#1\endcsname}%
1445   \@for#2:=\@glo@list\do
1446   {%
1447     \ifdefempty{#2}{#3}%
1448   }%
1449 }
```

`\forallglentries` To iterate through all glossary entries over all glossaries listed in the optional argument (the default is all glossaries) use:

```
\forallglentries[<glossary list>]{<cmd>}{<code>}
```

Within `\forallglentries`, the current glossary type is given by `\@this@glo@`.

```
1450 \newcommand*\forallglentries[3][\@glo@types]{%
```

```

1451 \expandafter\foralllglossaries\expandafter[#1]{\@@this@glo@}%
1452 {%
1453   \forallgsentries[\@@this@glo@]{#2}{#3}%
1454 }%
1455 }

```

`\ifglossaryexists` To check to see if a glossary exists use:

```
\ifglossaryexists{<type>}{<true-text>}{<false-text>}
```

where *<type>* is the glossary's label.

```

1456 \newcommand{\ifglossaryexists}[3]{%
1457   \ifcsundef{@glo@#1@out}{#3}{#2}%
1458 }

```

Since the label is used to form the name of control sequences, by default UTF8 etc characters can't be used in the label. A possible workaround is to use `\scantokens`, but commands such as `\glsentrytext` will no longer be usable in sectioning, caption etc commands. If the user really wants to be able to construct a label with UTF8 characters, allow them the means to do so (but on their own head be it, if they then use entries in `\section` etc). This can be done via:

```
\renewcommand*{\glsdetoklabel}[1]{\scantokens{#1\noexpand}}
```

(Note, don't use `\detokenize` or it will cause commands like `\glsaddall` to fail.) Since re-defining `\glsdetoklabel` can cause things to go badly wrong, I'm not going to mention it in the main user guide. Only advanced users who know what they're doing ought to attempt it.

`\glsdetoklabel`

```
1459 \newcommand*{\glsdetoklabel}[1]{#1}
```

`\ifglsentryexists` To check to see if a glossary entry has been defined use:

```
\ifglsentryexists{<label>}{<true text>}{<false text>}
```

where *<label>* is the entry's label.

```

1460 \newcommand{\ifglsentryexists}[3]{%
1461   \ifcsundef{glo@\glsdetoklabel{#1}@name}{#3}{#2}%
1462 }

```

`\ifglsused` To determine if given glossary entry has been used in the document text yet use:

```
\ifglsused{<label>}{<true text>}{<false text>}
```

where *<label>* is the entry's label. If true it will do *<true text>* otherwise it will do *<false text>*.

```

1463 \newcommand*{\ifglsused}[3]{%
1464   \ifbool{glo@\glsdetoklabel{#1}@flag}{#2}{#3}%
1465 }

```

The following two commands will cause an error if the given condition fails:

`\glsdoifexists` `\glsdoifexists{<label>}{<code>}`

Generate an error if entry specified by *<label>* doesn't exists, otherwise do *<code>*.

```
1466 \newcommand{\glsdoifexists}[2]{%
1467   \ifglentryexists{#1}{#2}{%
1468     \PackageError{glossaries}{Glossary entry ‘\glsdetoklabel{#1}’
1469     has not been defined}{You need to define a glossary entry before you
1470     can use it.}}%
1471 }
```

`\glsdoifnoexists` `\glsdoifnoexists{<label>}{<code>}`

The opposite: only do second argument if the entry doesn't exists. Generate an error message if it exists.

```
1472 \newcommand{\glsdoifnoexists}[2]{%
1473   \ifglentryexists{#1}{#2}{%
1474     \PackageError{glossaries}{Glossary entry ‘\glsdetoklabel{#1}’ has already
1475     been defined}{}}{#2}%
1476 }
```

`\glsdoifexistsorwarn` `\glsdoifexistsorwarn{<label>}{<code>}`

Generate a warning if entry specified by *<label>* doesn't exists, otherwise do *<code>*.

```
1477 \newcommand{\glsdoifexistsorwarn}[2]{%
1478   \ifglentryexists{#1}{#2}{%
1479     \GlossariesWarning{Glossary entry ‘\glsdetoklabel{#1}’
1480     has not been defined}%
1481   }%
1482 }
```

`\glsdoifexistsordo` `\glsdoifexistsordo{<label>}{<code>}{<undef code>}`

Generate an error and do *<undef code>* if entry specified by *<label>* doesn't exists, otherwise do *<code>*.

```
1483 \newcommand{\glsdoifexistsordo}[3]{%
1484   \ifglentryexists{#1}{#2}{%
1485     \PackageError{glossaries}{Glossary entry ‘\glsdetoklabel{#1}’
1486     has not been defined}{You need to define a glossary entry before you
1487     can use it.}}%
1488   #3%
1489 }%
1490 }
```

sarynoexistsordo `\doifglossarynoexistsordo{<label>}{<code>}{<else code>}`

If glossary given by *<label>* doesn't exist do *<code>* otherwise generate an error and do *<else code>*.

```

1491 \newcommand{\doifglossarynoexistsordo}[3]{%
1492   \ifglossaryexists{#1}%
1493   {%
1494     \PackageError{glossaries}{Glossary type ‘#1’ already exists}{}%
1495     #3%
1496   }%
1497   {#2}%
1498 }
```

fglshaschildren `\ifglshaschildren{<label>}{<true part>}{<false part>}`

```

1499 \newcommand{\ifglshaschildren}[3]{%
1500   \glsdoifexists{#1}%
1501   {%
1502     \def\do@glshaschildren{#3}%
1503     \edef\@gls@thislabel{\glsdetoklabel{#1}}%
1504     \expandafter\for@gl@entries\expandafter
1505     [\csname glo@\@gls@thislabel @type\endcsname]
1506     {\glo@label}%
1507     {%
1508       \letcs\glo@parent{glo@\glo@label @parent}%
1509       \ifdefequal\@gls@thislabel\glo@parent
1510       {%
1511         \def\do@glshaschildren{#2}%
1512         \@endfortrue
1513       }%
1514     }%
1515   }%
1516   \do@glshaschildren
1517 }%
1518 }
```

\ifglshasparent `\ifglshasparent{<label>}{<true part>}{<false part>}`

```

1519 \newcommand{\ifglshasparent}[3]{%
1520   \glsdoifexists{#1}%
1521   {%
1522     \ifcempty{glo@\glsdetoklabel{#1}@parent}{#3}{#2}%
1523   }%
1524 }
```

\ifglshasdesc `\ifglshasdesc{<label>}{<true part>}{<false part>}`

```

1525 \newcommand*\ifglshasdesc}[3]{%
```

```

1526 \ifcsempy{glo@\glsdetoklabel{#1}@desc}%
1527 {#3}%
1528 {#2}%
1529 }

```

`sdescsuppressed` `\ifglsdescsuppressed{<label>}{<true part>}{<false part>}` Does <true part> if the description is just `\nopostdesc` otherwise does <false part>.

```

1530 \newcommand*{\ifglsdescsuppressed}[3]{%
1531 \ifcsequal{glo@\glsdetoklabel{#1}@desc}{@no@post@desc}%
1532 {#2}%
1533 {#3}%
1534 }

```

`\ifglshassymbol` `\ifglshassymbol{<label>}{<true part>}{<false part>}`

```

1535 \newcommand*{\ifglshassymbol}[3]{%
1536 \letcs{\@glo@symbol}{glo@\glsdetoklabel{#1}@symbol}%
1537 \ifdefempty\@glo@symbol
1538 {#3}%
1539 {%
1540 \ifdefequal\@glo@symbol\@gls@default@value
1541 {#3}%
1542 {#2}%
1543 }%
1544 }

```

`\ifglshaslong` `\ifglshaslong{<label>}{<true part>}{<false part>}`

```

1545 \newcommand*{\ifglshaslong}[3]{%
1546 \letcs{\@glo@long}{glo@\glsdetoklabel{#1}@long}%
1547 \ifdefempty\@glo@long
1548 {#3}%
1549 {%
1550 \ifdefequal\@glo@long\@gls@default@value
1551 {#3}%
1552 {#2}%
1553 }%
1554 }

```

`\ifglshasshort` `\ifglshasshort{<label>}{<true part>}{<false part>}`

```

1555 \newcommand*{\ifglshasshort}[3]{%
1556 \letcs{\@glo@short}{glo@\glsdetoklabel{#1}@short}%
1557 \ifdefempty\@glo@short
1558 {#3}%
1559 {%
1560 \ifdefequal\@glo@short\@gls@default@value
1561 {#3}%
1562 {#2}%
1563 }%
1564 }

```


<code>\ifglshasfield</code>	<code>\ifglshasfield{<field>}{<label>}{<true part>}{<false part>}</code>
-----------------------------	--

```

1565 \newcommand*{\ifglshasfield}[4]{%
1566   \glstoifexists{#2}%
1567   {%
1568     \letcs{\@glo@thisvalue}{glo\glstetoklabel{#2}@#1}%

```

First check supplied field label is defined.

```

1569   \ifdef\@glo@thisvalue
1570   {%

```

Is defined, so now check if empty.

```

1571     \ifdefempty\@glo@thisvalue
1572     {%

```

Is empty, so doesn't have field set.

```

1573         #4%
1574     }%
1575   {%

```

Not empty, so check if set to \@gls@default@value

```

1576     \ifdefequal\@glo@thisvalue\@gls@default@value
1577     {%

```

Value is set to the default value.

```

1578         #4%
1579     }%
1580   {%

```

Non-empty, non-default value. Allow user to access this value through \glscurrentfieldvalue.

```

1581     \let\glscurrentfieldvalue\@glo@thisvalue
1582     #3%
1583   }%
1584 }%
1585 }%
1586 {%

```

Field given isn't defined, so check if mapping exists.

```

1587   \@gls@fetchfield{\@gls@thisfield}{#1}%

```

If \@gls@thisfield is defined, we've found a map. If not, the field supplied doesn't exist.

```

1588   \ifdef\@gls@thisfield
1589   {%

```

Is defined, so now check if empty.

```

1590     \letcs{\@glo@thisvalue}{glo\glstetoklabel{#2}@\@gls@thisfield}%
1591     \ifdefempty\@glo@thisvalue
1592     {%

```

Is empty so field hasn't been set.

```

1593         #4%

```

```

1594      }%
1595      {%

```

Isn't empty so check if it's been set to \@gls@default@value.

```

1596      \ifdefequal\@glo@thisvalue\@gls@default@value
1597      {%

```

Value is set to the default value.

```

1598          #4%
1599      }%
1600      {%

```

Non-empty, non-default value. Allow user to access this value through \glscurrentfieldvalue.

```

1601      \let\glscurrentfieldvalue\@glo@thisvalue
1602      #3%
1603      }%
1604      }%
1605      }%
1606      {%

```

Not defined.

```

1607      \GlossariesWarning{Unknown entry field '#1'}%
1608      #4%
1609      }%
1610      }%
1611      }%
1612 }

```

urrentfieldvalue

```

1613 \newcommand*{\glscurrentfieldvalue}{}

```

1.6 Defining new glossaries

A comma-separated list of glossary names is stored in \@glo@types. When a new glossary type is created, its identifying name is added to this list. This is used by commands that iterate through all glossaries (such as \makeglossaries and \printglossaries).

\@glo@types

```

1614 \newcommand*{\@glo@types}{,}

```

ide@newglossary

If the user removes the glossary package from their document, ensure the next run doesn't throw a load of undefined control sequence errors when the aux file is parsed.

```

1615 \newcommand*\@gls@provide@newglossary{%
1616   \protected@write\@auxout{}{\string\providecommand\string\@newglossary[4]{}}%

```

Only need to do this once.

```

1617   \let\@gls@provide@newglossary\relax
1618 }

```

```

\defglsentryfmt    Allow different glossaries to have different display styles.
1619 \newcommand*{\defglsentryfmt}[2][\glsdefaulttype]{%
1620   \csgdef{gls@#1@entryfmt}{#2}%
1621 }

\gls@doentryfmt
1622 \newcommand*{\gls@doentryfmt}[1]{\csuse{gls@#1@entryfmt}}

\ls@forbidtexext    As a security precaution, don't allow the user to specify a 'tex' extension for any of the glossary
                    files. (Just in case a seriously confused novice user doesn't know what they're doing.) The
                    argument must be a control sequence whose replacement text is the requested extension.
1623 \newcommand*{\@gls@forbidtexext}[1]{%
1624   \ifboolexpr{test {\ifdefstring{#1}{tex}}
1625             or test {\ifdefstring{#1}{TEX}}}
1626   {%
1627     \def#1{nottex}%
1628     \PackageError{glossaries}%
1629       {Forbidden '.tex' extension replaced with '.nottex'}%
1630     {I'm sorry, I can't allow you to do something so reckless.\MessageBreak
1631       Don't use '.tex' as an extension for a temporary file.}%
1632   }%
1633   {%
1634   }%
1635 }

\gls@gobbleopt    Discard optional argument.
1636 \newcommand*{\gls@gobbleopt}{\new@ifnextchar[\@gls@gobbleopt]}
1637 \def\@gls@gobbleopt[#1]{}

```

A new glossary type is defined using `\newglossary`. Syntax:

```
\newglossary[⟨log-ext⟩]{⟨name⟩}{⟨in-ext⟩}{⟨out-ext⟩} {⟨title⟩}[⟨counter⟩]
```

where `⟨log-ext⟩` is the extension of the makeindex transcript file, `⟨in-ext⟩` is the extension of the glossary input file (read in by `\printglossary` and created by makeindex), `⟨out-ext⟩` is the extension of the glossary output file which is read in by makeindex (lines are written to this file by the `\glossary` command), `⟨title⟩` is the title of the glossary that is used in `\glossarysection` and `⟨counter⟩` is the default counter to be used by entries belonging to this glossary. The `makeglossaries` Perl script reads in the relevant extensions from the auxiliary file, and passes the appropriate file names and switches to makeindex.

`\newglossary`

```
1638 \newcommand*{\newglossary}{\@ifstar\s@newglossary\ns@newglossary}
```

`\s@newglossary` The starred version will construct the extension based on the label.

```

1639 \newcommand*{\s@newglossary}[2]{%
1640   \ns@newglossary[#1-glg]{#1}{#1-gls}{#1-glo}{#2}%
1641 }

```

`\ns@newglossary` Define the unstarred version.

```
1642 \newcommand*{\ns@newglossary}[5][glg]{%
1643   \doifglossarynoexistsordo{#2}%
1644   {%
```

Check if default has been set

```
1645   \ifundef\glsdefaultttype
1646   {%
1647     \gdef\glsdefaultttype{#2}%
1648   }{}%
```

Add this to the list of glossary types:

```
1649   \toks@{#2}\edef\@glo@types{\@glo@types\the\toks@,}%
```

Define a comma-separated list of labels for this glossary type, so that all the entries for this glossary can be reset with a single command. When a new entry is created, its label is added to this list.

```
1650   \expandafter\gdef\csname glolist@#2\endcsname{,}%
```

Store the file extensions:

```
1651   \expandafter\edef\csname @glotype@#2@log\endcsname{#1}%
1652   \expandafter\edef\csname @glotype@#2@in\endcsname{#3}%
1653   \expandafter\edef\csname @glotype@#2@out\endcsname{#4}%
1654   \expandafter\@gls@forbidtextext\csname @glotype@#2@log\endcsname
1655   \expandafter\@gls@forbidtextext\csname @glotype@#2@in\endcsname
1656   \expandafter\@gls@forbidtextext\csname @glotype@#2@out\endcsname
```

Store the title:

```
1657   \expandafter\def\csname @glotype@#2@title\endcsname{#5}%
```

```
1658   \@gls@provide@newglossary
```

```
1659   \protected@write\@auxout{}\string\@newglossary{#2}{#1}{#3}{#4}}%
```

How to display this entry in the document text (uses `\glsentry` by default). This can be re-defined by the user later if required (see `\defglsentry`). This may already have been defined if this has been specified as a list of acronyms.

```
1660   \ifcsundef{gls@#2@entryfmt}%
1661   {%
1662     \defglsentryfmt[#2]{\glsentryfmt}%
1663   }%
1664   {}%
```

Define sort counter if required:

```
1665   \@gls@defsortcount{#2}%
```

Find out if the final optional argument has been specified, and use it to set the counter associated with this glossary. (Uses `\glscounter` if no optional argument is present.)

```
1666   \@ifnextchar[{\@gls@setcounter{#2}}%
1667   {\@gls@setcounter{#2}[\glscounter]}%
1668   }%
1669   {%
1670   \gls@gobbleopt
```

```
1671 }%
1672 }
```

`\altnewglossary`

```
1673 \newcommand*{\altnewglossary}[3]{%
1674   \newglossary[#2-glg]{#1}{#2-gls}{#2-glo}{#3}%
1675 }
```

Only define new glossaries in the preamble:

```
1676 \@onlypreamble{\newglossary}
```

Only define new glossaries before `\makeglossaries`

```
1677 \@onlypremakeg\newglossary
```

`\@newglossary` is used to specify the file extensions for the `makeindex` input, output and transcript files. It is written to the auxiliary file by `\newglossary`. Since it is not used by \TeX , `\@newglossary` simply ignores its arguments.

`\@newglossary`

```
1678 \newcommand*{\@newglossary}[4]{}
```

Store counter to be used for given glossary type (the first argument is the glossary label, the second argument is the name of the counter):

`@gls@setcounter`

```
1679 \def\@gls@setcounter#1[#2]{%
1680   \expandafter\def\csname @glotype@#1@counter\endcsname{#2}%
```

Add counter to xindy list, if not already added:

```
1681   \ifglsxindy
1682     \GlsAddXdyCounters{#2}%
1683   \fi
1684 }
```

Get counter associated with given glossary (the argument is the glossary label):

`@gls@getcounter`

```
1685 \newcommand*{\@gls@getcounter}[1]{%
1686   \csname @glotype@#1@counter\endcsname
1687 }
```

Define the main glossary. This will be the first glossary to be displayed when using `\printglossaries`.

```
1688 \glsdefmain
```

Define the “acronym” glossaries if required.

```
1689 \@gls@do@acronymsdef
```

Define the “symbols”, “numbers” and “index” glossaries if required.

```
1690 \@gls@do@symbolsdef
1691 \@gls@do@numbersdef
1692 \@gls@do@indexdef
```

`ignoredglossary` Creates a new glossary that doesn't have associated files. This glossary is ignored by and commands that iterate over glossaries, such as `\printglossaries`, and won't work with commands like `\printglossary`. It's intended for entries that are so commonly-known they don't require a glossary.

```

1693 \newcommand*\newignoredglossary}[1]{%
1694   \ifdefempty\@ignored@glossaries
1695   {%
1696     \edef\@ignored@glossaries{#1}%
1697   }%
1698   {%
1699     \eappto\@ignored@glossaries{, #1}%
1700   }%
1701   \csgdef{glolist@#1}{,}%
1702   \ifcsundef{gls@#1@entryfmt}%
1703   {%
1704     \defglentryfmt[#1]{\glentryfmt}%
1705   }%
1706   {}%
1707   \ifdefempty\@gls@nohyperlist
1708   {%
1709     \renewcommand*\@gls@nohyperlist{#1}%
1710   }%
1711   {%
1712     \eappto\@gls@nohyperlist{, #1}%
1713   }%
1714 }

```

`ignored@glossaries` List of ignored glossaries.

```

1715 \newcommand*\@ignored@glossaries{}

```

`ignoredglossary` Tests if the given glossary is an ignored glossary. Expansion is used in case the first argument is a control sequence.

```

1716 \newcommand*\ifignoredglossary}[3]{%
1717   \edef\@gls@igtype{#1}%
1718   \expandafter\DTLifinlist\expandafter
1719   {\@gls@igtype}{\@ignored@glossaries}{#2}{#3}%
1720 }

```

1.7 Defining new entries

New glossary entries are defined using `\newglossaryentry`. This command requires a label and a key-value list that defines the relevant information for that entry. The definition for these keys follows. Note that the name, description and symbol keys will be sanitized later, depending on the value of the package option `sanitize` (this means that if some of the keys haven't been defined, they can be constructed from the name and description key before they are sanitized).

name The name key indicates the name of the term being defined. This is how the term will appear in the glossary. The name key is required when defining a new glossary entry.

```
1721 \define@key{glossentry}{name}{%  
1722 \def\@glo@name{#1}%  
1723 }
```

description The description key is usually only used in the glossary, but can be made to appear in the text by redefining `\glentryfmt` or using `\defglentryfmt`. The description key is required when defining a new glossary entry. If a long description is required, use `\longnewglossaryentry` instead of `\newglossaryentry`.

```
1724 \define@key{glossentry}{description}{%  
1725 \def\@glo@desc{#1}%  
1726 }
```

descriptionplural

```
1727 \define@key{glossentry}{descriptionplural}{%  
1728 \def\@glo@descplural{#1}%  
1729 }
```

sort The sort key needs to be sanitized here (the sort key is provided for `makeindex`'s benefit, not for use in the document). The sort key is optional when defining a new glossary entry. If omitted, the value is given by `\langle name \rangle \langle description \rangle`.

```
1730 \define@key{glossentry}{sort}{%  
1731 \def\@glo@sort{#1}}
```

text The text key determines how the term should appear when used in the document (i.e. outside of the glossary). If omitted, the value of the name key is used instead.

```
1732 \define@key{glossentry}{text}{%  
1733 \def\@glo@text{#1}%  
1734 }
```

plural The plural key determines how the plural form of the term should be displayed in the document. If omitted, the plural is constructed by appending `\glspluralsuffix` to the value of the text key.

```
1735 \define@key{glossentry}{plural}{%  
1736 \def\@glo@plural{#1}%  
1737 }
```

first The first key determines how the entry should be displayed in the document when it is first used. If omitted, it is taken to be the same as the value of the text key.

```
1738 \define@key{glossentry}{first}{%  
1739 \def\@glo@first{#1}%  
1740 }
```

firstplural The firstplural key is used to set the plural form for first use, in the event that the plural is required the first time the term is used. If omitted, it is constructed by appending `\glspluralsuffix` to the value of the first key.

```

1741 \define@key{glossentry}{firstplural}{%
1742 \def\@glo@firstplural{#1}%
1743 }

```

s@default@value

```

1744 \newcommand*{\@gls@default@value}{\relax}

```

symbol The symbol key is ignored by most of the predefined glossary styles, and defaults to `\relax` if omitted. It is provided for glossary styles that require an associated symbol, as well as a name and description. To make this value appear in the glossary, you need to redefine `\glossentry`. If you want this value to appear in the text when the term is used by commands like `\gls`, you will need to change `\glsentryfmt` (or use for `\defglsentryfmt` individual glossaries).

```

1745 \define@key{glossentry}{symbol}{%
1746 \def\@glo@symbol{#1}%
1747 }

```

symbolplural

```

1748 \define@key{glossentry}{symbolplural}{%
1749 \def\@glo@symbolplural{#1}%
1750 }

```

type The type key specifies to which glossary this entry belongs. If omitted, the default glossary is used.

```

1751 \define@key{glossentry}{type}{%
1752 \def\@glo@type{#1}}

```

counter The counter key specifies the name of the counter associated with this glossary entry:

```

1753 \define@key{glossentry}{counter}{%
1754   \ifcsundef{c@#1}%
1755   {%
1756     \PackageError{glossaries}%
1757     {There is no counter called ‘#1’}%
1758     {%
1759       The counter key should have the name of a valid counter
1760       as its value%
1761     }%
1762   }%
1763   {%
1764     \def\@glo@counter{#1}%
1765   }%
1766 }

```

see The see key specifies a list of cross-references

```

1767 \define@key{glossentry}{see}{%
1768   \gls@set@xr@key{see}{\@glo@see}{#1}%
1769 }

```


`\gls@set@xr@key` `\gls@set@xr@key{<key name>}{<cs>}{<value>}`

Assign a cross-reference key.

```
1770 \newcommand*{\gls@set@xr@key}[3]{%
1771   \renewcommand*{\gls@xr@key}{#1}%
1772   \gls@checkseeallowed
1773   \def#2{#3}%
1774   \@glo@seeautonumberlist
1775 }
```

`\gls@xr@key`

```
1776 \newcommand*{\gls@xr@key}{see}
```

`checkseeallowed`

```
1777 \newcommand*{\gls@checkseeallowed}{%
1778   \@gls@see@noindex
1779 }
```

`ed@preambleonly`

```
1780 \newcommand*{\gls@checkseeallowed@preambleonly}{%
1781   \GlossariesWarning{glossaries}%
1782   {'\gls@xr@key' key doesn't have any effect when used in the document
1783   environment. Move the definition to the preamble
1784   after \string\makeglossaries\space
1785   or \string\makenoidxglossaries}%
1786 }
```

`parent` The parent key specifies the parent entry, if required.

```
1787 \define@key{glossentry}{parent}{%
1788 \def\@glo@parent{#1}}
```

`nonumberlist` The `nonumberlist` key suppresses or activates the number list for the given entry.

```
1789 \define@choicekey{glossentry}{nonumberlist}[\val\nr]{true,false}[true]{%
1790   \ifcase\nr\relax
1791     \def\@glo@prefix{\glsnonextpages}%
1792     \@gls@savenonumberlist{true}%
1793   \else
1794     \def\@glo@prefix{\glsnextpages}%
1795     \@gls@savenonumberlist{false}%
1796   \fi
1797 }
```

`savenonumberlist` The `nonumberlist` option isn't saved by default (as it just sets the prefix) which isn't a problem when the entries are defined in the preamble, but causes a problem when entries are defined in the document. In this case, the value needs to be saved so that it can be written to the `.glsdefs` file.

```
1798 \newcommand*{\@gls@savenonumberlist}[1]{}
```

nitnonnumberlist

```
1799 \newcommand*{\@gls@initnonnumberlist}{}%
```

nitnonnumberlist

```
1800 \newcommand*{\@gls@storenonnumberlist}[1]{}
```

savenonnumberlist Allow the nonnumberlist value to be saved.

```
1801 \newcommand*{\@gls@enablesavenonnumberlist}{%
1802   \renewcommand*{\@gls@initnonnumberlist}{%
1803     \undef\@glo@nonnumberlist
1804   }%
1805   \renewcommand*{\@gls@savenonnumberlist}[1]{%
1806     \def\@glo@nonnumberlist{##1}%
1807   }%
1808   \renewcommand*{\@gls@storenonnumberlist}[1]{%
1809     \ifdef\@glo@nonnumberlist
1810       {%
1811         \cslet{glo@glstetoklabel{##1}@nonnumberlist}{\@glo@nonnumberlist}%
1812       }%
1813     }%
1814   }%
1815   \appto\@gls@keymap{,{nonnumberlist}{nonnumberlist}}%
1816 }
```

Define some generic user keys. (Additional keys can be added by the user.)

user1

```
1817 \define@key{glossentry}{user1}{%
1818   \def\@glo@useri{#1}%
1819 }
```

user2

```
1820 \define@key{glossentry}{user2}{%
1821   \def\@glo@userii{#1}%
1822 }
```

user3

```
1823 \define@key{glossentry}{user3}{%
1824   \def\@glo@useriii{#1}%
1825 }
```

user4

```
1826 \define@key{glossentry}{user4}{%
1827   \def\@glo@useriv{#1}%
1828 }
```

user5

```
1829 \define@key{glossentry}{user5}{%
1830   \def\@glo@userv{#1}%
1831 }
```

user6

```
1832 \define@key{glossentry}{user6}{%  
1833   \def\@glo@user6{#1}%  
1834 }
```

short This key is provided for use by \newacronym. It's not designed for general purpose use, so isn't described in the user manual.

```
1835 \define@key{glossentry}{short}{%  
1836   \def\@glo@short{#1}%  
1837 }
```

shortplural This key is provided for use by \newacronym.

```
1838 \define@key{glossentry}{shortplural}{%  
1839   \def\@glo@shortpl{#1}%  
1840 }
```

long This key is provided for use by \newacronym.

```
1841 \define@key{glossentry}{long}{%  
1842   \def\@glo@long{#1}%  
1843 }
```

longplural This key is provided for use by \newacronym.

```
1844 \define@key{glossentry}{longplural}{%  
1845   \def\@glo@longpl{#1}%  
1846 }
```

\@glsnname Define command to generate error if name key is missing.

```
1847 \newcommand*\@glsnname{%  
1848   \PackageError{glossaries}{name key required in  
1849   \string\newglossaryentry\space for entry '\@glo@label'}{You  
1850   haven't specified the entry name}}
```

\@glsnodelsc Define command to generate error if description key is missing.

```
1851 \newcommand*\@glsnodelsc{%  
1852   \PackageError{glossaries}  
1853   {%  
1854     description key required in \string\newglossaryentry\space  
1855     for entry '\@glo@label'%  
1856   }%  
1857   {%  
1858     You haven't specified the entry description%  
1859   }%  
1860 }
```

lsdefaultplural Now obsolete. Don't use.

```
1861 \newcommand*\@glsdefaultplural{}
```

missingnumberlist Define a command to generate warning when numberlist not set.

```
1862 \newcommand*{\@gls@missingnumberlist}[1]{%
1863   ??%
1864   \ifglssavenumberlist
1865     \GlossariesWarning{Missing number list for entry ‘#1’.
1866       Maybe makeglossaries + rerun required}%
1867   \else
1868     \PackageError{glossaries}%
1869       {Package option ‘savenumberlist=true’ required}%
1870     {%
1871       You must use the ‘savenumberlist’ package option
1872       to reference location lists.%
1873     }%
1874   \fi
1875 }
```

@glsdefaultsort Define command to set default sort.

```
1876 \newcommand*{\@glsdefaultsort}{\@glo@name}
```

\gls@level Register to increment entry levels.

```
1877 \newcount\gls@level
```

@noexpand@field

```
1878 \newcommand{\@@gls@noexpand@field}[3]{%
1879   \expandafter\global\expandafter
1880     \let\csname glo@#1@#2\endcsname#3%
1881 }
```

noexpand@fields

```
1882 \newcommand{\@gls@noexpand@fields}[4]{%
1883   \ifcsdef{gls@assign@#3@field}
1884     {%
1885       \ifdefequal{#4}{\@gls@default@value}%
1886       {%
1887         \edef\@gls@value{\expandonce{#1}}%
1888         \csuse{gls@assign@#3@field}{#2}{\@gls@value}%
1889       }%
1890     }%
1891     \csuse{gls@assign@#3@field}{#2}{#4}%
1892   }%
1893 }%
1894 {%
1895   \ifdefequal{#4}{\@gls@default@value}%
1896   {%
1897     \edef\@gls@value{\expandonce{#1}}%
1898     \@@gls@noexpand@field{#2}{#3}{\@gls@value}%
1899   }%
1900   {%
```

```

1901      \@@gls@noexpand@field{#2}{#3}{#4}%
1902    }%
1903  }%
1904 }

```

ls@expand@field

```

1905 \newcommand{\@@gls@expand@field}[3]{%
1906   \expandafter
1907     \protected@xdef\csname glo@#1@#2\endcsname{#3}%
1908 }

```

s@expand@fields

```

1909 \newcommand{\@gls@expand@fields}[4]{%
1910   \ifcsdef{gls@assign@#3@field}
1911     {%
1912       \ifdefequal{#4}{\@gls@default@value}%
1913       {%
1914         \edef\@gls@value{\expandonce{#1}}%
1915         \csuse{gls@assign@#3@field}{#2}{\@gls@value}%
1916       }%
1917     }%
1918     \expandafter\@gls@startswithexpandonce#4\relax\relax@gls@endcheck
1919     {%
1920       \@@gls@expand@field{#2}{#3}{#4}%
1921     }%
1922     {%
1923       \csuse{gls@assign@#3@field}{#2}{#4}%
1924     }%
1925   }%
1926 }%
1927 {%
1928   \ifdefequal{#4}{\@gls@default@value}%
1929   {%
1930     \@@gls@expand@field{#2}{#3}{#1}%
1931   }%
1932   {%
1933     \@@gls@expand@field{#2}{#3}{#4}%
1934   }%
1935 }%
1936 }

```

swithexpandonce

```

1937 \def\@gls@expandonce{\expandonce}
1938 \def\@gls@startswithexpandonce#1#2@gls@endcheck#3#4{%
1939   \def\@gls@tmp{#1}%
1940   \ifdefequal{\@gls@expandonce}{\@gls@tmp}{#3}{#4}%
1941 }

```

`gls@assign@field` `\gls@assign@field{<def value>}{<label>}{<field>}{<tmp cs>}`

Assigns an entry field. Expansion performed by default (except for name, symbol and description where backward compatibility required). If *<tmp cs>* is *<@gls@default@value>*, *<def value>* is used instead.

```
1942 \let\gls@assign@field\@gls@expand@fields
```

`glsexpandfields` Fully expand values when assigning fields (except for specific fields that are overridden by `\glssetnoexpandfield`).

```
1943 \newcommand*{\glsexpandfields}{%
1944   \let\gls@assign@field\@gls@expand@fields
1945 }
```

`glsnoexpandfields` Don't expand values when assigning fields (except for specific fields that are overridden by `\glssetexpandfield`).

```
1946 \newcommand*{\glsnoexpandfields}{%
1947   \let\gls@assign@field\@gls@noexpand@fields
1948 }
```

`newglossaryentry` Define `\newglossaryentry {<label>} {<key-val list>}`. There are two required fields in *<key-val list>*: name (or parent) and description. (See above.)

```
1949 \newrobustcmd{\newglossaryentry}[2]{%
```

Check to see if this glossary entry has already been defined:

```
1950   \glsdoifnoexists{#1}%
1951   {%
1952     \gls@defglossaryentry{#1}{#2}%
1953   }%
1954 }
```

`newglossaryentry` The definition of `\newglossaryentry` is changed at the start of the document environment. The see key doesn't work for entries that have been defined in the document environment.

```
1955 \newcommand*{\gls@defdocnewglossaryentry}{%
1956   \let\gls@checkseeallowed\gls@checkseeallowed@preambleonly
1957   \let\newglossaryentry\new@glossaryentry
1958 }
```

`deglossaryentry` Like `\newglossaryentry` but does nothing if the entry has already been defined.

```
1959 \newrobustcmd{\provideglossaryentry}[2]{%
1960   \ifglsentryexists{#1}%
1961   }{%
1962   {%
1963     \gls@defglossaryentry{#1}{#2}%
1964   }%
1965 }
1966 \@onlypreamble{\provideglossaryentry}
```

w@glossaryentry For use in document environment.

```
1967 \newrobustcmd{\new@glossaryentry}[2]{%
1968   \ifundef\@gls@deffile
1969   {%
1970     \global\newwrite\@gls@deffile
1971     \immediate\openout\@gls@deffile=\jobname.glsdefs
1972   }%
1973   {}%
1974   \ifglentryexists{#1}{}%
1975   {%
1976     \gls@defglossaryentry{#1}{#2}%
1977   }%
1978   \@gls@writedef{#1}%
1979 }
1980 \AtBeginDocument
1981 {
1982   \@gls@enablesavenonnumberlist
1983   \makeatletter
1984   \InputIfFileExists{\jobname.glsdefs}{%}{}%
1985   \makeatother
1986   \gls@defdocnewglossaryentry
1987 }
1988 \AtEndDocument{\ifdef\@gls@deffile{\closeout\@gls@deffile}{}}
```

\@gls@writedef Writes glossary entry definition to \@gls@deffile.

```
1989 \newcommand*{\@gls@writedef}[1]{%
1990   \immediate\write\@gls@deffile
1991   {%
1992     \string\ifglentryexists{#1}{}\glspercentchar^^J%
1993     \expandafter\@gobble\string\{\glspercentchar^^J%
1994     \string\gls@defglossaryentry{\glsdetoklabel{#1}}\glspercentchar^^J%
1995     \expandafter\@gobble\string\{\glspercentchar%
1996   }%
1997   Write key value information:
1998   {%
1999     \letcs\glo@value{glo@\glsdetoklabel{#1}}\expandafter\@secondoftwo\@gls@map}%
2000     \ifdef\glo@value
2001     {%
2002       \@onelevel@sanitize\glo@value
2003       \immediate\write\@gls@deffile
2004       {%
2005         \expandafter\@firstoftwo\@gls@map
2006         =\expandafter\@gobble\string\{\glo@value\expandafter\@gobble\string\},%
2007         \glspercentchar
2008       }%
2009     }%
2010   }%
2011 }
```

Provide hook:

```

2012 \glswritedefhook
2013 \immediate\write\@gls@deffile
2014 {%
2015     \glpercentchar^^J%
2016     \expandafter\@gobble\string\}\glpercentchar^^J%
2017     \expandafter\@gobble\string\}\glpercentchar%
2018 }%
2019 }

```

\@gls@keymap List of entry definition key names and corresponding tag in control sequence used to store the value.

```

2020 \newcommand*{\@gls@keymap}{%
2021 {name}{name},%
2022 {sort}{sortvalue},% unescaped sort value
2023 {type}{type},%
2024 {first}{first},%
2025 {firstplural}{firstpl},%
2026 {text}{text},%
2027 {plural}{plural},%
2028 {description}{desc},%
2029 {descriptionplural}{descplural},%
2030 {symbol}{symbol},%
2031 {symbolplural}{symbolplural},%
2032 {user1}{useri},%
2033 {user2}{userii},%
2034 {user3}{useriii},%
2035 {user4}{useriv},%
2036 {user5}{userv},%
2037 {user6}{uservi},%
2038 {long}{long},%
2039 {longplural}{longpl},%
2040 {short}{short},%
2041 {shortplural}{shortpl},%
2042 {counter}{counter},%
2043 {parent}{parent}%
2044 }

```

\@gls@fetchfield \@gls@fetchfield{<cs>}{<field>}

Fetches the internal field label from the given user *<field>* and stores in *<cs>*.

```

2045 \newcommand*{\@gls@fetchfield}[2]{%

```

Ensure user field name is fully expanded

```

2046 \edef\@gls@thisval{#2}%

```

Iterate through known mappings until we find the one for this field.

```

2047 \@for\@gls@map:=\@gls@keymap\do{%

```



```

2048 \edef\@this@key{\expandafter\@firstoftwo\@gls@map}%
2049 \ifdefequal{\@this@key}{\@gls@thisval}%
2050 {%

```

Found it.

```

2051 \edef#1{\expandafter\@secondoftwo\@gls@map}%

```

Break out of loop.

```

2052 \@endfortrue
2053 }%
2054 {}%
2055 }%
2056 }

```

`\glsaddstoragekey` `\glsaddstoragekey{<key>}{<default value>}{<no link cs>}`

Similar to `\glsaddkey` but intended for keys whose values aren't explicitly used in the document, but might be required behind the scenes by other commands.

```

2057 \newcommand*{\glsaddstoragekey}{\ifstar\@sglsaddstoragekey\@glsaddstoragekey}

```

Starred version switches on expansion for this key.

```

2058 \newcommand*{\@sglsaddstoragekey}[1]{%
2059 \key@ifundefined{glossentry}{#1}%
2060 {%
2061 \expandafter\newcommand\expandafter*\expandafter
2062 {\csname gls@assign@#1@field\endcsname}[2]{%
2063 \@gls@expand@field{##1}{#1}{##2}%
2064 }%
2065 }%
2066 {}%
2067 \@glsaddstoragekey{#1}%
2068 }

```

Unstarred version doesn't override default expansion.

```

2069 \newcommand*{\@glsaddstoragekey}[3]{%

```

Check the specified key doesn't already exist.

```

2070 \key@ifundefined{glossentry}{#1}%
2071 {%

```

Set up the key.

```

2072 \define@key{glossentry}{#1}{\csdef{@glo@#1}{##1}}%
2073 \appto\@gls@keymap{, #1}{#1}}%

```

Set the default value.

```

2074 \appto\@newglossaryentryprehook{\csdef{@glo@#1}{#2}}%

```

Assignment code.

```

2075 \appto\@newglossaryentryposthook{%
2076 \letcs{\@glo@tmp}{@glo@#1}%
2077 \gls@assign@field{#2}{\@glo@label}{#1}{\@glo@tmp}%
2078 }%

```

Define the no-link commands.

```

2079 \newcommand*{#3}[1]{\@gls@entry@field{##1}{#1}}%
2080 }%
2081 {%
2082 \PackageError{glossaries}{Key ‘#1’ already exists}{}%
2083 }%
2084 }

```

<code>\glsaddkey</code>	<code>\glsaddkey{<key>}{<default value>}{<no link cs>}{<no link ucfirst cs>}</code> <code>{<link cs>}{<link ucfirst cs>}{<link allcaps cs>}</code>
-------------------------	---

Allow user to add their own custom keys.

```

2085 \newcommand*{\glsaddkey}{\@ifstar\@sglsaddkey\@glsaddkey}

```

Starred version switches on expansion for this key.

```

2086 \newcommand*{\@sglsaddkey}[1]{%
2087 \key@ifundefined{glossentry}{#1}%
2088 {%
2089 \expandafter\newcommand\expandafter*\expandafter
2090 {\csname gls@assign@#1@field@endcsname}[2]{%
2091 \@gls@expand@field{##1}{#1}{##2}%
2092 }%
2093 }%
2094 }%
2095 \@glsaddkey{#1}%
2096 }

```

Unstarred version doesn't override default expansion.

```

2097 \newcommand*{\@glsaddkey}[7]{%

```

Check the specified key doesn't already exist.

```

2098 \key@ifundefined{glossentry}{#1}%
2099 {%

```

Set up the key.

```

2100 \define@key{glossentry}{#1}{\csdef{@glo@#1}{##1}}%
2101 \appto\@gls@keymap{, {#1}{#1}}%

```

Set the default value.

```

2102 \appto\@newglossaryentryprehook{\csdef{@glo@#1}{#2}}%

```

Assignment code.

```

2103 \appto\@newglossaryentryposthook{%
2104 \letcs{\@glo@tmp}{@glo@#1}%
2105 \gls@assign@field{#2}{\@glo@label}{#1}{\@glo@tmp}%
2106 }%

```

Define the no-link commands.

```

2107 \newcommand*{#3}[1]{\@gls@entry@field{##1}{#1}}%
2108 \newcommand*{#4}[1]{\@Gls@entry@field{##1}{#1}}%

```

Now for the commands with links. First the version with no case change:

```

2109 \ifcsdef{@gls@user@#1@}%
2110 {%
2111   \PackageError{glossaries}%
2112   {Can't define '\string#5' as helper command
2113   '\expandafter\string\csname @gls@user@#1@\endcsname' already exists}%
2114   }%
2115 }%
2116 {%
2117   \expandafter\newcommand\expandafter*\expandafter
2118   {\csname @gls@user@#1@\endcsname}[2][\%
2119     \new@ifnextchar[%
2120       {\csuse{@gls@user@#1@}{##1}{##2}}%
2121       {\csuse{@gls@user@#1@}{##1}{##2}[]}}%
2122   \csdef{@gls@user@#1@}##1##2[##3]{%
2123     \@gls@field@link{##1}{##2}{#3{##2}##3}%
2124   }%
2125   \newrobustcmd*{#5}{%
2126     \expandafter\@gls@hyp@opt\csname @gls@user@#1@\endcsname}%
2127   }%

```

Next the version with the first letter converted to upper case:

```

2128 \ifcsdef{@Gls@user@#1@}%
2129 {%
2130   \PackageError{glossaries}%
2131   {Can't define '\string#6' as helper command
2132   '\expandafter\string\csname @Gls@user@#1@\endcsname' already exists}%
2133   }%
2134 }%
2135 {%
2136   \expandafter\newcommand\expandafter*\expandafter
2137   {\csname @Gls@user@#1@\endcsname}[2][\%
2138     \new@ifnextchar[%
2139       {\csuse{@Gls@user@#1@}{##1}{##2}}%
2140       {\csuse{@Gls@user@#1@}{##1}{##2}[]}}%
2141   \csdef{@Gls@user@#1@}##1##2[##3]{%
2142     \@gls@field@link{##1}{##2}{#4{##2}##3}%
2143   }%
2144   \newrobustcmd*{#6}{%
2145     \expandafter\@gls@hyp@opt\csname @Gls@user@#1@\endcsname}%
2146   }%

```

Finally the all caps version:

```

2147 \ifcsdef{@GLS@user@#1@}%
2148 {%
2149   \PackageError{glossaries}%
2150   {Can't define '\string#7' as helper command
2151   '\expandafter\string\csname @GLS@user@#1@\endcsname' already exists}%

```

```

2152     {}%
2153   }%
2154   {%

2155   \expandafter\newcommand\expandafter*\expandafter
2156   {\csname @GLS@user@#1\endcsname}[2] [] {%
2157     \new@ifnextchar[%
2158       {\csuse{@GLS@user@#1@}{##1}{##2}}%
2159       {\csuse{@GLS@user@#1@}{##1}{##2} []}}%
2160   \csdef{@GLS@user@#1@}##1##2[##3]{%
2161     \@gls@field@link{##1}{##2}{\mfirstucMakeUppercase{#3{##2}##3}}%
2162   }%
2163   \newrobustcmd*{#7}{%
2164     \expandafter\@gls@hyp@opt\csname @GLS@user@#1\endcsname}%
2165   }%
2166 }%
2167 {%
2168   \PackageError{glossaries}{Key ‘#1’ already exists}{}%
2169 }%
2170 }

```

`\glsfieldxdef` `\glsfieldxdef{<label>}{<field>}{<definition>}`

```

2171 \newcommand{\glsfieldxdef}[3]{%
2172   \glsdoifexists{#1}%
2173   {%
2174     \edef\@glo@label{\glsdetoklabel{#1}}%
2175     \ifcsdef{glo@\@glo@label @#2}%
2176     {%
2177       \expandafter\xdef\csname glo@\@glo@label @#2\endcsname{#3}%
2178     }%
2179     {%
2180       \PackageError{glossaries}{Key ‘#2’ doesn’t exist}{}%
2181     }%
2182   }%
2183 }

```

`\glsfielddedef` `\glsfielddedef{<label>}{<field>}{<definition>}`

```

2184 \newcommand{\glsfielddedef}[3]{%
2185   \glsdoifexists{#1}%
2186   {%
2187     \edef\@glo@label{\glsdetoklabel{#1}}%
2188     \ifcsdef{glo@\@glo@label @#2}%
2189     {%

```

```

2190     \expandafter\edef\csname glo@\@glo@label @#2\endcsname{#3}%
2191 }%
2192 {%
2193     \PackageError{glossaries}{Key ‘#2’ doesn’t exist}{}%
2194 }%
2195 }%
2196 }

```

`\glsfieldgdef` `\glsfieldgdef{<label>}{<field>}{<definition>}`

```

2197 \newcommand{\glsfieldgdef}[3]{%
2198   \glsdoifexists{#1}%
2199   {%
2200     \edef\@glo@label{\glsdetoklabel{#1}}%
2201     \ifcsdef{glo@\@glo@label @#2}%
2202     {%
2203       \expandafter\gdef\csname glo@\@glo@label @#2\endcsname{#3}%
2204     }%
2205     {%
2206       \PackageError{glossaries}{Key ‘#2’ doesn’t exist}{}%
2207     }%
2208   }%
2209 }

```

`\glsfieldddef` `\glsfieldddef{<label>}{<field>}{<definition>}`

```

2210 \newcommand{\glsfieldddef}[3]{%
2211   \glsdoifexists{#1}%
2212   {%
2213     \edef\@glo@label{\glsdetoklabel{#1}}%
2214     \ifcsdef{glo@\@glo@label @#2}%
2215     {%
2216       \expandafter\def\csname glo@\@glo@label @#2\endcsname{#3}%
2217     }%
2218     {%
2219       \PackageError{glossaries}{Key ‘#2’ doesn’t exist}{}%
2220     }%
2221   }%
2222 }

```

`\glsfieldfetch` `\glsfieldfetch{<label>}{<field>}{<cs>}`

Fetches the value of the given field and stores in the given control sequence.

```

2223 \newcommand{\glsfieldfetch}[3]{%
2224   \glsdoifexists{#1}%
2225   {%
2226     \edef\@glo@label{\glsdetoklabel{#1}}%
2227     \ifcsdef{glo@\@glo@label @#2}%
2228     {%
2229       \letcs#3{glo@\@glo@label @#2}%
2230     }%
2231   }%
2232   \PackageError{glossaries}{Key ‘#2’ doesn’t exist}{}%
2233 }%
2234 }%
2235 }

```

`\ifglsfieldeq` `\ifglsfieldeq{<label>}{<field>}{<string>}{<true>}{<false>}`

Tests if the value of the given field is equal to the given string.

```

2236 \newcommand{\ifglsfieldeq}[5]{%
2237   \glsdoifexists{#1}%
2238   {%
2239     \edef\@glo@label{\glsdetoklabel{#1}}%
2240     \ifcsdef{glo@\@glo@label @#2}%
2241     {%
2242       \ifcsstring{glo@\@glo@label @#2}{#3}{#4}{#5}%
2243     }%
2244   }%
2245   \PackageError{glossaries}{Key ‘#2’ doesn’t exist}{}%
2246 }%
2247 }%
2248 }

```

`\ifglsfielddefeq` `\ifglsfielddefeq{<label>}{<field>}{<command>}{<true>}{<false>}`

Tests if the value of the given field is equal to the replacement text of the given command.

```

2249 \newcommand{\ifglsfielddefeq}[5]{%
2250   \glsdoifexists{#1}%
2251   {%
2252     \edef\@glo@label{\glsdetoklabel{#1}}%
2253     \ifcsdef{glo@\@glo@label @#2}%
2254     {%
2255       \expandafter\ifdefstrequal
2256       \csname glo@\@glo@label @#2\endcsname{#3}{#4}{#5}%
2257     }%
2258   }%
2259   \PackageError{glossaries}{Key ‘#2’ doesn’t exist}{}%
2260 }%

```

```

2261 }%
2262 }

```

```

\ifglsfieldcseq \ifglsfieldcseq{<label>}{<field>}{<cs name>}{<true>}{<false>}

```

As above but uses \ifcsstrequal instead of \ifdefstrequal

```

2263 \newcommand{\ifglsfieldcseq}[5]{%
2264   \glsdoifexists{#1}%
2265   {%
2266     \edef\@glo@label{\glsdetoklabel{#1}}%
2267     \ifcsdef{glo@\@glo@label @#2}%
2268     {%
2269       \ifcsstrequal{glo@\@glo@label @#2}{#3}{#4}{#5}%
2270     }%
2271     {%
2272       \PackageError{glossaries}{Key ‘#2’ doesn’t exist}{}%
2273     }%
2274   }%
2275 }

```

gls.writedefhook

```

2276 \newcommand*{\gls.writedefhook}{}

```

gls@assign@desc

```

2277 \newcommand*{\gls@assign@desc}[1]{%
2278   \gls@assign@field{#1}{desc}{\@glo@desc}%
2279   \gls@assign@field{\@glo@desc}{#1}{descplural}{\@glo@descplural}%
2280 }

```

ewglossaryentry

```

2281 \newcommand{\longnewglossaryentry}[3]{%
2282   \glsdoifnoexists{#1}%
2283   {%
2284     \bgroup
2285     \let\@org@newglossaryentryprehook\@newglossaryentryprehook
2286     \long\def\@newglossaryentryprehook{%
2287       \long\def\@glo@desc{#3\leavevmode\unskip\nopostdesc}%
2288       \@org@newglossaryentryprehook
2289     }%
2290     \renewcommand*{\gls@assign@desc}[1]{%
2291       \global\cslet{glo@\glsdetoklabel{#1}@desc}{\@glo@desc}%
2292       \global\cslet{glo@\glsdetoklabel{#1}@descplural}{\@glo@desc}%
2293     }
2294     \gls@defglossaryentry{#1}{#2}%
2295   \egroup
2296 }%
2297 }

```

Only allowed in the preamble. (Otherwise a long description could cause problems when writing the entry definition to the temporary file.)

```
2298 \@onlypreamble{\longnewglossaryentry}
```

`deglossaryentry` As the above but only defines the entry if it doesn't already exist.

```
2299 \newcommand{\longprovideglossaryentry}[3]{%
2300   \ifglentryexists{#1}{}%
2301   {\longnewglossaryentry{#1}{#2}{#3}}%
2302 }
2303 \@onlypreamble{\longprovideglossaryentry}
```

`defglossaryentry` `\gls@defglossaryentry{<label>}{<key-val list>}`

Defines a new entry without checking if it already exists.

```
2304 \newcommand{\gls@defglossaryentry}[2]{%
```

Prevent any further use of `\GlsSetQuote`:

```
2305 \let\GlsSetQuote\gls@nosetquote
```

Store label

```
2306 \edef\@glo@label{\glsdetoklabel{#1}}%
```

Provide a means for user defined keys to reference the label:

```
2307 \let\glslabel\@glo@label
```

Set up defaults. If the name or description keys are omitted, an error will be generated.

```
2308 \let\@glo@name\@gls@name
```

```
2309 \let\@glo@desc\@gls@desc
```

```
2310 \let\@glo@descplural\@gls@default@value
```

```
2311 \let\@glo@type\@gls@default@value
```

```
2312 \let\@glo@symbol\@gls@default@value
```

```
2313 \let\@glo@symbolplural\@gls@default@value
```

```
2314 \let\@glo@text\@gls@default@value
```

```
2315 \let\@glo@plural\@gls@default@value
```

Using `\let` instead of `\def` to make later comparison avoid expansion issues. (Thanks to Ulrich Diez for suggesting this.)

```
2316 \let\@glo@first\@gls@default@value
```

```
2317 \let\@glo@firstplural\@gls@default@value
```

Set the default sort:

```
2318 \let\@glo@sort\@gls@default@value
```

Set the default counter:

```
2319 \let\@glo@counter\@gls@default@value
```


2320 \def\@glo@see{}%

2321 \def\@glo@parent{}%

2322 \def\@glo@prefix{}%

Initialise nonnumberlist setting if we're in the document environment.

2323 \@gls@initnonnumberlist

2324 \def\@glo@useri{}%

2325 \def\@glo@userii{}%

2326 \def\@glo@useriii{}%

2327 \def\@glo@useriv{}%

2328 \def\@glo@userv{}%

2329 \def\@glo@uservi{}%

2330 \def\@glo@short{}%

2331 \def\@glo@shortpl{}%

2332 \def\@glo@long{}%

2333 \def\@glo@longpl{}%

Add start hook in case another package wants to add extra keys.

2334 \@newglossaryentryprehook

Extract key-val information from third parameter:

2335 \setkeys{glossentry}{#2}%

Check there is a default glossary.

2336 \ifundef\glsdefaulttype

2337 {%

2338 \PackageError{glossaries}%

2339 {No default glossary type (have you used 'nomain' by mistake?)}%

2340 {If you use package option 'nomain' you must define

2341 a new glossary before you can define entries}%

2342 }%

2343 {}%

Assign type. This must be fully expandable

2344 \gls@assign@field{\glsdefaulttype}{\@glo@label}{type}{\@glo@type}%

2345 \edef\@glo@type{\glsentrytype{\@glo@label}}%

Check to see if this glossary type has been defined, if it has, add this label to the relevant list, otherwise generate an error.

2346 \ifcsundef{glo@list@\@glo@type}%

2347 {%

2348 \PackageError{glossaries}%

2349 {Glossary type '\@glo@type' has not been defined}%

2350 {You need to define a new glossary type, before making entries

2351 in it}%

2352 }%

2353 {}%

Check if it's an ignored glossary

```
2354 \ifignoredglossary\@glo@type
2355 {%
```

The description may be omitted for an entry in an ignored glossary.

```
2356 \ifx\@glo@desc\@glsnodel
2357 \let\@glo@desc\@empty
2358 \fi
2359 }%
2360 {%
2361 }%
2362 \protected@edef\@glolist@\csname glolist@\@glo@type\endcsname}%
2363 \expandafter\xdef\csname glolist@\@glo@type\endcsname{%
2364 \@glolist@\@glo@label},}%
2365 }%
```

Initialise level to 0.

```
2366 \gls@level=0\relax
```

Has this entry been assigned a parent?

```
2367 \ifx\@glo@parent\@empty
```

Doesn't have a parent. Set \glo@<label>@parent to empty.

```
2368 \expandafter\gdef\csname glo@\@glo@label @parent\endcsname{}%
2369 \else
```

Has a parent. Check to ensure this entry isn't its own parent.

```
2370 \ifdefequal\@glo@label\@glo@parent%
2371 {%
2372 \PackageError{glossaries}{Entry '@glo@label' can't be its own parent}{}%
2373 \def\@glo@parent{}%
2374 \expandafter\gdef\csname glo@\@glo@label @parent\endcsname{}%
2375 }%
2376 {%
```

Check the parent exists:

```
2377 \ifglsentryexists{\@glo@parent}%
2378 {%
```

Parent exists. Set \glo@<label>@parent.

```
2379 \expandafter\xdef\csname glo@\@glo@label @parent\endcsname{%
2380 \@glo@parent}%
```

Determine level.

```
2381 \gls@level=\csname glo@\@glo@parent @level\endcsname\relax
2382 \advance\gls@level by 1\relax
```

If name hasn't been specified, use same as the parent name

```
2383 \ifx\@glo@name\@glsnodel
2384 \expandafter\let\expandafter\@glo@name
2385 \csname glo@\@glo@parent @name\endcsname
```

If name and plural haven't been specified, use same as the parent

```

2386         \ifx\@glo@plural\@gls@default@value
2387         \expandafter\let\expandafter\@glo@plural
2388             \csname glo@\@glo@parent @plural\endcsname
2389         \fi
2390     \fi
2391 }%
2392 {%

```

Parent doesn't exist, so issue an error message and change this entry to have no parent

```

2393     \PackageError{glossaries}%
2394     {%
2395         Invalid parent '\@glo@parent'
2396         for entry '\@glo@label' - parent doesn't exist%
2397     }%
2398     {%
2399         Parent entries must be defined before their children%
2400     }%
2401     \def\@glo@parent{%
2402         \expandafter\gdef\csname glo@\@glo@label @parent\endcsname{%
2403     }%
2404 }%
2405 \fi

```

Set the level for this entry

```

2406 \expandafter\xdef\csname glo@\@glo@label @level\endcsname{\number\gls@level}%

```

Define commands associated with this entry:

```

2407 \gls@assign@field{\@glo@name}{\@glo@label}{sortvalue}{\@glo@sort}%
2408 \letcs\@glo@sort{glo@\@glo@label @sortvalue}%
2409 \gls@assign@field{\@glo@name}{\@glo@label}{text}{\@glo@text}%
2410 \expandafter\gls@assign@field\expandafter
2411     {\csname glo@\@glo@label @text\endcsname\glspluralsuffix}%
2412     {\@glo@label}{plural}{\@glo@plural}%
2413 \expandafter\gls@assign@field\expandafter
2414     {\csname glo@\@glo@label @text\endcsname}%
2415     {\@glo@label}{first}{\@glo@first}%

```

If first has been specified, make the default by appending \glspluralsuffix, otherwise make the default the value of the plural key.

```

2416 \ifx\@glo@first\@gls@default@value
2417     \expandafter\gls@assign@field\expandafter
2418         {\csname glo@\@glo@label @plural\endcsname}%
2419         {\@glo@label}{firstpl}{\@glo@firstplural}%
2420 \else
2421     \expandafter\gls@assign@field\expandafter
2422         {\csname glo@\@glo@label @first\endcsname\glspluralsuffix}%
2423         {\@glo@label}{firstpl}{\@glo@firstplural}%
2424 \fi
2425 \ifcsundef{\@glo@type@\@glo@type @counter}%

```

```

2426 {%
2427   \def\@glo@defaultcounter{\glscounter}%
2428 }%
2429 {%
2430   \letcs\@glo@defaultcounter{@glo@type\@glo@type @counter}%
2431 }%
2432 \gls@assign@field{\@glo@defaultcounter}{\@glo@label}{counter}{\@glo@counter}%
2433 \gls@assign@field{}{\@glo@label}{useri}{\@glo@useri}%
2434 \gls@assign@field{}{\@glo@label}{userii}{\@glo@userii}%
2435 \gls@assign@field{}{\@glo@label}{useriii}{\@glo@useriii}%
2436 \gls@assign@field{}{\@glo@label}{useriv}{\@glo@useriv}%
2437 \gls@assign@field{}{\@glo@label}{userv}{\@glo@userv}%
2438 \gls@assign@field{}{\@glo@label}{uservi}{\@glo@uservi}%
2439 \gls@assign@field{}{\@glo@label}{short}{\@glo@short}%
2440 \gls@assign@field{}{\@glo@label}{shortpl}{\@glo@shortpl}%
2441 \gls@assign@field{}{\@glo@label}{long}{\@glo@long}%
2442 \gls@assign@field{}{\@glo@label}{longpl}{\@glo@longpl}%
2443 \ifx\@glo@name\@glsnname
2444   \@glsnname
2445   \let\@glo@name\@gls@default@value
2446 \fi
2447 \gls@assign@field{}{\@glo@label}{name}{\@glo@name}%

```

Set default numberlist if not defined:

```

2448 \ifcsundef{glo@\@glo@label @numberlist}%
2449 {%
2450   \csxdef{glo@\@glo@label @numberlist}{%
2451     \noexpand\@gls@missingnumberlist{\@glo@label}}%
2452 }%
2453 {}%

```

Store nonnumberlist setting if we're in the document environment.

```

2454 \@gls@storenonumberlist{\@glo@label}%

```

The smaller and smallcaps options set the description to \@glo@first. Need to check for this, otherwise it won't get expanded if the description gets sanitized.

```

2455 \def\@glo@@desc{\@glo@first}%
2456 \ifx\@glo@desc\@glo@@desc
2457   \let\@glo@desc\@glo@first
2458 \fi
2459 \ifx\@glo@desc\@glsnnodec
2460   \@glsnnodec
2461   \let\@glo@desc\@gls@default@value
2462 \fi
2463 \gls@assign@desc{\@glo@label}%

```

Set the sort key for this entry:

```

2464 \@gls@defsort{\@glo@type}{\@glo@label}%

2465 \def\@glo@@symbol{\@glo@text}%
2466 \ifx\@glo@symbol\@glo@@symbol

```

```

2467 \let\@glo@symbol\@glo@text
2468 \fi
2469 \gls@assign@field{\relax}{\@glo@label}{symbol}{\@glo@symbol}%
2470 \expandafter
2471 \gls@assign@field\expandafter
2472 {\csname glo@\@glo@label @symbol\endcsname}
2473 {\@glo@label}{symbolplural}{\@glo@symbolplural}%

```

Define an associated boolean variable to determine whether this entry has been used yet (needs to be defined globally):

```

2474 \expandafter\xdef\csname glo@\@glo@label @flagfalse\endcsname{%
2475 \noexpand\global
2476 \noexpand\let\expandafter\noexpand
2477 \csname ifglo@\@glo@label @flag\endcsname\noexpand\iffalse
2478 }%
2479 \expandafter\xdef\csname glo@\@glo@label @flagtrue\endcsname{%
2480 \noexpand\global
2481 \noexpand\let\expandafter\noexpand
2482 \csname ifglo@\@glo@label @flag\endcsname\noexpand\iftrue
2483 }%
2484 \csname glo@\@glo@label @flagfalse\endcsname

```

Sort out any cross-referencing if required.

```

2485 \@glo@autosee

```

Determine and store main part of the entry's index format.

```

2486 \ifignoredglossary\@glo@type
2487 {%
2488 \csdef{glo@\@glo@label @index}{}%
2489 }
2490 {%
2491 \do@glo@storeentry{\@glo@label}%
2492 }%

```

Define entry counters if enabled:

```

2493 \@newglossaryentry@defcounters

```

Add end hook in case another package wants to add extra keys.

```

2494 \@newglossaryentryposthook
2495 }

```

\@glo@autosee Automatically implement \glssee.

```

2496 \newcommand*{\@glo@autosee}{%
2497 \ifdefvoid\@glo@see{%
2498 {%
2499 \protected@edef\@do@glssee{%
2500 \noexpand\@gls@fixbraces\noexpand\@glo@list\@glo@see\noexpand\@nil
2501 \noexpand\expandafter\noexpand\@glssee\noexpand\@glo@list{\@glo@label}}%
2502 \@do@glssee
2503 }%
2504 \@glo@autoseehook

```

```

2505 }%

glo@autoseehook
2506 \newcommand*{\@glo@autoseehook}{}

aryentryprehook  Allow extra information to be added to glossary entries:
2507 \newcommand*{\@newglossaryentryprehook}{}

ryentryposthook  Allow extra information to be added to glossary entries:
2508 \newcommand*{\@newglossaryentryposthook}{}

try@defcounters
2509 \newcommand*{\@newglossaryentry@defcounters}{}

\glsmoveentry  Moves entry whose label is given by first argument to the glossary named in the second argu-
ment.
2510 \newcommand*{\glsmoveentry}[2]{%
2511   \edef\@glo@thislabel{\glsdetoklabel{#1}}%
2512   \edef\glo@type{\csname glo@\@glo@thislabel @type\endcsname}%
2513   \def\glo@list{,%}
2514   \for\lsentries[\glo@type]{\glo@label}%
2515   {%
2516     \ifdefequal\@glo@thislabel\glo@label
2517       {\eappto\glo@list{\glo@label,}}%
2518     }%
2519   \cslet\glo@list@\glo@type{\glo@list}%
2520   \csdef\glo@\@glo@thislabel @type{#2}%
2521 }

ssaryentryfield  Indicate what command should be used to display each entry in the glossary. (This enables
the glossaries-accsupp package to use \accsuppglossaryentryfield instead.)
2522 \ifglxindy
2523   \newcommand*{\@glossaryentryfield}{\string\glossentry}
2524 \else
2525   \newcommand*{\@glossaryentryfield}{\string\glossentry}
2526 \fi

rysubentryfield  Indicate what command should be used to display each subentry in the glossary. (This en-
ables the glossaries-accsupp package to use \accsuppglossarysubentryfield instead.)
2527 \ifglxindy
2528   \newcommand*{\@glossarysubentryfield}{%
2529     \string\subglossentry}
2530 \else
2531   \newcommand*{\@glossarysubentryfield}{%
2532     \string\subglossentry}
2533 \fi

```

\@glo@storeentry

\@glo@storeentry{<label>}

Determine the format to write the entry in the glossary output (.glo) file. The argument is the entry's label (should already have been de-tok'ed if required). The result is stored in \@glo<label>@index, where <label> is the entry's label. (This doesn't include any formatting or location information.)

```
2534 \newcommand{\@glo@storeentry}[1]{%
```

Escape makeindex/xindy special characters in the label:

```
2535 \edef\@glo@esclabel{#1}%
```

```
2536 \gls@checkmkidxchars\@glo@esclabel
```

Get the sort string and escape any special characters

```
2537 \protected@edef\@glo@sort{\csname glo@#1@sort\endcsname}%
```

```
2538 \gls@checkmkidxchars\@glo@sort
```

Same again for the name string. Escape any special characters in the prefix

```
2539 \gls@checkmkidxchars\@glo@prefix
```

Get the parent, if one exists

```
2540 \edef\@glo@parent{\csname glo@#1@parent\endcsname}%
```

Write the information to the glossary file.

```
2541 \ifglxindy
```

Store using xindy syntax.

```
2542 \ifx\@glo@parent\@empty
```

Entry doesn't have a parent

```
2543 \expandafter\protected@xdef\csname glo@#1@index\endcsname{%
```

```
2544 (\string"\@glo@sort\string" %
```

```
2545 \string"\@glo@prefix\@glossaryentryfield{\@glo@esclabel}\string") %
```

```
2546 }%
```

```
2547 \else
```

Entry has a parent

```
2548 \expandafter\protected@xdef\csname glo@#1@index\endcsname{%
```

```
2549 \csname glo@\@glo@parent @index\endcsname
```

```
2550 (\string"\@glo@sort\string" %
```

```
2551 \string"\@glo@prefix\@glossarysubentryfield
```

```
2552 {\csname glo@#1@level\endcsname}{\@glo@esclabel}\string") %
```

```
2553 }%
```

```
2554 \fi
```

```
2555 \else
```

Store using makeindex syntax.

```
2556 \ifx\@glo@parent\@empty
```

Sanitize \@glo@prefix

```
2557 \@onelevel@sanitize\@glo@prefix
```

Entry doesn't have a parent

```

2558 \expandafter\protected@xdef\csname glo@#1@index\endcsname{%
2559 \glo@sort\@gls@actualchar\@glo@prefix
2560 \@glossaryentryfield{\@glo@esclabel}%
2561 }%
2562 \else

```

Entry has a parent

```

2563 \expandafter\protected@xdef\csname glo@#1@index\endcsname{%
2564 \csname glo@\@glo@parent @index\endcsname\@gls@levelchar
2565 \glo@sort\@gls@actualchar\@glo@prefix
2566 \@glossarysubentryfield
2567 {\csname glo@#1@level\endcsname}\@glo@esclabel}%
2568 }%
2569 \fi
2570 \fi
2571 }

```

1.8 Resetting and unsetting entry flags

Each glossary entry is assigned a conditional of the form `\ifglo@<label>@flag` which determines whether or not the entry has been used (see also `\ifglsused` defined below). These flags can be set and unset using the following macros, but first we need to know if we're in `amsmath`'s align environment's measuring pass.

`@ifnotmeasuring`

```

2572 \AtBeginDocument{%
2573 \ifpackageloaded{amsmath}%
2574 {\let\gls@ifnotmeasuring\@gls@ifnotmeasuring}%
2575 }%
2576 }
2577 \newcommand*\@gls@ifnotmeasuring[1]{%
2578 \ifmeasuring@
2579 \else
2580 #1%
2581 \fi
2582 }
2583 \newcommand*\gls@ifnotmeasuring[1]{#1}

```

`\lspatchtabularx` Patch `\TX@trial` (as per David Carlisle's answer in <http://tex.stackexchange.com/a/94895>). This does nothing if `\TX@trial` hasn't been defined.

```

2584 \def\@gls@patchtabularx#1\hbox#2#3!!{%
2585 \def\TX@trial#1{#1\hbox{\let\glsunset\@gobble#2}#3}%
2586 }
2587 \newcommand*\glspatchtabularx{%
2588 \ifdef\TX@trial
2589 {%
2590 \expandafter\@gls@patchtabularx\TX@trial{##1}!!%

```



```

2591 \let\glspatchtabularx\relax
2592 }%
2593 {}%
2594 }

```

`\glsreset` The command `\glsreset{<label>}` can be used to set the entry flag to indicate that it hasn't been used yet. The required argument is the entry label.

```

2595 \newcommand*{\glsreset}[1]{%
2596   \gls@ifnotmeasuring
2597   {%
2598     \glsdoifexists{#1}%
2599     {%
2600       \@glsreset{#1}%
2601     }%
2602   }%
2603 }

```

`\glslocalreset` As above, but with only a local effect:

```

2604 \newcommand*{\glslocalreset}[1]{%
2605   \gls@ifnotmeasuring
2606   {%
2607     \glsdoifexists{#1}%
2608     {%
2609       \@glslocalreset{#1}%
2610     }%
2611   }%
2612 }

```

`\glsunset` The command `\glsunset{<label>}` can be used to set the entry flag to indicate that it has been used. The required argument is the entry label.

```

2613 \newcommand*{\glsunset}[1]{%
2614   \gls@ifnotmeasuring
2615   {%
2616     \glsdoifexists{#1}%
2617     {%
2618       \@glsunset{#1}%
2619     }%
2620   }%
2621 }

```

`\glslocalunset` As above, but with only a local effect:

```

2622 \newcommand*{\glslocalunset}[1]{%
2623   \gls@ifnotmeasuring
2624   {%
2625     \glsdoifexists{#1}%
2626     {%
2627       \@glslocalunset{#1}%
2628     }%

```

```

2629 }%
2630 }

\@glslocalunset Local unset. This defaults to just \@glslocalunset but is changed by \glsenableentrycount.

2631 \newcommand*{\@glslocalunset}{\@glslocalunset}

@@glslocalunset Local unset without checks.
2632 \newcommand*{\@glslocalunset}[1]{%
2633   \expandafter\let\csname ifglo@glsdetoklabel{#1}@flag\endcsname\iftrue
2634 }

\@glsunset Global unset. This defaults to just \@glsunset but is changed by \glsenableentrycount.
2635 \newcommand*{\@glsunset}{\@glsunset}

\@@glsunset Global unset without checks.
2636 \newcommand*{\@glsunset}[1]{%
2637   \expandafter\global\csname glo@glsdetoklabel{#1}@flagtrue\endcsname
2638 }

\@glslocalreset Local reset. This defaults to just \@glslocalreset but is changed by \glsenableentrycount.

2639 \newcommand*{\@glslocalreset}{\@glslocalreset}

@@glslocalreset Local reset without checks.
2640 \newcommand*{\@glslocalreset}[1]{%
2641   \expandafter\let\csname ifglo@glsdetoklabel{#1}@flag\endcsname\iffalse
2642 }

\@glsreset Global reset. This defaults to just \@glsreset but is changed by \glsenableentrycount.
2643 \newcommand*{\@glsreset}{\@glsreset}

\@@glsreset Global reset without checks.
2644 \newcommand*{\@glsreset}[1]{%
2645   \expandafter\global\csname glo@glsdetoklabel{#1}@flagfalse\endcsname
2646 }

Reset all entries for the named glossaries (supplied in a comma-separated list). Syntax:
\glsresetall[glossary-list]

\glsresetall
2647 \newcommand*{\glsresetall}[1][\@glo@types]{%
2648   \forallglsentries[#1]{\@glsentry}%
2649   {%
2650     \glsreset{\@glsentry}%
2651   }%
2652 }

```

As above, but with only a local effect:

`\glslocalresetall`

```
2653 \newcommand*{\glslocalresetall}[1][\@glo@types]{%
2654   \forallglsentries[#1]{\@glsentry}%
2655   {%
2656     \glslocalreset{\@glsentry}%
2657   }%
2658 }
```

Unset all entries for the named glossaries (supplied in a comma-separated list). Syntax:
`\glsunsetall[⟨glossary-list⟩]`

`\glsunsetall`

```
2659 \newcommand*{\glsunsetall}[1][\@glo@types]{%
2660   \forallglsentries[#1]{\@glsentry}%
2661   {%
2662     \glsunset{\@glsentry}%
2663   }%
2664 }
```

As above, but with only a local effect:

`\glslocalunsetall`

```
2665 \newcommand*{\glslocalunsetall}[1][\@glo@types]{%
2666   \forallglsentries[#1]{\@glsentry}%
2667   {%
2668     \glslocalunset{\@glsentry}%
2669   }%
2670 }
```

1.9 Keeping Track of How Many Times an Entry Has Been Unset

Version 4.14 introduced `\glsenableentrycount` that keeps track of how many times an entry is marked as used. The counter is reset back to zero when the first use flag is reset. Note that although the word “counter” is used here, it’s not an actual \TeX counter or even an explicit \TeX count register but is just a macro. Any of the commands that use `\glsunset` or `\glslocalunset`, such as `\gls`, will automatically increment this value. Commands that don’t modify the first use flag (such as `\glstext` or `\glsentrytext`) don’t modify this value.

`\try@defcounters` Define entry fields to keep track of how many times that entry has been marked as used.

```
2671 \newcommand*{\@newglossaryentry@defcounters}{%
2672   \csdef{glo@\@glo@label @currcount}{0}%
2673   \csdef{glo@\@glo@label @prevcount}{0}%
2674 }
```

enableentrycount Enables tracking of how many times an entry has been marked as used.

```
2675 \newcommand*{\glsenableentrycount}{%
```

Enable new entry fields.

```
2676 \let\newglossaryentry@defcounters\@newglossaryentry@defcounters
```

Disable \newglossaryentry in the document environment.

```
2677 \renewcommand*{\gls@defdocnewglossaryentry}{%
```

```
2678 \renewcommand*\newglossaryentry[2]{%
```

```
2679 \PackageError{glossaries}{\string\newglossaryentry\space
```

```
2680 may only be used in the preamble when entry counting has
```

```
2681 been activated}{If you use \string\glsenableentrycount\space
```

```
2682 you must place all entry definitions in the preamble not in
```

```
2683 the document environment}}%
```

```
2684 }%
```

```
2685 }%
```

Define commands \glentrycurrcount and \glentryprevcount to access these new fields. Default to zero if undefined.

```
2686 \newcommand*{\glentrycurrcount}[1]{%
```

```
2687 \ifcsundef{glo@\glsdetoklabel{##1}@currcount}}%
```

```
2688 {0}{\@gls@entry@field{##1}{currcount}}}%
```

```
2689 }%
```

```
2690 \newcommand*{\glentryprevcount}[1]{%
```

```
2691 \ifcsundef{glo@\glsdetoklabel{##1}@prevcount}}%
```

```
2692 {0}{\@gls@entry@field{##1}{prevcount}}}%
```

```
2693 }%
```

Make the unset and reset functions also increment or reset the entry counter.

```
2694 \renewcommand*{\@glsunset}[1]{%
```

```
2695 \@@glsunset{##1}}%
```

```
2696 \@gls@increment@currcount{##1}}%
```

```
2697 }%
```

```
2698 \renewcommand*{\@glslocalunset}[1]{%
```

```
2699 \@@glslocalunset{##1}}%
```

```
2700 \@gls@local@increment@currcount{##1}}%
```

```
2701 }%
```

```
2702 \renewcommand*{\@glsreset}[1]{%
```

```
2703 \@@glsreset{##1}}%
```

```
2704 \csgdef{glo@\glsdetoklabel{##1}@currcount}{0}}%
```

```
2705 }%
```

```
2706 \renewcommand*{\@glslocalreset}[1]{%
```

```
2707 \@@glslocalreset{##1}}%
```

```
2708 \csdef{glo@\glsdetoklabel{##1}@currcount}{0}}%
```

```
2709 }%
```

Alter behaviour of \cgls. (Only global unset is used if previous count was one as it doesn't make sense to have a local unset here given that the previous count was global.)

```
2710 \def\@cgls@##1##2[##3]{%
```

```
2711 \ifnum\glentryprevcount{##2}=1\relax
```

```
2712 \cglsformat{##2}{##3}}%
```

```

2713     \glsunset{##2}%
2714   \else
2715     \@gls@{##1}-{##2}[##3]%
2716   \fi
2717 }%

```

Similarly for the analogous commands. No case change plural:

```

2718 \def\@cglspl@##1##2[##3]{%
2719   \ifnum\glsentryprevcount{##2}=1\relax
2720     \cglsplformat{##2}{##3}%
2721     \glsunset{##2}%
2722   \else
2723     \@glspl@{##1}-{##2}[##3]%
2724   \fi
2725 }%

```

First letter uppercase singular:

```

2726 \def\@cGls@##1##2[##3]{%
2727   \ifnum\glsentryprevcount{##2}=1\relax
2728     \cGlsformat{##2}{##3}%
2729     \glsunset{##2}%
2730   \else
2731     \@Gls@{##1}-{##2}[##3]%
2732   \fi
2733 }%

```

First letter uppercase plural:

```

2734 \def\@cGlspl@##1##2[##3]{%
2735   \ifnum\glsentryprevcount{##2}=1\relax
2736     \cGlsplformat{##2}{##3}%
2737     \glsunset{##2}%
2738   \else
2739     \@Glspl@{##1}-{##2}[##3]%
2740   \fi
2741 }%

```

Write information to aux file at the end of the document

```

2742 \AtEndDocument{\@gls@write@entrycounts}%

```

Fetch previous count information from aux file. (No check here to determine if the entry is still defined.)

```

2743 \renewcommand*{\@gls@entry@count}[2]{%
2744   \csgdef{glo@glsdetoklabel{##1}@prevcount}{##2}%
2745 }%

```

\glsenableentrycount may only be used once and only in the preamble.

```

2746 \let\glsenableentrycount\relax
2747 }
2748 \@onlypreamble\glsenableentrycount

```

ement@currcount

```

2749 \newcommand*{\@gls@increment@currcount}[1]{%
2750   \csxdef{glo@glstetoklabel{#1}@currcount}{%
2751     \number\numexpr\glstentrycurrcount{#1}+1}%
2752 }

```

ement@currcount

```

2753 \newcommand*{\@gls@local@increment@currcount}[1]{%
2754   \csedef{glo@glstetoklabel{#1}@currcount}{%
2755     \number\numexpr\glstentrycurrcount{#1}+1}%
2756 }

```

ite@entrycounts

Write the entry counts to the aux file. Use \immediate since this occurs right at the end of the document. Only write information for entries that have been used. (Some users have a file containing vast numbers of entries, many of which may not be used. There's no point writing information about the entries that haven't been used and it will only slow things down.)

```

2757 \newcommand*{\@gls@write@entrycounts}{%
2758   \immediate\write\@auxout
2759   {\string\providecommand*{\string\@gls@entry@count}[2]{}}%
2760   \forallglstentries{\@glstentry}{%
2761     \ifglstused{\@glstentry}%
2762     {\immediate\write\@auxout
2763       {\string\@gls@entry@count{\@glstentry}{\glstentrycurrcount{\@glstentry}}}%
2764     }%
2765   }%
2766 }

```

gls@entry@count

Default behaviour is to ignore arguments. Activated by \glsenableentrycount.

```

2767 \newcommand*{\@gls@entry@count}[2]{}

```

\cgls Define command that works like \gls but behaves differently if the entry count function is enabled. (If not enabled, it behaves the same as \gls but issues a warning.)

```

2768 \newrobustcmd*{\cgls}{\@gls@hyp@opt\@cgls}

```

\@cgls Defined the un-starred form. Need to determine if there is a final optional argument

```

2769 \newcommand*{\@cgls}[2][ ]{%
2770   \new@ifnextchar[{\@cgls@{#1}{#2}}{\@cgls@{#1}{#2}[ ]}%
2771 }

```

\@cgls@ Read in the final optional argument. This defaults to same behaviour as \gls but issues a warning.

```

2772 \def\@cgls@#1#2[#3]{%
2773   \GlossariesWarning{\string\cgls\space is defaulting to
2774     \string\gls\space since you haven't enabled entry counting}%
2775   \@gls@{#1}{#2}[#3]%
2776 }

```

\cglsformat

Format used by \cgls if entry only used once on previous run. The first argument is the label, the second argument is the insert text.

```

2777 \newcommand*{\cGlsformat}[2]{%
2778   \ifglshaslong{#1}{\glstrylong{#1}}{\glstryfirst{#1}}#2%
2779 }

```

\cGls Define command that works like \Gls but behaves differently if the entry count function is enabled. (If not enabled, it behaves the same as \Gls but issues a warning.)

```

2780 \newrobustcmd*{\cGls}{\@gls@hyp@opt\@cGls}

```

\@cGls Defined the un-starred form. Need to determine if there is a final optional argument

```

2781 \newcommand*{\@cGls}[2][{}]{%
2782   \new@ifnextchar[{\@cGls@{#1}{#2}}{\@cGls@{#1}{#2}[]}%
2783 }

```

\@cGls@ Read in the final optional argument. This defaults to same behaviour as \Gls but issues a warning.

```

2784 \def\@cGls@#1#2[#3]{%
2785   \GlossariesWarning{\string\cGls\space is defaulting to
2786     \string\Gls\space since you haven't enabled entry counting}%
2787   \@Gls@{#1}{#2}[#3]%
2788 }

```

\cGlsformat Format used by \cGls if entry only used once on previous run. The first argument is the label, the second argument is the insert text.

```

2789 \newcommand*{\cGlsformat}[2]{%
2790   \ifglshaslong{#1}{\glstrylong{#1}}{\glstryfirst{#1}}#2%
2791 }

```

\cglsp1 Define command that works like \glsp1 but behaves differently if the entry count function is enabled. (If not enabled, it behaves the same as \glsp1 but issues a warning.)

```

2792 \newrobustcmd*{\cglsp1}{\@gls@hyp@opt\@cglsp1}

```

\@cglsp1 Defined the un-starred form. Need to determine if there is a final optional argument

```

2793 \newcommand*{\@cglsp1}[2][{}]{%
2794   \new@ifnextchar[{\@cglsp1@{#1}{#2}}{\@cglsp1@{#1}{#2}[]}%
2795 }

```

\@cglsp1@ Read in the final optional argument. This defaults to same behaviour as \glsp1 but issues a warning.

```

2796 \def\@cglsp1@#1#2[#3]{%
2797   \GlossariesWarning{\string\cglsp1\space is defaulting to
2798     \string\glsp1\space since you haven't enabled entry counting}%
2799   \@glsp1@{#1}{#2}[#3]%
2800 }

```

\cglsp1format Format used by \cglsp1 if entry only used once on previous run. The first argument is the label, the second argument is the insert text.

```

2801 \newcommand*{\cglsp1format}[2]{%
2802   \ifglshaslong{#1}{\glstrylongpl{#1}}{\glstryfirstplural{#1}}#2%
2803 }

```

`\cGlspl` Define command that works like `\Glspl` but behaves differently if the entry count function is enabled. (If not enabled, it behaves the same as `\Glspl` but issues a warning.)

```
2804 \newrobustcmd*{\cGlspl}{\@gls@hyp@opt\@cGlspl}
```

`\cglsp1` Defined the un-starred form. Need to determine if there is a final optional argument

```
2805 \newcommand*{\@cGlspl}[2][\%
2806 \new@ifnextchar[\@cGlspl@{#1}{#2}]{\@cGlspl@{#1}{#2}[]}%
2807 }
```

`\@cGlspl@` Read in the final optional argument. This defaults to same behaviour as `\Glspl` but issues a warning.

```
2808 \def\@cGlspl@#1#2[#3]{%
2809 \GlossariesWarning{\string\cGlspl\space is defaulting to
2810 \string\Glspl\space since you haven't enabled entry counting}%
2811 \@Glspl@{#1}{#2}[#3]%
2812 }
```

`\cGlsplformat` Format used by `\cGlspl` if entry only used once on previous run. The first argument is the label, the second argument is the insert text.

```
2813 \newcommand*{\cGlsplformat}[2]{%
2814 \ifglshaslong{#1}{\Glsentrylongpl{#1}}{\Glsentryfirstplural{#1}}#2%
2815 }
```

1.10 Loading files containing glossary entries

Glossary entries can be defined in an external file. These external files can contain `\newglossaryentry` and `\newacronym` commands.¹

`\loadglsentries[⟨type⟩]{⟨filename⟩}`

This command will input the file using `\input`. The optional argument specifies to which glossary the entries should be assigned if they haven't used the type key. If the optional argument is not specified, the default glossary is used. Only those entries used in the document (via `\glslink`, `\gls`, `\glspl` and uppercase variants or `\glsadd` and `\glsaddall` will appear in the glossary). The mandatory argument is the filename (with or without `.tex` extension).

`\loadglsentries`

```
2816 \newcommand*{\loadglsentries}[2][\@gls@default]{%
2817 \let\@gls@default\glsdefaulttype
2818 \def\glsdefaulttype{#1}\input{#2}%
2819 \let\glsdefaulttype\@gls@default
2820 }
```

`\loadglsentries` can only be used in the preamble:

```
2821 \@onlypreamble{\loadglsentries}
```

¹and any other valid \TeX code that can be used in the preamble.

1.11 Using glossary entries in the text

Any term that has been defined using `\newglossaryentry` (or `\newacronym`) can be displayed in the text (i.e. outside of the glossary) using one of the commands defined in this section. Unless you use `\glslink`, the way the term appears in the text is determined by `\glsdisplayfirst` (if it is the first time the term has been used) or `\glsdisplay` (for subsequent use). Any formatting commands (such as `\textbf`) is governed by `\glstextformat`. By default this just displays the link text “as is”.

`\glstextformat`

```
2822 \newcommand*{\glstextformat}[1]{#1}
```

`\glsentryfmt` As from version 3.11a, the way in which an entry is displayed is now governed by `\glsentryfmt`. This doesn't take any arguments. The required information is set by commands like `\gls`. To ensure backward compatibility, the default use the old `\glsdisplay` and `\glsdisplayfirst` style of commands

```
2823 \newcommand*{\glsentryfmt}{%
2824   \@@gls@default@entryfmt\glsdisplayfirst\glsdisplay
2825 }
```

Format that provides backwards compatibility:

```
2826 \newcommand*{\@@gls@default@entryfmt}[2]{%
2827   \ifdefempty\glscustomtext
2828     {%
2829       \glsifplural
2830       {%
```

Plural form

```
2831       \glscapscase
2832       {%
```

Don't adjust case

```
2833       \ifglsused\glslabel
2834       {%
```

Subsequent use

```
2835       #2{\glsentryplural{\glslabel}}}%
2836       {\glsentrydescplural{\glslabel}}}%
2837       {\glsentrysymbolplural{\glslabel}}{\glsinsert}%
2838     }%
2839     {%
```

First use

```
2840       #1{\glsentryfirstplural{\glslabel}}}%
2841       {\glsentrydescplural{\glslabel}}}%
2842       {\glsentrysymbolplural{\glslabel}}{\glsinsert}%
2843     }%
2844   }%
2845   {%
```

Make first letter upper case

```
2846      \ifglused\glslabel
2847      {%
```

Subsequent use. (Expansion was used in version 3.07 and below in case the name wasn't the first thing to be displayed, but now the user can sort out the upper casing in `\defglentryfmt`, which avoids the issues caused by fragile commands.)

```
2848      \ifbool{glcompatible-3.07}%
2849      {%
2850      \protected@edef\@glo@etext{%
2851      #2{\glentryplural{\glslabel}}%
2852      {\glentrydescplural{\glslabel}}%
2853      {\glentrysymbolplural{\glslabel}}{\glinsert}}%
2854      \xmakefirstuc\@glo@etext
2855      }%
2856      {%
2857      #2{\Glsentryplural{\glslabel}}%
2858      {\glentrydescplural{\glslabel}}%
2859      {\glentrysymbolplural{\glslabel}}{\glinsert}%
2860      }%
2861      }%
2862      {%
```

First use

```
2863      \ifbool{glcompatible-3.07}%
2864      {%
2865      \protected@edef\@glo@etext{%
2866      #1{\glentryfirstplural{\glslabel}}%
2867      {\glentrydescplural{\glslabel}}%
2868      {\glentrysymbolplural{\glslabel}}{\glinsert}}%
2869      \xmakefirstuc\@glo@etext
2870      }%
2871      {%
2872      #1{\Glsentryfirstplural{\glslabel}}%
2873      {\glentrydescplural{\glslabel}}%
2874      {\glentrysymbolplural{\glslabel}}{\glinsert}%
2875      }%
2876      }%
2877      }%
2878      {%
```

Make all upper case

```
2879      \ifglused\glslabel
2880      {%
```

Subsequent use

```
2881      \mfirstucMakeUppercase{#2{\glentryplural{\glslabel}}%
2882      {\glentrydescplural{\glslabel}}%
2883      {\glentrysymbolplural{\glslabel}}{\glinsert}}%
2884      }%
2885      {%
```

First use

```

2886      \mfirstucMakeUppercase{#1{\glsentryfirstplural{\glslabel}}}%
2887      {\glsentrydescplural{\glslabel}}}%
2888      {\glsentrysymbolplural{\glslabel}}{\glsinsert}}}%
2889      }%
2890      }%
2891      }%
2892      {%

```

Singular form

```

2893      \glscapscase
2894      {%

```

Don't adjust case

```

2895      \ifglused\glslabel
2896      {%

```

Subsequent use

```

2897      #2{\glsentrytext{\glslabel}}}%
2898      {\glsentrydesc{\glslabel}}}%
2899      {\glsentrysymbol{\glslabel}}{\glsinsert}}}%
2900      }%
2901      {%

```

First use

```

2902      #1{\glsentryfirst{\glslabel}}}%
2903      {\glsentrydesc{\glslabel}}}%
2904      {\glsentrysymbol{\glslabel}}{\glsinsert}}}%
2905      }%
2906      }%
2907      {%

```

Make first letter upper case

```

2908      \ifglused\glslabel
2909      {%

```

Subsequent use

```

2910      \ifbool{glscompatible-3.07}%
2911      {%
2912      \protected@edef\@glo@etext{%
2913      #2{\glsentrytext{\glslabel}}}%
2914      {\glsentrydesc{\glslabel}}}%
2915      {\glsentrysymbol{\glslabel}}{\glsinsert}}}%
2916      \xmakefirstuc\@glo@etext
2917      }%
2918      {%
2919      #2{\Glsentrytext{\glslabel}}}%
2920      {\glsentrydesc{\glslabel}}}%
2921      {\glsentrysymbol{\glslabel}}{\glsinsert}}}%
2922      }%
2923      }%
2924      {%

```

First use

```

2925      \ifbool{glscompatible-3.07}%
2926      {%
2927          \protected@edef\@glo@etext{%
2928              #1{\glsentryfirst{\glslabel}}%
2929              {\glsentrydesc{\glslabel}}%
2930              {\glsentrysymbol{\glslabel}}{\glsinsert}}%
2931          \xmakefirstuc\@glo@etext
2932      }%
2933      {%
2934          #1{\Glsentryfirst{\glslabel}}%
2935          {\glsentrydesc{\glslabel}}%
2936          {\glsentrysymbol{\glslabel}}{\glsinsert}}%
2937      }%
2938      }%
2939      }%
2940      {%

```

Make all upper case

```

2941      \ifglsused\glslabel
2942      {%

```

Subsequent use

```

2943      \mfirstucMakeUppercase{#2{\glsentrytext{\glslabel}}%
2944      {\glsentrydesc{\glslabel}}%
2945      {\glsentrysymbol{\glslabel}}{\glsinsert}}%
2946      }%
2947      {%

```

First use

```

2948      \mfirstucMakeUppercase{#1{\glsentryfirst{\glslabel}}%
2949      {\glsentrydesc{\glslabel}}%
2950      {\glsentrysymbol{\glslabel}}{\glsinsert}}%
2951      }%
2952      }%
2953      }%
2954      }%
2955      {%

```

Custom text provided in \glsdisp

```

2956      \ifglsused{\glslabel}%
2957      {%

```

Subsequent use

```

2958      #2{\glscustomtext}%
2959      {\glsentrydesc{\glslabel}}%
2960      {\glsentrysymbol{\glslabel}}{\glsinsert}}%
2961      }%
2962      {%

```

First use

```

2963      #1{\glscustomtext}%

```

```

2964         {\glsentrydesc{\glslabel}}}%
2965         {\glsentrysymbol{\glslabel}}{}%
2966     }%
2967 }%
2968 }

```

`\glsgetentryfmt` Define a generic format that just uses the first, text, plural or first plural keys (or the custom text) with the insert text appended.

```

2969 \newcommand*{\glsgetentryfmt}{%
2970     \ifdefempty\glscustomtext
2971     {%
2972         \glsifplural
2973     {%

```

Plural form

```

2974         \glscapscase
2975     {%

```

Don't adjust case

```

2976         \ifglsused\glslabel
2977     {%

```

Subsequent use

```

2978         \glsentryplural{\glslabel}\glsinsert
2979     }%
2980     {%

```

First use

```

2981         \glsentryfirstplural{\glslabel}\glsinsert
2982     }%
2983     }%
2984     {%

```

Make first letter upper case

```

2985         \ifglsused\glslabel
2986     {%

```

Subsequent use.

```

2987         \Glsentryplural{\glslabel}\glsinsert
2988     }%
2989     {%

```

First use

```

2990         \Glsentryfirstplural{\glslabel}\glsinsert
2991     }%
2992     }%
2993     {%

```

Make all upper case

```

2994         \ifglsused\glslabel
2995     {%

```

Subsequent use

```
2996      \mfirstucMakeUppercase
2997      {\glsentryplural{\glslabel}\glsinsert}%
2998      }%
2999      {%
```

First use

```
3000      \mfirstucMakeUppercase
3001      {\glsentryfirstplural{\glslabel}\glsinsert}%
3002      }%
3003      }%
3004      }%
3005      {%
```

Singular form

```
3006      \glscapscase
3007      {%
```

Don't adjust case

```
3008      \ifglused\glslabel
3009      {%
```

Subsequent use

```
3010      \glsentrytext{\glslabel}\glsinsert
3011      }%
3012      {%
```

First use

```
3013      \glsentryfirst{\glslabel}\glsinsert
3014      }%
3015      }%
3016      {%
```

Make first letter upper case

```
3017      \ifglused\glslabel
3018      {%
```

Subsequent use

```
3019      \Glsentrytext{\glslabel}\glsinsert
3020      }%
3021      {%
```

First use

```
3022      \Glsentryfirst{\glslabel}\glsinsert
3023      }%
3024      }%
3025      {%
```

Make all upper case

```
3026      \ifglused\glslabel
3027      {%
```

Subsequent use

```
3028      \mfirstucMakeUppercase{\glsentrytext{\glslabel}\glsinsert}%
3029      }%
3030      {%
```

First use

```
3031      \mfirstucMakeUppercase{\glsentryfirst{\glslabel}\glsinsert}%
3032      }%
3033      }%
3034      }%
3035      }%
3036      {%
```

Custom text provided in \glsdisp. (The insert is most likely to be empty at this point.)

```
3037      \glscustomtext\glsinsert
3038      }%
3039      }
```

`\glsngenacfmt` Define a generic acronym format that uses the long and short keys (or their plurals) and `\acrfullformat`, `\firstacronymfont` and `\acronymfont`.

```
3040 \newcommand*{\glsngenacfmt}{%
3041   \ifdefempty\glscustomtext
3042   {%
3043     \ifglsused\glslabel
3044     {%
```

Subsequent use:

```
3045     \glsifplural
3046     {%
```

Subsequent plural form:

```
3047     \glscapscase
3048     {%
```

Subsequent plural form, don't adjust case:

```
3049     \acronymfont{\glsentryshortpl{\glslabel}}\glsinsert
3050     }%
3051     {%
```

Subsequent plural form, make first letter upper case:

```
3052     \acronymfont{\Glsentryshortpl{\glslabel}}\glsinsert
3053     }%
3054     {%
```

Subsequent plural form, all caps:

```
3055     \mfirstucMakeUppercase
3056     {\acronymfont{\glsentryshortpl{\glslabel}}\glsinsert}%
3057     }%
3058     }%
3059     {%
```

Subsequent singular form

```
3060      \glscapscase
3061      {%
```

Subsequent singular form, don't adjust case:

```
3062      \acronymfont{\glentryshort{\glslabel}}\glsinsert
3063      }%
3064      {%
```

Subsequent singular form, make first letter upper case:

```
3065      \acronymfont{\Glentryshort{\glslabel}}\glsinsert
3066      }%
3067      {%
```

Subsequent singular form, all caps:

```
3068      \mfirstucMakeUppercase
3069      {\acronymfont{\glentryshort{\glslabel}}\glsinsert}%
3070      }%
3071      }%
3072      }%
3073      {%
```

First use:

```
3074      \glsifplural
3075      {%
```

First use plural form:

```
3076      \glscapscase
3077      {%
```

First use plural form, don't adjust case:

```
3078      \genplacrfullformat{\glslabel}{\glsinsert}%
3079      }%
3080      {%
```

First use plural form, make first letter upper case:

```
3081      \Genplacrfullformat{\glslabel}{\glsinsert}%
3082      }%
3083      {%
```

First use plural form, all caps:

```
3084      \mfirstucMakeUppercase
3085      {\genplacrfullformat{\glslabel}{\glsinsert}}%
3086      }%
3087      }%
3088      {%
```

First use singular form

```
3089      \glscapscase
3090      {%
```

First use singular form, don't adjust case:

```
3091      \genacrfullformat{\glslabel}{\glsinsert}%
```



```

3092     }%
3093     {%

```

First use singular form, make first letter upper case:

```

3094         \Genacrfullformat{\glslabel}{\glsinsert}%
3095     }%
3096     {%

```

First use singular form, all caps:

```

3097         \mfirstucMakeUppercase
3098         {\genacrfullformat{\glslabel}{\glsinsert}}%
3099     }%
3100     }%
3101     }%
3102     }%
3103     {%

```

User supplied text.

```

3104     \glscustomtext
3105 }%
3106 }

```

genacrfullformat

```
\genacrfullformat{\label}{\insert}}
```

The full format used by \gls`genacfmt` (singular).

```

3107 \newcommand*{\genacrfullformat}[2]{%
3108     \glsentrylong{#1}#2\space
3109     (\protect\firstacronymfont{\glsentryshort{#1}})%
3110 }

```

Genacrfullformat

```
\Genacrfullformat{\label}{\insert}}
```

As above but makes the first letter upper case.

```

3111 \newcommand*{\Genacrfullformat}[2]{%
3112     \protected@edef\gls@text{\genacrfullformat{#1}{#2}}%
3113     \xmakefirstuc\gls@text
3114 }

```

nplacrfullformat

```
\genplacrfullformat{\label}{\insert}}
```

The full format used by \gls`genacfmt` (plural).

```

3115 \newcommand*{\genplacrfullformat}[2]{%
3116     \glsentrylongpl{#1}#2\space
3117     (\protect\firstacronymfont{\glsentryshortpl{#1}})%
3118 }

```

`\genplacrfullformat` `\Genplacrfullformat{<label>}{<insert>}`

As above but makes the first letter upper case.

```
3119 \newcommand*{\Genplacrfullformat}[2]{%
3120   \protected@edef\gls@text{\genplacrfullformat{#1}{#2}}%
3121   \xmakefirstuc\gls@text
3122 }
```

`\glsdisplayfirst` Deprecated. Kept for backward compatibility.

```
3123 \newcommand*{\glsdisplayfirst}[4]{#1#4}
```

`\glsdisplay` Deprecated. Kept for backward compatibility.

```
3124 \newcommand*{\glsdisplay}[4]{#1#4}
```

`\defglsdisplay` Deprecated. Kept for backward compatibility.

```
3125 \newcommand*{\defglsdisplay}[2][\glsdefaulttype]{%
3126   \GlossariesWarning{\string\defglsdisplay\space is now obsolete.^^J
3127   Use \string\defglsentryfmt\space instead}%
3128   \expandafter\def\csname gls@#1@display\endcsname##1##2##3##4{#2}%
3129   \edef\@gls@doentrydef{%
3130     \noexpand\defglsentryfmt[#1]{%
3131       \noexpand\ifcsdef{gls@#1@displayfirst}%
3132       {%
3133         \noexpand\@gls@default@entryfmt
3134         {\noexpand\csuse{gls@#1@displayfirst}}%
3135         {\noexpand\csuse{gls@#1@display}}%
3136       }%
3137       {%
3138         \noexpand\@gls@default@entryfmt
3139         {\noexpand\glsdisplayfirst}%
3140         {\noexpand\csuse{gls@#1@display}}%
3141       }%
3142     }%
3143   }%
3144   \@gls@doentrydef
3145 }
```

`\glsdisplayfirst` Deprecated. Kept for backward compatibility.

```
3146 \newcommand*{\defglsdisplayfirst}[2][\glsdefaulttype]{%
3147   \GlossariesWarning{\string\defglsdisplayfirst\space is now obsolete.^^J
3148   Use \string\defglsentryfmt\space instead}%
3149   \expandafter\def\csname gls@#1@displayfirst\endcsname##1##2##3##4{#2}%
3150   \edef\@gls@doentrydef{%
3151     \noexpand\defglsentryfmt[#1]{%
3152       \noexpand\ifcsdef{gls@#1@display}%
3153       {%
3154         \noexpand\@gls@default@entryfmt
3155         {\noexpand\csuse{gls@#1@displayfirst}}%

```

```

3156      {\noexpand\csuse{gls@#1@display}}}%
3157    }%
3158    {%
3159      \noexpand\@gls@default@entryfmt
3160      {\noexpand\csuse{gls@#1@displayfirst}}}%
3161      {\noexpand\glsdisplay}%
3162    }%
3163  }%
3164 }%
3165 \@gls@doentrydef
3166 }

```

Links to glossary entries

The links to glossary entries all have a first optional argument that can be used to change the format and counter of the associated entry number. Except for `\glslink` and `\glsdisp`, the commands like `\gls` have a final optional argument that can be used to insert additional text in the link (this will usually be appended, but can be redefined using `\defentryfmt`). It goes against the \TeX norm to have an optional argument after the mandatory arguments, but it makes more sense to write, say, `\gls{label}['s]` rather than, say, `\gls[append='s]{label}`. Since these control sequences are defined to include the final square bracket, spaces will be ignored after them. This is likely to lead to confusion as most users would not expect, say, `\gls{<label>}` to ignore following spaces, so `\new@ifnextchar` from the package is required.

The following keys can be used in the first optional argument. The counter key checks that the value is the name of a valid counter.

```

3167 \define@key{glslink}{counter}{%
3168   \ifcsundef{c@#1}%
3169   {%
3170     \PackageError{glossaries}%
3171     {There is no counter called '#1'}%
3172     {%
3173       The counter key should have the name of a valid counter
3174       as its value%
3175     }%
3176   }%
3177   {%
3178     \def\@gls@counter{#1}%
3179   }%
3180 }

```

The value of the format key should be the name of a command (without the initial backslash) that has a single mandatory argument which can be used to format the associated entry number.

```

3181 \define@key{glslink}{format}{%
3182   \def\@glsnumberformat{#1}}

```

The hyper key is a boolean key, it can either have the value true or false, and indicates whether or not to make a hyperlink to the relevant glossary entry. If hyper is false, an entry will still be

made in the glossary, but the given text won't be a hyperlink.

```
3183 \define@boolkey{glslink}{hyper}[true]{}

```

Initialise hyper key.

```
3184 \ifdef{\hyperlink}{\KV@glslink@hypertrue}{\KV@glslink@hyperfalse}

```

The local key is a boolean key. If true this indicates that commands such as `\gls` should only do a local reset rather than a global one.

```
3185 \define@boolkey{glslink}{local}[true]{}

```

The original `\glsifhyper` command isn't particularly useful as it makes more sense to check the actual hyperlink setting rather than testing whether the starred or unstarred version has been used. Therefore, as from version 4.08, `\glsifhyper` is deprecated in favour of `\glsifhyperon`. In case there is a particular need to know whether the starred or unstarred version was used, provide a new command that determines whether the *-version, +-version or unmodified version was used.

```
\glslinkvar{<unmodified case>}{<star case>}{<plus case>}
```

`\glslinkvar` Initialise to unmodified case.

```
3186 \newcommand*{\glslinkvar}[3]{#1}

```

`\glsifhyper` Now deprecated.

```
3187 \newcommand*{\glsifhyper}[2]{%
3188   \glslinkvar{#1}{#2}{#1}%
3189   \GlossariesWarning{\string\glsifhyper\space is deprecated. Did
3190     you mean \string\glsifhyperon\space or \string\glslinkvar?}%
3191 }

```

`\@gls@hyp@opt` Used by the commands such as `\glslink` to determine whether to modify the hyper option.

```
3192 \newcommand*{\@gls@hyp@opt}[1]{%
3193   \let\glslinkvar\@firstofthree
3194   \let\@gls@hyp@opt@cs#1\relax
3195   \@ifstar{\s@gls@hyp@opt}%
3196   {\@ifnextchar+{\@firstoftwo{\p@gls@hyp@opt}}{#1}}%
3197 }

```

`\s@gls@hyp@opt` Starred version

```
3198 \newcommand*{\s@gls@hyp@opt}[1][]{%
3199   \let\glslinkvar\@secondofthree
3200   \@gls@hyp@opt@cs[hyper=false,#1]}

```

`\p@gls@hyp@opt` Plus version

```
3201 \newcommand*{\p@gls@hyp@opt}[1][]{%
3202   \let\glslinkvar\@thirdofthree
3203   \@gls@hyp@opt@cs[hyper=true,#1]}

```

Syntax:

```
\glslink[⟨options⟩]{⟨label⟩}{⟨text⟩}
```

Display $\langle text \rangle$ in the document, and add the entry information for $\langle label \rangle$ into the relevant glossary. The optional argument should be a key value list using the `glslink` keys defined above.

There is also a starred version:

```
\glslink*[⟨options⟩]{⟨label⟩}{⟨text⟩}
```

which is equivalent to `\glslink[hyper=false,⟨options⟩]{⟨label⟩}{⟨text⟩}`

First determine which version is being used:

`\glslink`

```
3204 \newrobustcmd*{\glslink}{%
3205   \@gls@hyp@opt\@gls@link
3206 }
```

`\@gls@link` The main part of the business is in `\@gls@link` which shouldn't check if the term is defined as it's called by `\gls` etc which also perform that check.

```
3207 \newcommand*{\@gls@link}[3] [] {%
3208   \glsdoifexistsordo{#2}%
3209   {%
3210     \let\do@gls@link@checkfirsthyper\relax
3211     \@gls@link[#1]{#2}{#3}%
3212   }{%
```

Display the specified text. (The entry doesn't exist so there's nothing to link it to.)

```
3213   \glstextformat{#3}%
3214   }%
```

```
3215   \glspostlinkhook
3216 }
```

`glspostlinkhook`

```
3217 \newcommand*{\glspostlinkhook}{}
```

`checkfirsthyper` Check for first use and switch off hyper key if hyperlink not wanted. (Should be off if first use and `hyper=false` is on or if first use and both the entry is in an acronym list and the `acrfootnote` setting is on.) This assumes the glossary type is stored in `\glstype` and the label is stored in `\glslabel`.

```
3218 \newcommand*{\@gls@link@checkfirsthyper}{%
3219   \ifglsused{\glslabel}%
3220   {%
3221   }%
3222   {%
```

```

3223 \gls@checkisacronymlist\glstype
3224 \ifglshyperfirst
3225 \ifglsisacronymlist
3226 \ifglsacrfootnote
3227 \KV@glslink@hyperfalse
3228 \fi
3229 \fi
3230 \else
3231 \KV@glslink@hyperfalse
3232 \fi
3233 }%

```

Allow user to hook into this

```

3234 \glslinkcheckfirsthyperhook
3235 }

```

`\glslinkcheckfirsthyperhook` Allow used to hook into the `\@gls@link@checkfirsthyper` macro

```

3236 \newcommand*{\glslinkcheckfirsthyperhook}{}

```

`\glslinkpostsetkeys`

```

3237 \newcommand*{\glslinkpostsetkeys}{}

```

`\glsifhyperon` Check the value of the hyper key:

```

3238 \newcommand{\glsifhyperon}[2]{\ifKV@glslink@hyper#1\else#2\fi}

```

`\glsdisablehyperinlist` Disable hyperlink if in the “nohyper” list.

```

3239 \newcommand*{\do@glsdisablehyperinlist}{%
3240 \expandafter\DTLifinlist\expandafter{\glstype}{\@gls@nohyperlist}%
3241 {\KV@glslink@hyperfalse}}%
3242 }

```

`\@glslink@opts` Hook to set default options for `\@glslink`.

```

3243 \newcommand*{\@gls@setdefault@glslink@opts}{}

```

`\@gls@link`

```

3244 \def\@gls@link[#1]#2#3{%

```

Inserting `\leavevmode` suggested by Donald Arseneau (avoids problem with tabularx).

```

3245 \leavevmode
3246 \edef\glslabel{\glsdetoklabel{#2}}%

```

Save options in `\@gls@link@opts` and label in `\@gls@link@label`

```

3247 \def\@gls@link@opts{#1}%
3248 \let\@gls@link@label\glslabel

3249 \def\@glsnumberformat{glsnumberformat}%
3250 \edef\@gls@counter{\csname glo@\glslabel @counter\endcsname}%

```

If this is in one of the “nohypertypes” glossaries, suppress the hyperlink by default

```

3251 \edef\glstype{\csname glo@\glslabel @type\endcsname}%

```

Save original setting

```
3252 \let\org@ifKV@glslink@hyper\ifKV@glslink@hyper
```

Set defaults:

```
3253 \@gls@setdefault@glslink@opts
```

Switch off hyper setting if the glossary type has been identified in nohyperlist.

```
3254 \do@gl:disablehyperinlist
```

Macros must set this before calling `\@gls@link`. The commands that check the first use flag should set this to `\@gls@link@checkfirsthyper` otherwise it should be set to `\relax`.

```
3255 \do@gl@link@checkfirsthyper
```

```
3256 \setkeys{glslink}{#1}%
```

Add a hook for the user to customise things after the keys have been set.

```
3257 \glslinkpostsetkeys
```

Store the entry's counter in `\theglsentrycounter`

```
3258 \@gls@saveentrycounter
```

Define sort key if necessary:

```
3259 \@gls@setsort{\glslabel}%
```

(De-tok'ing done by `\@do@wrglossary`)

```
3260 \@do@wrglossary{#2}%
```

```
3261 \ifKV@glslink@hyper
```

```
3262 \glslink{\glolinkprefix\glslabel}{\glstextformat{#3}}%
```

```
3263 \else
```

```
3264 \glndonohyperlink{\glolinkprefix\glslabel}{\glstextformat{#3}}%
```

```
3265 \fi
```

Restore original setting

```
3266 \let\ifKV@glslink@hyper\org@ifKV@glslink@hyper
```

```
3267 }
```

`\glolinkprefix`

```
3268 \newcommand*{\glolinkprefix}{glo:}
```

`glsentrycounter` Set default value of entry counter

```
3269 \def\glsentrycounter{\glscounter}%
```

`saveentrycounter` Need to check if using equation counter in align environment:

```
3270 \newcommand*{\@gls@saveentrycounter}{%
```

```
3271 \def\@gls@Hcounter{}}%
```

Are we using equation counter?

```
3272 \ifthenelse{\equal{\@gls@counter}{equation}}{%
```

```
3273 {
```

If we're in align environment, \xatlevel@ will be defined. (Can't test for \@currenvir as may be inside an inner environment.)

```

3274 \ifcsundef{xatlevel@}%
3275 {%
3276 \edef\theglentrycounter{\expandafter\noexpand
3277 \csname the\@gls@counter\endcsname}%
3278 }%
3279 {%
3280 \ifx\xatlevel@\@empty
3281 \edef\theglentrycounter{\expandafter\noexpand
3282 \csname the\@gls@counter\endcsname}%
3283 \else
3284 \savecounters@
3285 \advance\c@equation by 1\relax
3286 \edef\theglentrycounter{\csname the\@gls@counter\endcsname}%

```

Check if hyperref version of this counter

```

3287 \ifcsundef{theH\@gls@counter}%
3288 {%
3289 \def\@gls@Hcounter{\theglentrycounter}%
3290 }%
3291 {%
3292 \def\@gls@Hcounter{\csname theH\@gls@counter\endcsname}%
3293 }%
3294 \protected@edef\theHglentrycounter{\@gls@Hcounter}%
3295 \restorecounters@
3296 \fi
3297 }%
3298 }%
3299 {%

```

Not using equation counter so no special measures:

```

3300 \edef\theglentrycounter{\expandafter\noexpand
3301 \csname the\@gls@counter\endcsname}%
3302 }%

```

Check if hyperref version of this counter

```

3303 \ifx\@gls@Hcounter\@empty
3304 \ifcsundef{theH\@gls@counter}%
3305 {%
3306 \def\theHglentrycounter{\theglentrycounter}%
3307 }%
3308 {%
3309 \protected@edef\theHglentrycounter{\expandafter\noexpand
3310 \csname theH\@gls@counter\endcsname}%
3311 }%
3312 \fi
3313 }

```


t@glo@numformat Set the formatting information in the format required by makeindex. The first argument is the format specified by the user (via the format key), the second argument is the name of the counter used to indicate the location, the third argument is a control sequence which stores the required format and the fourth argument (new to v3.0) is the hyper-prefix.

```

3314 \def\@set@glo@numformat#1#2#3#4{%
3315   \expandafter\@glo@check@mkidxrangechar#3\@nil
3316   \protected@edef#1{%
3317     \@glo@prefix setentrycounter[#4]{#2}%
3318     \expandafter\string\csname\@glo@suffix\endcsname
3319   }%
3320   \@gls@checkmkidxchars#1%
3321 }

```

Check to see if the given string starts with a (or). If it does set \@glo@prefix to the starting character, and \@glo@suffix to the rest (or glsnumberformat if there is nothing else), otherwise set \@glo@prefix to nothing and \@glo@suffix to all of it.

```

3322 \def\@glo@check@mkidxrangechar#1#2\@nil{%
3323 \if#1(\relax
3324   \def\@glo@prefix{(%
3325   \if\relax#2\relax
3326     \def\@glo@suffix{glsnumberformat}%
3327   \else
3328     \def\@glo@suffix{#2}%
3329   \fi
3330 \else
3331   \if#1)\relax
3332     \def\@glo@prefix{)}%
3333   \if\relax#2\relax
3334     \def\@glo@suffix{glsnumberformat}%
3335   \else
3336     \def\@glo@suffix{#2}%
3337   \fi
3338 \else
3339   \def\@glo@prefix{}\def\@glo@suffix{#1#2}%
3340 \fi
3341 \fi}

```

\@gls@escbsdq Escape backslashes and double quote marks. The argument must be a control sequence.

```

3342 \newcommand*\@gls@escbsdq[1]{%
3343   \def\@gls@checkedmkidx{%
3344     \let\gls@xdystring=#1\relax
3345     \@onelevel@sanitize\gls@xdystring
3346     \edef\do@gls@xdycheckbackslash{%
3347       \noexpand\@gls@xdycheckbackslash\gls@xdystring\noexpand\@nil
3348       \@backslashchar\@backslashchar\noexpand\@null}%
3349     \do@gls@xdycheckbackslash
3350     \expandafter\@gls@updatechecked\@gls@checkedmkidx{\gls@xdystring}%
3351     \def\@gls@checkedmkidx{%

```

```

3352 \expandafter\@gls@xdycheckquote\gls@xdystring\@nil""\null
3353 \expandafter\@gls@updatechecked\@gls@checkedmkidx{\gls@xdystring}%

Unsanitize\gls@numberpage,\gls@alphpage,\gls@Alphpage and \gls@romanpage (thanks
to David Carlisle for the suggestion.)

3354 \@for\@gls@tmp:=\gls@protected@pagefmts\do
3355 {%
3356 \edef\@gls@sanitized@tmp{\expandafter\@gobble\string\\expandonce\@gls@tmp}%
3357 \@onelevel@sanitize\@gls@sanitized@tmp
3358 \edef\gls@dosubst{%
3359 \noexpand\DTLsubstituteall\noexpand\gls@xdystring
3360 {\@gls@sanitized@tmp}{\expandonce\@gls@tmp}%
3361 }%
3362 \gls@dosubst
3363 }%

Assign to required control sequence
3364 \let#1=\gls@xdystring
3365 }

```

Catch special characters (argument must be a control sequence):

checkmkidxchars

```

3366 \newcommand{\@gls@checkmkidxchars}[1]{%
3367 \ifglxsindy
3368 \@gls@escbsdq{#1}%
3369 \else
3370 \def\@gls@checkedmkidx{%
3371 \expandafter\@gls@checkquote#1\@nil""\null
3372 \expandafter\@gls@updatechecked\@gls@checkedmkidx{#1}%
3373 \def\@gls@checkedmkidx{%
3374 \expandafter\@gls@checkescquote#1\@nil\""\null
3375 \expandafter\@gls@updatechecked\@gls@checkedmkidx{#1}%
3376 \def\@gls@checkedmkidx{%
3377 \expandafter\@gls@checkescactual#1\@nil\??\null
3378 \expandafter\@gls@updatechecked\@gls@checkedmkidx{#1}%
3379 \def\@gls@checkedmkidx{%
3380 \expandafter\@gls@checkactual#1\@nil??\null
3381 \expandafter\@gls@updatechecked\@gls@checkedmkidx{#1}%
3382 \def\@gls@checkedmkidx{%
3383 \expandafter\@gls@checkbar#1\@nil||\null
3384 \expandafter\@gls@updatechecked\@gls@checkedmkidx{#1}%
3385 \def\@gls@checkedmkidx{%
3386 \expandafter\@gls@checkescbar#1\@nil\\|\null
3387 \expandafter\@gls@updatechecked\@gls@checkedmkidx{#1}%
3388 \def\@gls@checkedmkidx{%
3389 \expandafter\@gls@checklevel#1\@nil!!\null
3390 \expandafter\@gls@updatechecked\@gls@checkedmkidx{#1}%
3391 \fi
3392 }

```

Update the control sequence and strip trailing \@nil:

s@updatechecked

```
3393 \def\@gls@updatechecked#1\@nil#2{\def#2{#1}}
```

\@gls@tmpb Define temporary token

```
3394 \newtoks\@gls@tmpb
```

@gls@checkquote Replace " with "" since " is a makeindex special character.

```
3395 \def\@gls@checkquote#1"#2"#3\null{%
3396   \@gls@tmpb=\expandafter{\@gls@checkedmkidx}%
3397   \toks@={#1}%
3398   \ifx\null#2\null
3399   \ifx\null#3\null
3400   \edef\@gls@checkedmkidx{\the\@gls@tmpb\the\toks@}%
3401   \def\@gls@checkquote{\relax}%
3402   \else
3403   \edef\@gls@checkedmkidx{\the\@gls@tmpb\the\toks@
3404     \@gls@quotechar\@gls@quotechar\@gls@quotechar\@gls@quotechar}%
3405   \def\@gls@checkquote{\@gls@checkquote#3\null}%
3406   \fi
3407   \else
3408   \edef\@gls@checkedmkidx{\the\@gls@tmpb\the\toks@
3409     \@gls@quotechar\@gls@quotechar}%
3410   \ifx\null#3\null
3411     \def\@gls@checkquote{\@gls@checkquote#2""\null}%
3412   \else
3413     \def\@gls@checkquote{\@gls@checkquote#2"#3\null}%
3414   \fi
3415   \fi
3416   \@gls@checkquote
3417 }
```

s@checkescquote Do the same for \":

```
3418 \def\@gls@checkescquote#1\"#2\"#3\null{%
3419   \@gls@tmpb=\expandafter{\@gls@checkedmkidx}%
3420   \toks@={#1}%
3421   \ifx\null#2\null
3422   \ifx\null#3\null
3423   \edef\@gls@checkedmkidx{\the\@gls@tmpb\the\toks@}%
3424   \def\@gls@checkescquote{\relax}%
3425   \else
3426   \edef\@gls@checkedmkidx{\the\@gls@tmpb\the\toks@
3427     \@gls@quotechar\string\"@gls@quotechar
3428     \@gls@quotechar\string\"@gls@quotechar}%
3429   \def\@gls@checkescquote{\@gls@checkescquote#3\null}%
3430   \fi
3431   \else
3432   \edef\@gls@checkedmkidx{\the\@gls@tmpb\the\toks@
```

```

3433     \@gls@quotechar\string\" \@gls@quotechar}%
3434 \ifx\null#3\null
3435     \def\@gls@checkescquote{\@gls@checkescquote#2\" \"\null}%
3436 \else
3437     \def\@gls@checkescquote{\@gls@checkescquote#2\"#3\null}%
3438 \fi
3439 \fi
3440 \@gls@checkescquote
3441 }

```

@checkescactual Similarly for \? (which is replaces @ as makeindex's special character):

```

3442 \def\@gls@checkescactual#1\?#2\?#3\null{%
3443 \@gls@tmpb=\expandafter{\@gls@checkedmkidx}%
3444 \toks@={#1}%
3445 \ifx\null#2\null
3446     \ifx\null#3\null
3447         \edef\@gls@checkedmkidx{\the\@gls@tmpb\the\toks@}%
3448         \def\@gls@checkescactual{\relax}%
3449     \else
3450         \edef\@gls@checkedmkidx{\the\@gls@tmpb\the\toks@
3451 \@gls@quotechar\string\" \@gls@actualchar
3452 \@gls@quotechar\string\" \@gls@actualchar}%
3453         \def\@gls@checkescactual{\@gls@checkescactual#3\null}%
3454     \fi
3455 \else
3456     \edef\@gls@checkedmkidx{\the\@gls@tmpb\the\toks@
3457 \@gls@quotechar\string\" \@gls@actualchar}%
3458     \ifx\null#3\null
3459         \def\@gls@checkescactual{\@gls@checkescactual#2\?\?\null}%
3460     \else
3461         \def\@gls@checkescactual{\@gls@checkescactual#2\?#3\null}%
3462     \fi
3463 \fi
3464 \@gls@checkescactual
3465 }

```

gls@checkescbar Similarly for \|:

```

3466 \def\@gls@checkescbar#1\|#2\|#3\null{%
3467 \@gls@tmpb=\expandafter{\@gls@checkedmkidx}%
3468 \toks@={#1}%
3469 \ifx\null#2\null
3470     \ifx\null#3\null
3471         \edef\@gls@checkedmkidx{\the\@gls@tmpb\the\toks@}%
3472         \def\@gls@checkescbar{\relax}%
3473     \else
3474         \edef\@gls@checkedmkidx{\the\@gls@tmpb\the\toks@
3475 \@gls@quotechar\string\" \@gls@encapchar
3476 \@gls@quotechar\string\" \@gls@encapchar}%
3477         \def\@gls@checkescbar{\@gls@checkescbar#3\null}%

```

```

3478 \fi
3479 \else
3480 \edef\@gls@checkedmkidx{\the\@gls@tmpb\the\toks@
3481 \@gls@quotechar\string"\@gls@encapchar}%
3482 \ifx\null#3\null
3483 \def\@gls@checkeschar{\@gls@checkeschar#2\|\|\null}%
3484 \else
3485 \def\@gls@checkeschar{\@gls@checkeschar#2\|#3\null}%
3486 \fi
3487 \fi
3488 \@gls@checkeschar
3489 }

```

s@checkesclevel Similarly for \!:

```

3490 \def\@gls@checkesclevel#1\!#2\!#3\null{%
3491 \@gls@tmpb=\expandafter{\@gls@checkedmkidx}%
3492 \toks@={#1}%
3493 \ifx\null#2\null
3494 \ifx\null#3\null
3495 \edef\@gls@checkedmkidx{\the\@gls@tmpb\the\toks@}%
3496 \def\@gls@checkesclevel{\relax}%
3497 \else
3498 \edef\@gls@checkedmkidx{\the\@gls@tmpb\the\toks@
3499 \@gls@quotechar\string"\@gls@levelchar
3500 \@gls@quotechar\string"\@gls@levelchar}%
3501 \def\@gls@checkesclevel{\@gls@checkesclevel#3\null}%
3502 \fi
3503 \else
3504 \edef\@gls@checkedmkidx{\the\@gls@tmpb\the\toks@
3505 \@gls@quotechar\string"\@gls@levelchar}%
3506 \ifx\null#3\null
3507 \def\@gls@checkesclevel{\@gls@checkesclevel#2\!\!\null}%
3508 \else
3509 \def\@gls@checkesclevel{\@gls@checkesclevel#2\!#3\null}%
3510 \fi
3511 \fi
3512 \@gls@checkesclevel
3513 }

```

\@gls@checkbar and for |:

```

3514 \def\@gls@checkbar#1|#2|#3\null{%
3515 \@gls@tmpb=\expandafter{\@gls@checkedmkidx}%
3516 \toks@={#1}%
3517 \ifx\null#2\null
3518 \ifx\null#3\null
3519 \edef\@gls@checkedmkidx{\the\@gls@tmpb\the\toks@}%
3520 \def\@gls@checkbar{\relax}%
3521 \else
3522 \edef\@gls@checkedmkidx{\the\@gls@tmpb\the\toks@

```

```

3523     \@gls@quotechar\@gls@encapchar\@gls@quotechar\@gls@encapchar}%
3524     \def\@gls@checkbar{\@gls@checkbar#3\null}%
3525     \fi
3526   \else
3527     \edef\@gls@checkedmkidx{\the\@gls@tmpb\the\toks@
3528       \@gls@quotechar\@gls@encapchar}%
3529     \ifx\null#3\null
3530       \def\@gls@checkbar{\@gls@checkbar#2||\null}%
3531     \else
3532       \def\@gls@checkbar{\@gls@checkbar#2|#3\null}%
3533     \fi
3534   \fi
3535   \@gls@checkbar
3536 }

```

@gls@checklevel and for !:

```

3537 \def\@gls@checklevel#1!#2!#3\null{%
3538   \@gls@tmpb=\expandafter{\@gls@checkedmkidx}%
3539   \toks@={#1}%
3540   \ifx\null#2\null
3541     \ifx\null#3\null
3542       \edef\@gls@checkedmkidx{\the\@gls@tmpb\the\toks@}%
3543       \def\@gls@checklevel{\relax}%
3544     \else
3545       \edef\@gls@checkedmkidx{\the\@gls@tmpb\the\toks@
3546         \@gls@quotechar\@gls@levelchar\@gls@quotechar\@gls@levelchar}%
3547       \def\@gls@checklevel{\@gls@checklevel#3\null}%
3548     \fi
3549   \else
3550     \edef\@gls@checkedmkidx{\the\@gls@tmpb\the\toks@
3551       \@gls@quotechar\@gls@levelchar}%
3552     \ifx\null#3\null
3553       \def\@gls@checklevel{\@gls@checklevel#2!!\null}%
3554     \else
3555       \def\@gls@checklevel{\@gls@checklevel#2!#3\null}%
3556     \fi
3557   \fi
3558   \@gls@checklevel
3559 }

```

gls@checkactual and for ?:

```

3560 \def\@gls@checkactual#1?#2?#3\null{%
3561   \@gls@tmpb=\expandafter{\@gls@checkedmkidx}%
3562   \toks@={#1}%
3563   \ifx\null#2\null
3564     \ifx\null#3\null
3565       \edef\@gls@checkedmkidx{\the\@gls@tmpb\the\toks@}%
3566       \def\@gls@checkactual{\relax}%
3567     \else

```

```

3568 \edef\@gls@checkedmkidx{\the\@gls@tmpb\the\toks@
3569 \@gls@quotechar\@gls@actualchar\@gls@quotechar\@gls@actualchar}%
3570 \def\@@gls@checkactual{\@gls@checkactual#3\null}%
3571 \fi
3572 \else
3573 \edef\@gls@checkedmkidx{\the\@gls@tmpb\the\toks@
3574 \@gls@quotechar\@gls@actualchar}%
3575 \ifx\null#3\null
3576 \def\@@gls@checkactual{\@gls@checkactual#2??\null}%
3577 \else
3578 \def\@@gls@checkactual{\@gls@checkactual#2?#3\null}%
3579 \fi
3580 \fi
3581 \@@gls@checkactual
3582 }

```

s@xdycheckquote As before but for use with xindy

```

3583 \def\@gls@xdycheckquote#1"#2"#3\null{%
3584 \@gls@tmpb=\expandafter{\@gls@checkedmkidx}%
3585 \toks@={#1}%
3586 \ifx\null#2\null
3587 \ifx\null#3\null
3588 \edef\@gls@checkedmkidx{\the\@gls@tmpb\the\toks@}%
3589 \def\@@gls@xdycheckquote{\relax}%
3590 \else
3591 \edef\@gls@checkedmkidx{\the\@gls@tmpb\the\toks@
3592 \string\string\}%
3593 \def\@@gls@xdycheckquote{\@gls@xdycheckquote#3\null}%
3594 \fi
3595 \else
3596 \edef\@gls@checkedmkidx{\the\@gls@tmpb\the\toks@
3597 \string\}%
3598 \ifx\null#3\null
3599 \def\@@gls@xdycheckquote{\@gls@xdycheckquote#2""\null}%
3600 \else
3601 \def\@@gls@xdycheckquote{\@gls@xdycheckquote#2"#3\null}%
3602 \fi
3603 \fi
3604 \@@gls@xdycheckquote
3605 }

```

ycheckbackslash Need to escape all backslashes for xindy. Define command that will define \@gls@xdycheckbackslash

```

3606 \edef\def\@gls@xdycheckbackslash{%
3607 \noexpand\def\noexpand\@gls@xdycheckbackslash##1\@backslashchar
3608 ##2\@backslashchar##3\noexpand\null{%
3609 \noexpand\@gls@tmpb=\noexpand\expandafter
3610 {\noexpand\@gls@checkedmkidx}%
3611 \noexpand\toks@={##1}%
3612 \noexpand\ifx\noexpand\null##2\noexpand\null

```

```

3613 \noexpand\ifx\noexpand\null##3\noexpand\null
3614 \noexpand\edef\noexpand\@gls@checkedmkidx{%
3615     \noexpand\the\noexpand\@gls@tmpb\noexpand\the\noexpand\toks@}%
3616 \noexpand\def\noexpand\@gls@xdycheckbackslash{\relax}%
3617 \noexpand\else
3618 \noexpand\edef\noexpand\@gls@checkedmkidx{%
3619     \noexpand\the\noexpand\@gls@tmpb\noexpand\the\noexpand\toks@
3620 \@backslashchar\@backslashchar\@backslashchar\@backslashchar}%
3621 \noexpand\def\noexpand\@gls@xdycheckbackslash{%
3622     \noexpand\@gls@xdycheckbackslash##3\noexpand\null}%
3623 \noexpand\fi
3624 \noexpand\else
3625 \noexpand\edef\noexpand\@gls@checkedmkidx{%
3626     \noexpand\the\noexpand\@gls@tmpb\noexpand\the\noexpand\toks@
3627 \@backslashchar\@backslashchar}%
3628 \noexpand\ifx\noexpand\null##3\noexpand\null
3629 \noexpand\def\noexpand\@gls@xdycheckbackslash{%
3630     \noexpand\@gls@xdycheckbackslash##2\@backslashchar
3631 \@backslashchar\noexpand\null}%
3632 \noexpand\else
3633 \noexpand\def\noexpand\@gls@xdycheckbackslash{%
3634     \noexpand\@gls@xdycheckbackslash##2\@backslashchar
3635     ##3\noexpand\null}%
3636 \noexpand\fi
3637 \noexpand\fi
3638 \noexpand\@gls@xdycheckbackslash
3639 }%
3640 }

```

Now go ahead and define \@gls@xdycheckbackslash

```

3641 \def@gls@xdycheckbackslash

```

lsdohypertarget

```

3642 \newlength\gls@tmplen
3643 \newcommand*\glsdohypertarget}[2]{%
3644     \@glsshowtarget{#1}%
3645     \settoheight\gls@tmplen{#2}%
3646     \raisebox\gls@tmplen{\hypertarget{#1}{}}#2%
3647 }

```

\glsdohyperlink

```

3648 \newcommand*\glsdohyperlink}[2]{%
3649     \@glsshowtarget{#1}%
3650     \hyperlink{#1}{#2}%
3651 }

```

lsdonohyperlink

```

3652 \newcommand*\glsdonohyperlink}[2]{#2}

```


`\@glslink` If `\hyperlink` is not defined `\@glslink` ignores its first argument and just does the second argument, otherwise it is equivalent to `\hyperlink`.

```
3653 \ifcsundef{hyperlink}%  
3654 {%  
3655   \let\@glslink\glsdonohyperlink  
3656 }%  
3657 {%  
3658   \let\@glslink\glsdohyperlink  
3659 }
```

`\@glstarget` If `\hypertarget` is not defined, `\@glstarget` ignores its first argument and just does the second argument, otherwise it is equivalent to `\hypertarget`.

```
3660 \ifcsundef{hypertarget}%  
3661 {%  
3662   \let\@glstarget\@secondoftwo  
3663 }%  
3664 {%  
3665   \let\@glstarget\glsdohypertarget  
3666 }
```

Glossary hyperlinks can be disabled using `\glsdisablehyper` (effect can be localised):

`\glsdisablehyper`

```
3667 \newcommand{\glsdisablehyper}{%  
3668   \KV@glslink@hyperfalse  
3669   \let\@glslink\glsdonohyperlink  
3670   \let\@glstarget\@secondoftwo  
3671 }
```

Glossary hyperlinks can be enabled using `\glsenablehyper` (effect can be localised):

`\glsenablehyper`

```
3672 \newcommand{\glsenablehyper}{%  
3673   \KV@glslink@hypertrue  
3674   \let\@glslink\glsdohyperlink  
3675   \let\@glstarget\glsdohypertarget  
3676 }
```

Provide some convenience commands if not already defined:

```
3677 \providecommand{\@firstofthree}[3]{#1}  
3678 \providecommand{\@secondofthree}[3]{#2}
```

Syntax:

`\gls[<options>]{<label>}[<insert text>]`

Link to glossary entry using singular form. The link text is taken from the value of the text or first keys used when the entry was defined.

The first optional argument is a key-value list, the same as `\glslink`, the mandatory argument is the entry label. After the mandatory argument, there is another optional argument to insert extra text in the link text (the location of the inserted text is governed by `\glsdisplay` and `\glsdisplayfirst`). As with `\glslink` there is a starred version which is the same as the unstarred version but with the hyper key set to false. (Additional options can also be specified in the first optional argument.)

First determine which version is being used:

```
\gls
3679 \newrobustcmd*{\gls}{\@gls@hyp@opt\@gls}
```

Defined the un-starred form. Need to determine if there is a final optional argument

```
\@gls
3680 \newcommand*{\@gls}[2][\%
3681   \new@ifnextchar[\@gls@{#1}{#2}]{\@gls@{#1}{#2}[]}%
3682 }
```

`\@gls@` Read in the final optional argument:

```
3683 \def\@gls@#1#2[#3]{%
3684   \glsdoifexists{#2}%
3685   {%
3686     \let\do@gls@link@checkfirsthyper\@gls@link@checkfirsthyper

3687     \let\glsifplural\@secondoftwo
3688     \let\glsupcase\@firstofthree
3689     \let\glscustomtext\@empty
3690     \def\glsinsert{#3}%
```

Determine what the link text should be (this is stored in `\@glo@text`) Note that `\@gls@link` sets `\glstype`.

```
3691   \def\@glo@text{\csname gls@\glstype @entryfmt\endcsname}%
```

Call `\@gls@link`. If footnote package option has been used and the glossary type is `\acronymtype`, suppress hyperlink for first use. Likewise if the `hyperfirst=false` package option is used.

```
3692   \@gls@link[#1]{#2}{\@glo@text}%
```

Indicate that this entry has now been used

```
3693   \ifKV@glslink@local
3694     \glslocalunset{#2}%
3695   \else
3696     \glsunset{#2}%
3697   \fi
3698 }%

3699 \glspostlinkhook
3700 }
```

`\Gls` behaves like `\gls`, but the first letter of the link text is converted to uppercase (note that if the first letter has an accent, the accented letter will need to be grouped when you define the entry). It is mainly intended for terms that start a sentence:

`\Gls`

```
3701 \newrobustcmd*{\Gls}{\@gls@hyp@opt\@Gls}
```

Defined the un-starred form. Need to determine if there is a final optional argument

```
3702 \newcommand*{\@Gls}[2] [] {%
3703   \new@ifnextchar[{\@Gls@{#1}{#2}}{\@Gls@{#1}{#2} []}]%
3704 }
```

`\@Gls@` Read in the final optional argument:

```
3705 \def\@Gls@#1#2[#3] {%
3706   \glsdoifexists{#2}%
3707   {%
3708     \let\do@gls@link@checkfirsthyper\@gls@link@checkfirsthyper

3709     \let\glsifplural\@secondoftwo
3710     \let\glsupcase\@secondofthree
3711     \let\glscustomtext\@empty
3712     \def\glsinsert{#3}%
```

Determine what the link text should be (this is stored in `\@glo@text`) Note that `\@gls@link` sets `\glstype`.

```
3713   \def\@glo@text{\csname gls@\glstype @entryfmt\endcsname}%
```

Call `\@gls@link` If footnote package option has been used and the glossary type is `\acronymtype`, suppress hyperlink for first use. Likewise if the `hyperfirst=false` package option is used.

```
3714   \@gls@link[#1]{#2}{\@glo@text}%
```

Indicate that this entry has now been used

```
3715   \ifKV@glslink@local
3716     \glslocalunset{#2}%
3717   \else
3718     \glsunset{#2}%
3719   \fi
3720 }%

3721 \glspostlinkhook
3722 }
```

`\GLS` behaves like `\gls`, but the link text is converted to uppercase:

`\GLS`

```
3723 \newrobustcmd*{\GLS}{\@gls@hyp@opt\@GLS}
```

Defined the un-starred form. Need to determine if there is a final optional argument

```
3724 \newcommand*{\@GLS}[2] [] {%
3725   \new@ifnextchar[{\@GLS@{#1}{#2}}{\@GLS@{#1}{#2} []}]%
3726 }
```

`\@GLS@` Read in the final optional argument:

```
3727 \def\@GLS@#1#2[#3]{%
3728   \glsdoifexists{#2}%
3729   {%
3730     \let\do@gl@link@checkfirsthyper\@gl@link@checkfirsthyper

3731     \let\glsifplural\@secondoftwo
3732     \let\glscapscase\@thirdofthree
3733     \let\glscustomtext\@empty
3734     \def\glsinsert{#3}%
```

Determine what the link text should be (this is stored in `\@glo@text`). Note that `\@gl@link` sets `\glstype`.

```
3735   \def\@glo@text{\csname gls@\glstype @entryfmt\endcsname}%
```

Call `\@gl@link` If footnote package option has been used and the glossary type is `\acronymtype`, suppress hyperlink for first use. Likewise if the `hyperfirst=false` package option is used.

```
3736   \@gl@link[#1]{#2}{\@glo@text}%
```

Indicate that this entry has now been used

```
3737   \ifKV@gl@link@local
3738     \gl@localunset{#2}%
3739   \else
3740     \gl@unset{#2}%
3741   \fi
3742 }%

3743 \gl@postlinkhook
3744 }
```

`\gl@pl` behaves in the same way as `\gl` except it uses the plural form.

`\gl@pl`

```
3745 \newrobustcmd*{\gl@pl}{\@gl@hyp@opt\gl@pl}
```

Defined the un-starred form. Need to determine if there is a final optional argument

```
3746 \newcommand*{\@gl@pl}[2][{}]{%
3747   \new@ifnextchar[{\@gl@pl@{#1}{#2}}{\@gl@pl@{#1}{#2}[]}%
3748 }
```

`\@gl@pl@` Read in the final optional argument:

```
3749 \def\@gl@pl@#1#2[#3]{%
3750   \glsdoifexists{#2}%
3751   {%
3752     \let\do@gl@link@checkfirsthyper\@gl@link@checkfirsthyper

3753     \let\glsifplural\@firstoftwo
3754     \let\glscapscase\@firstofthree
3755     \let\glscustomtext\@empty
3756     \def\glsinsert{#3}%
```

Determine what the link text should be (this is stored in `\@glo@text`) Note that `\@gls@link` sets `\glstype`.

```
3757 \def\@glo@text{\csname gls@\glstype @entryfmt\endcsname}%
```

Call `\@gls@link`. If footnote package option has been used and the glossary type is `\acronymtype`, suppress hyperlink for first use. Likewise if the `hyperfirst=false` package option is used.

```
3758 \@gls@link[#1]{#2}{\@glo@text}%
```

Indicate that this entry has now been used

```
3759 \ifKV@glslink@local
```

```
3760 \glslocalunset{#2}%
```

```
3761 \else
```

```
3762 \glsunset{#2}%
```

```
3763 \fi
```

```
3764 }%
```

```
3765 \glspostlinkhook
```

```
3766 }
```

`\Glsp1` behaves in the same way as `\glsp1`, except that the first letter of the link text is converted to uppercase (as with `\Gls`, if the first letter has an accent, it will need to be grouped).

`\Glsp1`

```
3767 \newrobustcmd*{\Glsp1}{\@gls@hyp@opt\@Glsp1}
```

Defined the un-starred form. Need to determine if there is a final optional argument

```
3768 \newcommand*{\@Glsp1}[2][{}]{%
```

```
3769 \new@ifnextchar[{\@Glsp1@{#1}{#2}}{\@Glsp1@{#1}{#2}[]}%
```

```
3770 }
```

`\@Glsp1@` Read in the final optional argument:

```
3771 \def\@Glsp1@#1#2[#3]{%
```

```
3772 \glsdoifexists{#2}%
```

```
3773 {%
```

```
3774 \let\do@gls@link@checkfirsthyper\@gls@link@checkfirsthyper
```

```
3775 \let\glsifplural\@firstoftwo
```

```
3776 \let\glscapscase\@secondofthree
```

```
3777 \let\glscustomtext\@empty
```

```
3778 \def\glsinsert{#3}%
```

Determine what the link text should be (this is stored in `\@glo@text`). This needs to be expanded so that the `\@glo@text` can be passed to `\xmakefirstuc`. Note that `\@gls@link` sets `\glstype`.

```
3779 \def\@glo@text{\csname gls@\glstype @entryfmt\endcsname}%
```

Call `\@gls@link`. If footnote package option has been used and the glossary type is `\acronymtype`, suppress hyperlink for first use. Likewise if the `hyperfirst=false` package option is used.

```
3780 \@gls@link[#1]{#2}{\@glo@text}%
```

Indicate that this entry has now been used

```
3781 \ifKV@glslink@local
3782 \glsllocalunset{#2}%
3783 \else
3784 \glunset{#2}%
3785 \fi
3786 }%

3787 \glspostlinkhook
3788 }
```

\GLSp1 behaves like \glsp1 except that all the link text is converted to uppercase.

\GLSp1

```
3789 \newrobustcmd*{\GLSp1}{\@gls@hyp@opt\@GLSp1}
```

Defined the un-starred form. Need to determine if there is a final optional argument

```
3790 \newcommand*{\@GLSp1}[2][{}]{%
3791 \new@ifnextchar[{\@GLSp1@{#1}{#2}}{\@GLSp1@{#1}{#2}[]}%
3792 }
```

\@GLSp1 Read in the final optional argument:

```
3793 \def\@GLSp1@#1#2[#3]{%
3794 \glsoifexists{#2}%
3795 {%
3796 \let\do@gls@link@checkfirsthyper\@gls@link@checkfirsthyper

3797 \let\glsifplural\@firstoftwo
3798 \let\glscapscase\@thirdofthree
3799 \let\glscustomtext\@empty
3800 \def\glsinsert{#3}%
```

Determine what the link text should be (this is stored in \@glo@text) Note that \@gls@link sets \glstype.

```
3801 \def\@glo@text{\csname gls@\glstype @entryfmt\endcsname}%
```

Call \@gls@link. If footnote package option has been used and the glossary type is \acronymtype, suppress hyperlink for first use. Likewise if the hyperfirst=false package option is used.

```
3802 \@gls@link[#1]{#2}{\@glo@text}%
```

Indicate that this entry has now been used

```
3803 \ifKV@glslink@local
3804 \glsllocalunset{#2}%
3805 \else
3806 \glunset{#2}%
3807 \fi
3808 }%

3809 \glspostlinkhook
3810 }
```

`\glsdisp` `\glsdisp[<options>]{<label>}{<text>}` This is like `\gls` except that the link text is provided. This differs from `\glslink` in that it uses `\glsdisplay` or `\glsdisplayfirst` and unsets the first use flag.

First determine if we are using the starred form:

```
3811 \newrobustcmd*{\glsdisp}{\@gls@hyp@opt\@glsdisp}
```

Defined the un-starred form.

`\@glsdisp`

```
3812 \newcommand*{\@glsdisp}[3][{}]{%
3813   \glsdoifexists{#2}{%

3814     \let\do@gls@link@checkfirsthyper\@gls@link@checkfirsthyper

3815     \let\glsifplural\@secondoftwo
3816     \let\glsupcase\@firstofthree
3817     \def\glscustomtext{#3}%
3818     \def\glsinsert{}}%
```

Determine what the link text should be (this is stored in `\@glo@text`) Note that `\@gls@link` sets `\glstyp`.

```
3819   \def\@glo@text{\csname gls@\glstyp @entryfmt\endcsname}%
```

Call `\@gls@link`. If footnote package option has been used and the glossary type is `\acronymtype`, suppress hyperlink for first use. Likewise if the `hyperfirst=false` package option is used.

```
3820   \@gls@link[#1]{#2}{\@glo@text}%
```

Indicate that this entry has now been used

```
3821   \ifKV@glslink@local
3822     \glslocalunset{#2}%
3823   \else
3824     \glsunset{#2}%
3825   \fi
3826 }%
```

```
3827 \glspostlinkhook
```

```
3828 }
```

`checkfirsthyper` Instead of just setting `\do@gls@link@checkfirsthyper` to `\relax` in `\@gls@field@link`, set it to `\@gls@link@nocheckfirsthyper` in case some other action needs to take place.

```
3829 \newcommand*{\@gls@link@nocheckfirsthyper}{}
```

`\@gls@field@link`

```
3830 \newcommand{\@gls@field@link}[3]{%
3831   \glsdoifexists{#2}%
3832   {%
3833     \let\do@gls@link@checkfirsthyper\@gls@link@nocheckfirsthyper
3834     \@gls@link[#1]{#2}{#3}%
3835   }%
```

```

3836 \glspostlinkhook
3837 }

```

`\glstext` behaves like `\gls` except it always uses the value given by the text key and it doesn't mark the entry as used.

`\glstext`

```

3838 \newrobustcmd*{\glstext}{\@gls@hyp@opt\@glstext}

```

Defined the un-starred form. Need to determine if there is a final optional argument

```

3839 \newcommand*{\@glstext}[2] [] {%
3840   \new@ifnextchar[{\@glstext@{#1}{#2}}{\@glstext@{#1}{#2} []}]

```

Read in the final optional argument:

```

3841 \def\@glstext@#1#2[#3] {%
3842   \@gls@field@link{#1}{#2}{\glstentrytext{#2}#3}%
3843 }

```

`\GLStext` behaves like `\glstext` except the text is converted to uppercase.

`\GLStext`

```

3844 \newrobustcmd*{\GLStext}{\@gls@hyp@opt\@GLStext}

```

Defined the un-starred form. Need to determine if there is a final optional argument

```

3845 \newcommand*{\@GLStext}[2] [] {%
3846   \new@ifnextchar[{\@GLStext@{#1}{#2}}{\@GLStext@{#1}{#2} []}]

```

Read in the final optional argument:

```

3847 \def\@GLStext@#1#2[#3] {%
3848   \@gls@field@link{#1}{#2}{\mfirstucMakeUppercase{\glstentrytext{#2}#3}%
3849 }

```

`\Glstext` behaves like `\glstext` except that the first letter of the text is converted to uppercase.

`\Glstext`

```

3850 \newrobustcmd*{\Glstext}{\@gls@hyp@opt\@Glstext}

```

Defined the un-starred form. Need to determine if there is a final optional argument

```

3851 \newcommand*{\@Glstext}[2] [] {%
3852   \new@ifnextchar[{\@Glstext@{#1}{#2}}{\@Glstext@{#1}{#2} []}]

```

Read in the final optional argument:

```

3853 \def\@Glstext@#1#2[#3] {%
3854   \@gls@field@link{#1}{#2}{\Glstentrytext{#2}#3}%
3855 }

```

`\glsfirst` behaves like `\gls` except it always uses the value given by the first key and it doesn't mark the entry as used.

`\glsfirst`

```

3856 \newrobustcmd*{\glsfirst}{\@gls@hyp@opt\@glsfirst}

```


Defined the un-starred form. Need to determine if there is a final optional argument

```
3857 \newcommand*{\@glsfirst}[2] [] {%
3858   \new@ifnextchar[{\@glsfirst@{#1}{#2}}{\@glsfirst@{#1}{#2} [] }}
```

Read in the final optional argument:

```
3859 \def\@glsfirst@#1#2[#3] {%
3860   \@gls@field@link{#1}{#2}{\glstryfirst{#2}#3}%
3861 }
```

\Glsfirst behaves like \glsfirst except it displays the first letter in uppercase.

\Glsfirst

```
3862 \newrobustcmd*{\Glsfirst}{\@gls@hyp@opt\@Glsfirst}
```

Defined the un-starred form. Need to determine if there is a final optional argument

```
3863 \newcommand*{\@Glsfirst}[2] [] {%
3864   \new@ifnextchar[{\@Glsfirst@{#1}{#2}}{\@Glsfirst@{#1}{#2} [] }}
```

Read in the final optional argument:

```
3865 \def\@Glsfirst@#1#2[#3] {%
3866   \@gls@field@link{#1}{#2}{\Glsstryfirst{#2}#3}%
3867 }
```

\GLSfirst behaves like \Glsfirst except it displays the text in uppercase.

\GLSfirst

```
3868 \newrobustcmd*{\GLSfirst}{\@gls@hyp@opt\@GLSfirst}
```

Defined the un-starred form. Need to determine if there is a final optional argument

```
3869 \newcommand*{\@GLSfirst}[2] [] {%
3870   \new@ifnextchar[{\@GLSfirst@{#1}{#2}}{\@GLSfirst@{#1}{#2} [] }}
```

Read in the final optional argument:

```
3871 \def\@GLSfirst@#1#2[#3] {%
3872   \@gls@field@link{#1}{#2}{\mfirstucMakeUppercase{\glstryfirst{#2}#3}}%
3873 }
```

\glsplural behaves like \gls except it always uses the value given by the plural key and it doesn't mark the entry as used.

\glsplural

```
3874 \newrobustcmd*{\glsplural}{\@gls@hyp@opt\@glsplural}
```

Defined the un-starred form. Need to determine if there is a final optional argument

```
3875 \newcommand*{\@glsplural}[2] [] {%
3876   \new@ifnextchar[{\@glsplural@{#1}{#2}}{\@glsplural@{#1}{#2} [] }}
```

Read in the final optional argument:

```
3877 \def\@glsplural@#1#2[#3] {%
3878   \@gls@field@link{#1}{#2}{\glstryplural{#2}#3}%
3879 }
```

\Glsplural behaves like \glsplural except that the first letter is converted to uppercase.

\Glsplural

```
3880 \newrobustcmd*{\Glsplural}{\@gls@hyp@opt\@Glsplural}
```

Defined the un-starred form. Need to determine if there is a final optional argument

```
3881 \newcommand*{\@Glsplural}[2] [] {%
```

```
3882   \new@ifnextchar[{\@Glsplural@{#1}{#2}}{\@Glsplural@{#1}{#2} []}]}
```

Read in the final optional argument:

```
3883 \def\@Glsplural@#1#2[#3] {%
```

```
3884   \@gls@field@link{#1}{#2}{\Glsentryplural{#2}#3}%
```

```
3885 }
```

\Glsplural behaves like \glsplural except that the text is converted to uppercase.

\GLSplural

```
3886 \newrobustcmd*{\GLSplural}{\@gls@hyp@opt\@GLSplural}
```

Defined the un-starred form. Need to determine if there is a final optional argument

```
3887 \newcommand*{\@GLSplural}[2] [] {%
```

```
3888   \new@ifnextchar[{\@GLSplural@{#1}{#2}}{\@GLSplural@{#1}{#2} []}]}
```

Read in the final optional argument:

```
3889 \def\@GLSplural@#1#2[#3] {%
```

```
3890   \@gls@field@link{#1}{#2}{\mfirstucMakeUppercase{\glsentryplural{#2}#3}}%
```

```
3891 }
```

\glsfirstplural behaves like \gls except it always uses the value given by the firstplural key and it doesn't mark the entry as used.

\glsfirstplural

```
3892 \newrobustcmd*{\glsfirstplural}{\@gls@hyp@opt\@glsfirstplural}
```

Defined the un-starred form. Need to determine if there is a final optional argument

```
3893 \newcommand*{\@glsfirstplural}[2] [] {%
```

```
3894   \new@ifnextchar[{\@glsfirstplural@{#1}{#2}}{\@glsfirstplural@{#1}{#2} []}]}
```

Read in the final optional argument:

```
3895 \def\@glsfirstplural@#1#2[#3] {%
```

```
3896   \@gls@field@link{#1}{#2}{\glsentryfirstplural{#2}#3}%
```

```
3897 }
```

\Glsfirstplural behaves like \glsfirstplural except that the first letter is converted to uppercase.

\Glsfirstplural

```
3898 \newrobustcmd*{\Glsfirstplural}{\@gls@hyp@opt\@Glsfirstplural}
```

Defined the un-starred form. Need to determine if there is a final optional argument

```
3899 \newcommand*{\@Glsfirstplural}[2] [] {%
```

```
3900   \new@ifnextchar[{\@Glsfirstplural@{#1}{#2}}{\@Glsfirstplural@{#1}{#2} []}]}
```

Read in the final optional argument:

```
3901 \def\@GLSfirstplural@#1#2[#3]{%
3902   \@gls@field@link{#1}{#2}{\Glsentryfirstplural{#2}#3}%
3903 }
```

\GLSfirstplural behaves like \glsfirstplural except that the link text is converted to uppercase.

\GLSfirstplural

```
3904 \newrobustcmd*{\GLSfirstplural}{\@gls@hyp@opt\@GLSfirstplural}
```

Defined the un-starred form. Need to determine if there is a final optional argument

```
3905 \newcommand*{\@GLSfirstplural}[2] [] {%
3906   \new@ifnextchar[{\@GLSfirstplural@{#1}{#2}}{\@GLSfirstplural@{#1}{#2} []}]}
```

Read in the final optional argument:

```
3907 \def\@GLSfirstplural@#1#2[#3]{%
3908   \@gls@field@link{#1}{#2}{\mfirstucMakeUppercase{\Glsentryfirstplural{#2}#3}}%
3909 }
```

\glsname behaves like \gls except it always uses the value given by the name key and it doesn't mark the entry as used.

\glsname

```
3910 \newrobustcmd*{\glsname}{\@gls@hyp@opt\@glsname}
```

Defined the un-starred form. Need to determine if there is a final optional argument

```
3911 \newcommand*{\@glsname}[2] [] {%
3912   \new@ifnextchar[{\@glsname@{#1}{#2}}{\@glsname@{#1}{#2} []}]}
```

Read in the final optional argument:

```
3913 \def\@glsname@#1#2[#3]{%
3914   \@gls@field@link{#1}{#2}{\Glsentryname{#2}#3}%
3915 }
```

\Glsname behaves like \glsname except that the first letter is converted to uppercase.

\Glsname

```
3916 \newrobustcmd*{\Glsname}{\@gls@hyp@opt\@Glsname}
```

Defined the un-starred form. Need to determine if there is a final optional argument

```
3917 \newcommand*{\@Glsname}[2] [] {%
3918   \new@ifnextchar[{\@Glsname@{#1}{#2}}{\@Glsname@{#1}{#2} []}]}
```

Read in the final optional argument:

```
3919 \def\@Glsname@#1#2[#3]{%
3920   \@gls@field@link{#1}{#2}{\Glsentryname{#2}#3}%
3921 }
```

\GLSname behaves like \glsname except that the link text is converted to uppercase.

\GLSname

```
3922 \newrobustcmd*{\GLSname}{\@gls@hyp@opt\@GLSname}
```

Define the un-starred form. Need to determine if there is a final optional argument

```
3923 \newcommand*{\@GLSname}[2] [] {%
3924   \new@ifnextchar [{\@GLSname@{#1}{#2}}{\@GLSname@{#1}{#2} [] }}
```

Read in the final optional argument:

```
3925 \def\@GLSname@#1#2[#3] {%
3926   \@gls@field@link{#1}{#2}{\mfirstucMakeUppercase{\glsentryname{#2}#3}}%
3927 }
```

\glsdesc behaves like \gls except it always uses the value given by the description key and it doesn't mark the entry as used.

\glsdesc

```
3928 \newrobustcmd*{\glsdesc}{\@gls@hyp@opt\@glsdesc}
```

Defined the un-starred form. Need to determine if there is a final optional argument

```
3929 \newcommand*{\@glsdesc}[2] [] {%
3930   \new@ifnextchar [{\@glsdesc@{#1}{#2}}{\@glsdesc@{#1}{#2} [] }}
```

Read in the final optional argument:

```
3931 \def\@glsdesc@#1#2[#3] {%
3932   \@gls@field@link{#1}{#2}{\glsentrydesc{#2}#3}}%
3933 }
```

\Glsdesc behaves like \glsdesc except that the first letter is converted to uppercase.

\Glsdesc

```
3934 \newrobustcmd*{\Glsdesc}{\@gls@hyp@opt\@Glsdesc}
```

Define the un-starred form. Need to determine if there is a final optional argument

```
3935 \newcommand*{\@Glsdesc}[2] [] {%
3936   \new@ifnextchar [{\@Glsdesc@{#1}{#2}}{\@Glsdesc@{#1}{#2} [] }}
```

Read in the final optional argument:

```
3937 \def\@Glsdesc@#1#2[#3] {%
3938   \@gls@field@link{#1}{#2}{\Glsentrydesc{#2}#3}}%
3939 }
```

\GLSdesc behaves like \glsdesc except that the link text is converted to uppercase.

\GLSdesc

```
3940 \newrobustcmd*{\GLSdesc}{\@gls@hyp@opt\@GLSdesc}
```

Define the un-starred form. Need to determine if there is a final optional argument

```
3941 \newcommand*{\@GLSdesc}[2] [] {%
3942   \new@ifnextchar [{\@GLSdesc@{#1}{#2}}{\@GLSdesc@{#1}{#2} [] }}
```

Read in the final optional argument:

```
3943 \def\@GLSdesc@#1#2[#3] {%
3944   \@gls@field@link{#1}{#2}{\mfirstucMakeUppercase{\glsentrydesc{#2}#3}}%
3945 }
```

\glsdescplural behaves like \gls except it always uses the value given by the description-plural key and it doesn't mark the entry as used.

`\glsdescplural`

3946 `\newrobustcmd*{\glsdescplural}{\@gls@hyp@opt\@glsdescplural}`

Define the un-starred form. Need to determine if there is a final optional argument

3947 `\newcommand*{\@glsdescplural}[2][\%`
3948 `\new@ifnextchar[{\@glsdescplural@{#1}{#2}}{\@glsdescplural@{#1}{#2}[]}]}`

Read in the final optional argument:

3949 `\def\@glsdescplural@#1#2[#3]{%`
3950 `\@gls@field@link{#1}{#2}{\glsentrydescplural{#2}#3}%`
3951 `}`

`\Glsdescplural` behaves like `\glsdescplural` except that the first letter is converted to uppercase.

`\Glsdescplural`

3952 `\newrobustcmd*{\Glsdescplural}{\@gls@hyp@opt\@Glsdescplural}`

Define the un-starred form. Need to determine if there is a final optional argument

3953 `\newcommand*{\@Glsdescplural}[2][\%`
3954 `\new@ifnextchar[{\@Glsdescplural@{#1}{#2}}{\@Glsdescplural@{#1}{#2}[]}]}`

Read in the final optional argument:

3955 `\def\@Glsdescplural@#1#2[#3]{%`
3956 `\@gls@field@link{#1}{#2}{\Glsentrydescplural{#2}#3}%`
3957 `}`

`\GLSdescplural` behaves like `\glsdescplural` except that the link text is converted to uppercase.

`\GLSdescplural`

3958 `\newrobustcmd*{\GLSdescplural}{\@gls@hyp@opt\@GLSdescplural}`

Define the un-starred form. Need to determine if there is a final optional argument

3959 `\newcommand*{\@GLSdescplural}[2][\%`
3960 `\new@ifnextchar[{\@GLSdescplural@{#1}{#2}}{\@GLSdescplural@{#1}{#2}[]}]}`

Read in the final optional argument:

3961 `\def\@GLSdescplural@#1#2[#3]{%`
3962 `\@gls@field@link{#1}{#2}{\mfirstucMakeUppercase{\glsentrydescplural{#2}#3}}%`
3963 `}`

`\glssymbol` behaves like `\gls` except it always uses the value given by the symbol key and it doesn't mark the entry as used.

`\glssymbol`

3964 `\newrobustcmd*{\glssymbol}{\@gls@hyp@opt\@glssymbol}`

Defined the un-starred form. Need to determine if there is a final optional argument

3965 `\newcommand*{\@glssymbol}[2][\%`
3966 `\new@ifnextchar[{\@glssymbol@{#1}{#2}}{\@glssymbol@{#1}{#2}[]}]}`

Read in the final optional argument:

```
3967 \def\@glssymbol@#1#2[#3]{%
3968   \@gls@field@link{#1}{#2}{\glstentrysymbol{#2}#3}%
3969 }
```

\Glssymbol behaves like \glssymbol except that the first letter is converted to uppercase.

\Glssymbol

```
3970 \newrobustcmd*{\Glssymbol}{\@gls@hyp@opt\@Glssymbol}
```

Define the un-starred form. Need to determine if there is a final optional argument

```
3971 \newcommand*{\@Glssymbol}[2][ ]{%
3972   \new@ifnextchar[{\@Glssymbol@{#1}{#2}}{\@Glssymbol@{#1}{#2}[ ]}}
```

Read in the final optional argument:

```
3973 \def\@Glssymbol@#1#2[#3]{%
3974   \@gls@field@link{#1}{#2}{\glstentrysymbol{#2}#3}%
3975 }
```

\GLSsymbol behaves like \glssymbol except that the link text is converted to uppercase.

\GLSsymbol

```
3976 \newrobustcmd*{\GLSsymbol}{\@gls@hyp@opt\@GLSsymbol}
```

Define the un-starred form. Need to determine if there is a final optional argument

```
3977 \newcommand*{\@GLSsymbol}[2][ ]{%
3978   \new@ifnextchar[{\@GLSsymbol@{#1}{#2}}{\@GLSsymbol@{#1}{#2}[ ]}}
```

Read in the final optional argument:

```
3979 \def\@GLSsymbol@#1#2[#3]{%
3980   \@gls@field@link{#1}{#2}{\mfirstucMakeUppercase{\glstentrysymbol{#2}#3}}%
3981 }
```

\glssymbolplural behaves like \gls except it always uses the value given by the symbol-plural key and it doesn't mark the entry as used.

glssymbolplural

```
3982 \newrobustcmd*{\glssymbolplural}{\@gls@hyp@opt\@glssymbolplural}
```

Define the un-starred form. Need to determine if there is a final optional argument

```
3983 \newcommand*{\@glssymbolplural}[2][ ]{%
3984   \new@ifnextchar[{\@glssymbolplural@{#1}{#2}}{\@glssymbolplural@{#1}{#2}[ ]}}
```

Read in the final optional argument:

```
3985 \def\@glssymbolplural@#1#2[#3]{%
3986   \@gls@field@link{#1}{#2}{\glstentrysymbolplural{#2}#3}%
3987 }
```

\Glssymbolplural behaves like \glssymbolplural except that the first letter is converted to uppercase.

Glssymbolplural

```
3988 \newrobustcmd*{\Glssymbolplural}{\@gls@hyp@opt\@Glssymbolplural}
```

Define the un-starred form. Need to determine if there is a final optional argument

```
3989 \newcommand*{\@Glssymbolplural}[2] [] {%
3990   \new@ifnextchar[{\@Glssymbolplural@{#1}{#2}}{\@Glssymbolplural@{#1}{#2} [] }}
```

Read in the final optional argument:

```
3991 \def\@Glssymbolplural@#1#2[#3] {%
3992   \@gls@field@link{#1}{#2}{\Glsentrysymbolplural{#2}#3}%
3993 }
```

`\GLSsymbolplural` behaves like `\glsymbolplural` except that the link text is converted to uppercase.

`GLSsymbolplural`

```
3994 \newrobustcmd*{\GLSsymbolplural}{\@gls@hyp@opt\@GLSsymbolplural}
```

Define the un-starred form. Need to determine if there is a final optional argument

```
3995 \newcommand*{\@GLSsymbolplural}[2] [] {%
3996   \new@ifnextchar[{\@GLSsymbolplural@{#1}{#2}}{\@GLSsymbolplural@{#1}{#2} [] }}
```

Read in the final optional argument:

```
3997 \def\@GLSsymbolplural@#1#2[#3] {%
3998   \@gls@field@link{#1}{#2}{\mfirstucMakeUppercase{\glsentrysymbolplural{#2}#3}}%
3999 }
```

`\glsuseri` behaves like `\gls` except it always uses the value given by the `user1` key and it doesn't mark the entry as used.

`\glsuseri`

```
4000 \newrobustcmd*{\glsuseri}{\@gls@hyp@opt\@glsuseri}
```

Define the un-starred form. Need to determine if there is a final optional argument

```
4001 \newcommand*{\@glsuseri}[2] [] {%
4002   \new@ifnextchar[{\@glsuseri@{#1}{#2}}{\@glsuseri@{#1}{#2} [] }}
```

Read in the final optional argument:

```
4003 \def\@glsuseri@#1#2[#3] {%
4004   \@gls@field@link{#1}{#2}{\Glsentryuseri{#2}#3}%
4005 }
```

`\Glsuseri` behaves like `\glsuseri` except that the first letter is converted to uppercase.

`\Glsuseri`

```
4006 \newrobustcmd*{\Glsuseri}{\@gls@hyp@opt\@Glsuseri}
```

Define the un-starred form. Need to determine if there is a final optional argument

```
4007 \newcommand*{\@Glsuseri}[2] [] {%
4008   \new@ifnextchar[{\@Glsuseri@{#1}{#2}}{\@Glsuseri@{#1}{#2} [] }}
```

Read in the final optional argument:

```
4009 \def\@Glsuseri@#1#2[#3] {%
4010   \@gls@field@link{#1}{#2}{\Glsentryuseri{#2}#3}%
4011 }
```

\GLSuseri behaves like \glsuseri except that the link text is converted to uppercase.

\GLSuseri

```
4012 \newrobustcmd*{\GLSuseri}{\@gls@hyp@opt\@GLSuseri}
```

Define the un-starred form. Need to determine if there is a final optional argument

```
4013 \newcommand*{\@GLSuseri}[2] [] {%
```

```
4014   \new@ifnextchar[{\@GLSuseri@{#1}{#2}}{\@GLSuseri@{#1}{#2} []}]}
```

Read in the final optional argument:

```
4015 \def\@GLSuseri@#1#2[#3] {%
```

```
4016   \@gls@field@link{#1}{#2}{\mfirstucMakeUppercase{\glsentryuseri{#2}#3}}%
```

```
4017 }
```

\glsuserii behaves like \gls except it always uses the value given by the user2 key and it doesn't mark the entry as used.

\glsuserii

```
4018 \newrobustcmd*{\glsuserii}{\@gls@hyp@opt\@glsuserii}
```

Defined the un-starred form. Need to determine if there is a final optional argument

```
4019 \newcommand*{\@glsuserii}[2] [] {%
```

```
4020   \new@ifnextchar[{\@glsuserii@{#1}{#2}}{\@glsuserii@{#1}{#2} []}]}
```

Read in the final optional argument:

```
4021 \def\@glsuserii@#1#2[#3] {%
```

```
4022   \@gls@field@link{#1}{#2}{\glsentryuserii{#2}#3}}%
```

```
4023 }
```

\Glsuserii behaves like \glsuserii except that the first letter is converted to uppercase.

\Glsuserii

```
4024 \newrobustcmd*{\Glsuserii}{\@gls@hyp@opt\@Glsuserii}
```

Define the un-starred form. Need to determine if there is a final optional argument

```
4025 \newcommand*{\@Glsuserii}[2] [] {%
```

```
4026   \new@ifnextchar[{\@Glsuserii@{#1}{#2}}{\@Glsuserii@{#1}{#2} []}]}
```

Read in the final optional argument:

```
4027 \def\@Glsuserii@#1#2[#3] {%
```

```
4028   \@gls@field@link{#1}{#2}{\Glsentryuserii{#2}#3}}%
```

```
4029 }
```

\GLSuserii behaves like \glsuserii except that the link text is converted to uppercase.

\GLSuserii

```
4030 \newrobustcmd*{\GLSuserii}{\@gls@hyp@opt\@GLSuserii}
```

Defined the un-starred form. Need to determine if there is a final optional argument

```
4031 \newcommand*{\@GLSuserii}[2] [] {%
```

```
4032   \new@ifnextchar[{\@GLSuserii@{#1}{#2}}{\@GLSuserii@{#1}{#2} []}]}
```


Read in the final optional argument:

```
4033 \def\@GLSuserii@#1#2[#3]{%
4034   \@gls@field@link{#1}{#2}{\mfirstucMakeUppercase{\glsentryuserii{#2}#3}}%
4035 }
```

`\glsuseriii` behaves like `\gls` except it always uses the value given by the `user3` key and it doesn't mark the entry as used.

`\glsuseriii`

```
4036 \newrobustcmd*{\glsuseriii}{\@gls@hyp@opt\@glsuseriii}
```

Define the un-starred form. Need to determine if there is a final optional argument

```
4037 \newcommand*{\@glsuseriii}[2][\@gls@field@link{#1}{#2}{\mfirstucMakeUppercase{\glsentryuserii{#2}#3}}%
4038   \new@ifnextchar[\@glsuseriii@{#1}{#2}]{\@glsuseriii@{#1}{#2}[]}}
```

Read in the final optional argument:

```
4039 \def\@glsuseriii@#1#2[#3]{%
4040   \@gls@field@link{#1}{#2}{\glsentryuseriii{#2}#3}%
4041 }
```

`\Glsuseriii` behaves like `\glsuseriii` except that the first letter is converted to uppercase.

`\Glsuseriii`

```
4042 \newrobustcmd*{\Glsuseriii}{\@gls@hyp@opt\@Glsuseriii}
```

Define the un-starred form. Need to determine if there is a final optional argument

```
4043 \newcommand*{\@Glsuseriii}[2][\@Gls@field@link{#1}{#2}{\mfirstucMakeUppercase{\glsentryuseriii{#2}#3}}%
4044   \new@ifnextchar[\@Glsuseriii@{#1}{#2}]{\@Glsuseriii@{#1}{#2}[]}}
```

Read in the final optional argument:

```
4045 \def\@Glsuseriii@#1#2[#3]{%
4046   \@gls@field@link{#1}{#2}{\Glsentryuseriii{#2}#3}%
4047 }
```

`\GLSuseriii` behaves like `\glsuseriii` except that the link text is converted to uppercase.

`\GLSuseriii`

```
4048 \newrobustcmd*{\GLSuseriii}{\@gls@hyp@opt\@GLSuseriii}
```

Define the un-starred form. Need to determine if there is a final optional argument

```
4049 \newcommand*{\@GLSuseriii}[2][\@GLS@field@link{#1}{#2}{\mfirstucMakeUppercase{\glsentryuseriii{#2}#3}}%
4050   \new@ifnextchar[\@GLSuseriii@{#1}{#2}]{\@GLSuseriii@{#1}{#2}[]}}
```

Read in the final optional argument:

```
4051 \def\@GLSuseriii@#1#2[#3]{%
4052   \@gls@field@link{#1}{#2}{\mfirstucMakeUppercase{\glsentryuseriii{#2}#3}}%
4053 }
```

`\glsuseriv` behaves like `\gls` except it always uses the value given by the `user4` key and it doesn't mark the entry as used.

`\glsuseriv`

```
4054 \newrobustcmd*{\glsuseriv}{\@gls@hyp@opt\@glsuseriv}
```

Define the un-starred form. Need to determine if there is a final optional argument

```
4055 \newcommand*{\@glsuseriv}[2][\@glsuseriv@{#1}{#2}]{\@glsuseriv@{#1}{#2}[]}}
```

```
4056 \new@ifnextchar[{\@glsuseriv@{#1}{#2}}{\@glsuseriv@{#1}{#2}[]}]
```

Read in the final optional argument:

```
4057 \def\@glsuseriv@#1#2[#3]{%
```

```
4058 \@gls@field@link{#1}{#2}{\glsentryuseriv{#2}#3}%
```

```
4059 }
```

`\Glsuseriv` behaves like `\glsuseriv` except that the first letter is converted to uppercase.

`\Glsuseriv`

```
4060 \newrobustcmd*{\Glsuseriv}{\@gls@hyp@opt\@Glsuseriv}
```

Define the un-starred form. Need to determine if there is a final optional argument

```
4061 \newcommand*{\@Glsuseriv}[2][\@Glsuseriv@{#1}{#2}]{\@Glsuseriv@{#1}{#2}[]}}
```

```
4062 \new@ifnextchar[{\@Glsuseriv@{#1}{#2}}{\@Glsuseriv@{#1}{#2}[]}]
```

Read in the final optional argument:

```
4063 \def\@Glsuseriv@#1#2[#3]{%
```

```
4064 \@gls@field@link{#1}{#2}{\Glsentryuseriv{#2}#3}%
```

```
4065 }
```

`\GLSuseriv` behaves like `\glsuseriv` except that the link text is converted to uppercase.

`\GLSuseriv`

```
4066 \newrobustcmd*{\GLSuseriv}{\@gls@hyp@opt\@GLSuseriv}
```

Define the un-starred form. Need to determine if there is a final optional argument

```
4067 \newcommand*{\@GLSuseriv}[2][\@GLSuseriv@{#1}{#2}]{\@GLSuseriv@{#1}{#2}[]}}
```

```
4068 \new@ifnextchar[{\@GLSuseriv@{#1}{#2}}{\@GLSuseriv@{#1}{#2}[]}]
```

Read in the final optional argument:

```
4069 \def\@GLSuseriv@#1#2[#3]{%
```

```
4070 \@gls@field@link{#1}{#2}{\mfirstucMakeUppercase{\glsentryuseriv{#2}#3}}%
```

```
4071 }
```

`\glsuserv` behaves like `\gls` except it always uses the value given by the `user5` key and it doesn't mark the entry as used.

`\glsuserv`

```
4072 \newrobustcmd*{\glsuserv}{\@gls@hyp@opt\@glsuserv}
```

Define the un-starred form. Need to determine if there is a final optional argument

```
4073 \newcommand*{\@glsuserv}[2][\@glsuserv@{#1}{#2}]{\@glsuserv@{#1}{#2}[]}}
```

```
4074 \new@ifnextchar[{\@glsuserv@{#1}{#2}}{\@glsuserv@{#1}{#2}[]}]
```

Read in the final optional argument:

```
4075 \def\@glsuserv@#1#2[#3]{%
```

```
4076 \@gls@field@link{#1}{#2}{\glsentryuserv{#2}#3}%
```

```
4077 }
```

\Glsuserv behaves like \glsuserv except that the first letter is converted to uppercase.

\Glsuserv

```
4078 \newrobustcmd*{\Glsuserv}{\@gls@hyp@opt\@Glsuserv}
```

Define the un-starred form. Need to determine if there is a final optional argument

```
4079 \newcommand*{\@Glsuserv}[2] [] {%
```

```
4080 \new@ifnextchar[{\@Glsuserv@{#1}{#2}}{\@Glsuserv@{#1}{#2} []}]}
```

Read in the final optional argument:

```
4081 \def\@Glsuserv@#1#2[#3] {%
```

```
4082 \@gls@field@link{#1}{#2}{\Glsentryuserv{#2}#3}%
```

```
4083 }
```

\GLSuserv behaves like \glsuserv except that the link text is converted to uppercase.

\GLSuserv

```
4084 \newrobustcmd*{\GLSuserv}{\@gls@hyp@opt\@GLSuserv}
```

Define the un-starred form. Need to determine if there is a final optional argument

```
4085 \newcommand*{\@GLSuserv}[2] [] {%
```

```
4086 \new@ifnextchar[{\@GLSuserv@{#1}{#2}}{\@GLSuserv@{#1}{#2} []}]}
```

Read in the final optional argument:

```
4087 \def\@GLSuserv@#1#2[#3] {%
```

```
4088 \@gls@field@link{#1}{#2}{\mfirstucMakeUppercase{\glsentryuserv{#2}#3}}%
```

```
4089 }
```

\glsuservi behaves like \gls except it always uses the value given by the user6 key and it doesn't mark the entry as used.

\glsuservi

```
4090 \newrobustcmd*{\glsuservi}{\@gls@hyp@opt\@glsuservi}
```

Defined the un-starred form. Need to determine if there is a final optional argument

```
4091 \newcommand*{\@glsuservi}[2] [] {%
```

```
4092 \new@ifnextchar[{\@glsuservi@{#1}{#2}}{\@glsuservi@{#1}{#2} []}]}
```

Read in the final optional argument:

```
4093 \def\@glsuservi@#1#2[#3] {%
```

```
4094 \@gls@field@link{#1}{#2}{\glsentryuservi{#2}#3}%
```

```
4095 }
```

\Glsuservi behaves like \glsuservi except that the first letter is converted to uppercase.

\Glsuservi

```
4096 \newrobustcmd*{\Glsuservi}{\@gls@hyp@opt\@Glsuservi}
```

Defined the un-starred form. Need to determine if there is a final optional argument

```
4097 \newcommand*{\@Glsuservi}[2] [] {%
```

```
4098 \new@ifnextchar[{\@Glsuservi@{#1}{#2}}{\@Glsuservi@{#1}{#2} []}]}
```

Read in the final optional argument:

```
4099 \def\@Glsuservi@#1#2[#3]{%
4100   \@gls@field@link{#1}{#2}{\glentryuservi{#2}#3}%
4101 }
```

\Glsuservi behaves like \glsuservi except that the link text is converted to uppercase.

\Glsuservi

```
4102 \newrobustcmd*{\Glsuservi}{\@gls@hyp@opt\@Glsuservi}
```

Define the un-starred form. Need to determine if there is a final optional argument

```
4103 \newcommand*{\@Glsuservi}[2][\@Glsuservi@#1]{%
4104   \new@ifnextchar[\@Glsuservi@{#1}{#2}]{\@Glsuservi@{#1}{#2}[]}}
```

Read in the final optional argument:

```
4105 \def\@Glsuservi@#1#2[#3]{%
4106   \@gls@field@link{#1}{#2}{\mfirstucMakeUppercase{\glentryuservi{#2}#3}}%
4107 }
```

Now deal with acronym related keys. First the short form:

\acrshort

```
4108 \newrobustcmd*{\acrshort}{\@gls@hyp@opt\@ns@acrshort}
```

Define the un-starred form. Need to determine if there is a final optional argument

```
4109 \newcommand*{\@ns@acrshort}[2][\@ns@acrshort@#1]{%
4110   \new@ifnextchar[\@ns@acrshort@{#1}{#2}]{\@ns@acrshort@{#1}{#2}[]}%
4111 }
```

Read in the final optional argument:

```
4112 \def\@ns@acrshort#1#2[#3]{%
4113   \glsdoifexists{#2}%
4114   {%
4115     \let\do@gls@link@checkfirsthyper\@gls@link@nocheckfirsthyper
4116     \let\glsifplural\@secondoftwo
4117     \let\glscapscase\@firstofthree
4118     \let\glsinsert\@empty
4119     \def\glscustomtext{%
4120       \acronymfont{\glentryshort{#2}}#3%
4121     }%
4122     \@gls@link[#1]{#2}{\csname gls@glstype @entryfmt\endcsname}%
4123   }%
4124   \glspostlinkhook
4125 }
```

Call \@gls@link Note that \@gls@link sets \glstype.

```
4122   \@gls@link[#1]{#2}{\csname gls@glstype @entryfmt\endcsname}%
4123 }%
4124 \glspostlinkhook
4125 }
```

\Acrshort

```
4126 \newrobustcmd*{\Acrshort}{\@gls@hyp@opt\@ns@Acrshort}
```

Define the un-starred form. Need to determine if there is a final optional argument

```
4127 \newcommand*{\ns@Acrshort}[2][\%
4128   \new@ifnextchar[\@Acrshort{#1}{#2}]{\@Acrshort{#1}{#2}[]}%
4129 }
```

Read in the final optional argument:

```
4130 \def\@Acrshort#1#2[#3]{%
4131   \glsdoifexists{#2}%
4132   {%
4133     \let\do@gl@link@checkfirsthyper\@gl@link@nocheckfirsthyper
4134     \def\glslabel{#2}%
4135     \let\glsifplural\@secondoftwo
4136     \let\glscapscase\@secondofthree
4137     \let\glsinsert\@empty
4138     \def\glscustomtext{%
4139       \acronymfont{\Glsentryshort{#2}}#3%
4140     }%
```

Call \@gl@link Note that \@gl@link sets \glstype.

```
4141   \@gl@link[#1]{#2}{\csname gls@\glstype @entryfmt\endcsname}%
4142   }%
4143   \glspostlinkhook
4144 }
```

\ACRshort

```
4145 \newrobustcmd*{\ACRshort}{\@gl@hyp@opt\ns@ACRshort}
```

Define the un-starred form. Need to determine if there is a final optional argument

```
4146 \newcommand*{\ns@ACRshort}[2][\%
4147   \new@ifnextchar[\@ACRshort{#1}{#2}]{\@ACRshort{#1}{#2}[]}%
4148 }
```

Read in the final optional argument:

```
4149 \def\@ACRshort#1#2[#3]{%
4150   \glsdoifexists{#2}%
4151   {%
4152     \let\do@gl@link@checkfirsthyper\@gl@link@nocheckfirsthyper
4153     \def\glslabel{#2}%
4154     \let\glsifplural\@secondoftwo
4155     \let\glscapscase\@thirdofthree
4156     \let\glsinsert\@empty
4157     \def\glscustomtext{%
4158       \mfirstucMakeUppercase{\acronymfont{\Glsentryshort{#2}}#3}%
4159     }%
```

Call \@gls@link Note that \@gls@link sets \glstype.

```
4160   \@gls@link[#1]{#2}{\csname gls@\glstype @entryfmt\endcsname}%
4161   }%

4162   \glspostlinkhook
4163 }
```

Short plural:

\acrshortpl

```
4164 \newrobustcmd*{\acrshortpl}{\@gls@hyp@opt\@ns@acrshortpl}
```

Define the un-starred form. Need to determine if there is a final optional argument

```
4165 \newcommand*{\ns@acrshortpl}[2] [] {%
4166   \new@ifnextchar[{\@acrshortpl{#1}{#2}}{\@acrshortpl{#1}{#2} []}%
4167 }
```

Read in the final optional argument:

```
4168 \def\@acrshortpl#1#2[#3] {%
4169   \glsdoifexists{#2}%
4170   {%

4171   \let\do@gls@link@checkfirsthyper\@gls@link@nocheckfirsthyper

4172   \def\glslabel{#2}%
4173   \let\glsifplural\@firstoftwo
4174   \let\glscapscase\@firstofthree
4175   \let\glsinsert\@empty
4176   \def\glscustomtext{%
4177     \acronymfont{\glsentryshortpl{#2}}#3%
4178   }%
```

Call \@gls@link Note that \@gls@link sets \glstype.

```
4179   \@gls@link[#1]{#2}{\csname gls@\glstype @entryfmt\endcsname}%
4180   }%

4181   \glspostlinkhook
4182 }
```

\Acrshortpl

```
4183 \newrobustcmd*{\Acrshortpl}{\@gls@hyp@opt\@ns@Acrshortpl}
```

Define the un-starred form. Need to determine if there is a final optional argument

```
4184 \newcommand*{\ns@Acrshortpl}[2] [] {%
4185   \new@ifnextchar[{\@Acrshortpl{#1}{#2}}{\@Acrshortpl{#1}{#2} []}%
4186 }
```

Read in the final optional argument:

```
4187 \def\@Acrshortpl#1#2[#3] {%
4188   \glsdoifexists{#2}%
4189   {%
```

```

4190 \let\do@gl@link@checkfirsthyper\@gl@link@nocheckfirsthyper

4191 \def\glslabel{#2}%
4192 \let\gl@sifplural\@firstoftwo
4193 \let\glscapscase\@secondofthree
4194 \let\gl$insert\@empty
4195 \def\glscustomtext{%
4196 \acronymfont{\Glentryshortpl{#2}}#3%
4197 }%

```

Call \@gl@link Note that \@gl@link sets \glstype.

```

4198 \@gl@link[#1]{#2}{\csname gls@\glstype @entryfmt\endcsname}%
4199 }%

```

```

4200 \glspostlinkhook
4201 }

```

\ACRshortpl

```

4202 \newrobustcmd*{\ACRshortpl}{\@gl@hyp@opt\@ns@ACRshortpl}

```

Define the un-starred form. Need to determine if there is a final optional argument

```

4203 \newcommand*{\ns@ACRshortpl}[2][{}]{%
4204 \new@ifnextchar[{\@ACRshortpl{#1}{#2}}{\@ACRshortpl{#1}{#2}[]}%
4205 }

```

Read in the final optional argument:

```

4206 \def\@ACRshortpl#1#2[#3]{%
4207 \gl@sdoifexists{#2}%
4208 {%
4209 \let\do@gl@link@checkfirsthyper\@gl@link@nocheckfirsthyper

4210 \def\glslabel{#2}%
4211 \let\gl@sifplural\@firstoftwo
4212 \let\glscapscase\@thirdofthree
4213 \let\gl$insert\@empty
4214 \def\glscustomtext{%
4215 \mfirstucMakeUppercase{\acronymfont{\Glentryshortpl{#2}}#3}%
4216 }%

```

Call \@gl@link Note that \@gl@link sets \glstype.

```

4217 \@gl@link[#1]{#2}{\csname gls@\glstype @entryfmt\endcsname}%
4218 }%

```

```

4219 \glspostlinkhook
4220 }

```

\acrlong

```

4221 \newrobustcmd*{\acrlong}{\@gl@hyp@opt\@ns@acrlong}

```

Define the un-starred form. Need to determine if there is a final optional argument

```
4222 \newcommand*{\ns@acrlong}[2][{}]{%
4223   \new@ifnextchar[{\@acrlong{#1}{#2}}{\@acrlong{#1}{#2}[]}%
4224 }
```

Read in the final optional argument:

```
4225 \def\@acrlong#1#2[#3]{%
4226   \glsdoifexists{#2}%
4227   {%
4228     \let\do@gl@link@checkfirsthyper\@gl@link@nocheckfirsthyper
4229     \def\glslabel{#2}%
4230     \let\glsifplural\@secondoftwo
4231     \let\glscapscase\@firstofthree
4232     \let\glsinsert\@empty
```

Bug fix v4.02 removed \acronymfont from \glscustomtext (\acronymfont only designed for short form).

```
4233   \def\glscustomtext{%
4234     \glstrylong{#2}#3%
4235   }%
```

Call \@gl@link Note that \@gl@link sets \glstype.

```
4236   \@gl@link[#1]{#2}{\csname gls@\glstype @entryfmt\endcsname}%
4237   }%
4238   \glspostlinkhook
4239 }
```

\Acrlong

```
4240 \newrobustcmd*{\Acrlong}{\@gl@hyp@opt\ns@Acrlong}
```

Define the un-starred form. Need to determine if there is a final optional argument

```
4241 \newcommand*{\ns@Acrlong}[2][{}]{%
4242   \new@ifnextchar[{\@Acrlong{#1}{#2}}{\@Acrlong{#1}{#2}[]}%
4243 }
```

Read in the final optional argument:

```
4244 \def\@Acrlong#1#2[#3]{%
4245   \glsdoifexists{#2}%
4246   {%
4247     \let\do@gl@link@checkfirsthyper\@gl@link@nocheckfirsthyper
4248     \def\glslabel{#2}%
4249     \let\glsifplural\@secondoftwo
4250     \let\glscapscase\@secondofthree
4251     \let\glsinsert\@empty
```


Bug fix v4.02 removed \acronymfont from \glscustomtext (\acronymfont only designed for short form).

```
4252 \def\glscustomtext{%
4253 \Glsentrylong{#2}#3%
4254 }%
```

Call \@gls@link. Note that \@gls@link sets \glstype.

```
4255 \@gls@link[#1]{#2}{\csname gls\glstype @entryfmt\endcsname}%
4256 }%

4257 \glspostlinkhook
4258 }
```

\ACRlong

```
4259 \newrobustcmd*{\ACRlong}{\@gls@hyp@opt\ns@ACRlong}
```

Define the un-starred form. Need to determine if there is a final optional argument

```
4260 \newcommand*{\ns@ACRlong}[2][\%]
4261 \new@ifnextchar[{\@ACRlong{#1}{#2}}{\@ACRlong{#1}{#2}[]}]%
4262 }
```

Read in the final optional argument:

```
4263 \def\@ACRlong#1#2[#3]{%
4264 \glstoifexists{#2}%
4265 {%
4266 \let\do@gls@link@checkfirsthyper\@gls@link@nocheckfirsthyper

4267 \def\glslabel{#2}%
4268 \let\glsifplural\@secondoftwo
4269 \let\glscapscase\@thirdofthree
4270 \let\glsinsert\@empty
```

Bug fix v4.02 removed \acronymfont from \glscustomtext (\acronymfont only designed for short form).

```
4271 \def\glscustomtext{%
4272 \mfirstucMakeUppercase{\Glsentrylong{#2}#3}%
4273 }%
```

Call \@gls@link. Note that \@gls@link sets \glstype.

```
4274 \@gls@link[#1]{#2}{\csname gls\glstype @entryfmt\endcsname}%
4275 }%

4276 \glspostlinkhook
4277 }
```

Short plural:

\acrlongpl

```
4278 \newrobustcmd*{\acrlongpl}{\@gls@hyp@opt\ns@acrlongpl}
```

Define the un-starred form. Need to determine if there is a final optional argument

```
4279 \newcommand*{\ns@acrlongpl}[2][\%
4280   \new@ifnextchar[\@acrlongpl{#1}{#2}]{\@acrlongpl{#1}{#2}[]}%
4281 }
```

Read in the final optional argument:

```
4282 \def\@acrlongpl#1#2[#3]{%
4283   \glsdoifexists{#2}%
4284   {%
4285     \let\do@gl@link@checkfirsthyper\@gl@link@nocheckfirsthyper
4286     \def\glslabel{#2}%
4287     \let\glsifplural\@firstoftwo
4288     \let\glscapscase\@firstofthree
4289     \let\glsinsert\@empty
```

Bug fix v4.02 removed \acronymfont from \glscustomtext (\acronymfont only designed for short form).

```
4290   \def\glscustomtext{%
4291     \glsentrylongpl{#2}#3%
4292   }%
```

Call \@gl@link. Note that \@gl@link sets \glstype.

```
4293   \@gl@link[#1]{#2}{\csname gls@\glstype @entryfmt\endcsname}%
4294   }%
4295   \glspostlinkhook
4296 }
```

\Acrlongpl

```
4297 \newrobustcmd*{\Acrlongpl}{\@gl@hyp@opt\ns@Acrlongpl}
```

Define the un-starred form. Need to determine if there is a final optional argument

```
4298 \newcommand*{\ns@Acrlongpl}[2][\%
4299   \new@ifnextchar[\@Acrlongpl{#1}{#2}]{\@Acrlongpl{#1}{#2}[]}%
4300 }
```

Read in the final optional argument:

```
4301 \def\@Acrlongpl#1#2[#3]{%
4302   \glsdoifexists{#2}%
4303   {%
4304     \let\do@gl@link@checkfirsthyper\@gl@link@nocheckfirsthyper
4305     \def\glslabel{#2}%
4306     \let\glsifplural\@firstoftwo
4307     \let\glscapscase\@secondofthree
4308     \let\glsinsert\@empty
```

Bug fix v4.02 removed \acronymfont from \glscustomtext (\acronymfont only designed for short form).

```
4309 \def\glscustomtext{%
4310 \Glsentrylongpl{#2}#3%
4311 }%
```

Call \@gls@link. Note that \@gls@link sets \glstype.

```
4312 \@gls@link[#1]{#2}{\csname gls@\glstype @entryfmt\endcsname}%
4313 }%

4314 \glspostlinkhook
4315 }
```

\ACRlongpl

```
4316 \newrobustcmd*{\ACRlongpl}{\@gls@hyp@opt\@ns@ACRlongpl}
```

Define the un-starred form. Need to determine if there is a final optional argument

```
4317 \newcommand*{\ns@ACRlongpl}[2][{}]{%
4318 \new@ifnextchar[{\@ACRlongpl{#1}{#2}}{\@ACRlongpl{#1}{#2}[]}%
4319 }
```

Read in the final optional argument:

```
4320 \def\@ACRlongpl#1#2[#3]{%
4321 \glstoifexists{#2}%
4322 {%
4323 \let\do@gls@link@checkfirsthyper\@gls@link@nocheckfirsthyper

4324 \def\glslabel{#2}%
4325 \let\glsifplural\@firstoftwo
4326 \let\glsupcase\@thirdofthree
4327 \let\glsinsert\@empty
```

Bug fix v4.02 removed \acronymfont from \glscustomtext (\acronymfont only designed for short form).

```
4328 \def\glscustomtext{%
4329 \mfirstucMakeUppercase{\Glsentrylongpl{#2}#3}%
4330 }%
```

Call \@gls@link. Note that \@gls@link sets \glstype.

```
4331 \@gls@link[#1]{#2}{\csname gls@\glstype @entryfmt\endcsname}%
4332 }%

4333 \glspostlinkhook
4334 }
```

Displaying entry details without adding information to the glossary

These commands merely display entry information without adding entries in the associated file or having hyperlinks.

`gls@entry@field` Generic version.

```
\@gls@entry@field{\<label>}{\<field>}
```

```
4335 \newcommand*{\@gls@entry@field}[2]{%
4336   \csname glo@glsdetoklabel{#1}@#2\endcsname
4337 }
```

`glsletentryfield`

```
\glsletentryfield{\<cs>}{\<label>}{\<field>}
```

```
4338 \newcommand*{\glsletentryfield}[3]{%
4339   \letcs{#1}{glo@glsdetoklabel{#2}@#3}%
4340 }
```

`Gls@entry@field` Generic first letter uppercase version.

```
\@Gls@entry@field{\<label>}{\<field>}
```

```
4341 \newcommand*{\@Gls@entry@field}[2]{%
4342   \glsdoifexistsordo{#1}%
4343   {%
4344     \letcs\@glo@text{glo@glsdetoklabel{#1}@#2}%
4345     \ifdef\@glo@text
4346     {%
4347       \xmakefirstuc{\@glo@text}%
4348     }%
4349     {%
4350       ??\PackageError{glossaries}{The field ‘#2’ doesn’t exist for glossary
4351       entry ‘\glsdetoklabel{#1}’}{Check you have correctly spelt the entry
4352       label and the field name}%
4353     }%
4354   }%
4355   {%
4356     ??%
4357   }%
4358 }
```

Get the entry name (as specified by the name key when the entry was defined). The argument is the label associated with the entry. Note that unless you used `name=false` in the `sanitize` package option you may get unexpected results if the name key contains any commands.

```

\glsentryname
4359 \newcommand*{\glsentryname}[1]{\@Gls@entry@field{#1}{name}}

\Glsentryname
4360 \newrobustcmd*{\Glsentryname}[1]{%
4361   \@Gls@entryname{#1}%
4362 }

\@Gls@entryname This is a workaround in the event that the user defies the warning in the manual about not
                  using \Glsname or \Glsentryname with acronyms. First the default behaviour:
4363 \newcommand*{\@Gls@entryname}[1]{%
4364   \@Gls@entry@field{#1}{name}%
4365 }

ls@acentryname Now the behaviour when \setacronymstyle is used:
4366 \newcommand*{\@Gls@acentryname}[1]{%
4367   \ifglshaslong{#1}%
4368   {%
4369     \letcs\@glo@text{glo@\glsdetoklabel{#1}@name}%
4370     \expandafter\@gls@getbody\@glo@text{}\@nil
4371     \expandafter\ifx\@gls@body\glsentrylong\relax
4372       \expandafter\Glsentrylong\@gls@rest
4373     \else
4374       \expandafter\ifx\@gls@body\glsentryshort\relax
4375         \expandafter\Glsentryshort\@gls@rest
4376       \else
4377         \expandafter\ifx\@gls@body\acronymfont\relax
          Temporarily make \glsentryshort behave like \Glsentryshort. (This is on the assump-
          tion that the argument of \acronymfont is \glsentryshort{\langle label \rangle}, as that's the behaviour
          of the predefined acronym styles.) This is scoped to localise the effect of the assignment.
4378         {%
4379           \let\glsentryshort\Glsentryshort
4380           \@glo@text
4381         }%
4382       \else
4383         \xmakefirstuc{\@glo@text}%
4384       \fi
4385     \fi
4386   \fi
4387 }%
4388 {%
  Not an acronym
4389   \@Gls@entry@field{#1}{name}%
4390 }%
4391 }

```

Get the entry description (as specified by the description when the entry was defined). The argument is the label associated with the entry. Note that unless you used `description=false` in the `sanitize` package option you may get unexpected results if the description key contained any commands.

`\glentrydesc`

```
4392 \newcommand*{\glentrydesc}[1]{\@gls@entry@field{#1}{desc}}
```

`\Glsentrydesc`

```
4393 \newrobustcmd*{\Glsentrydesc}[1]{%
4394   \@Gls@entry@field{#1}{desc}%
4395 }
```

Plural form:

`entrydescplural`

```
4396 \newcommand*{\glentrydescplural}[1]{%
4397   \@gls@entry@field{#1}{descplural}%
4398 }
```

`entrydescplural`

```
4399 \newrobustcmd*{\Glsentrydescplural}[1]{%
4400   \@Gls@entry@field{#1}{descplural}%
4401 }
```

Get the entry text, as specified by the text key when the entry was defined. The argument is the label associated with the entry:

`\glentrytext`

```
4402 \newcommand*{\glentrytext}[1]{\@gls@entry@field{#1}{text}}
```

`\Glsentrytext`

```
4403 \newrobustcmd*{\Glsentrytext}[1]{%
4404   \@Gls@entry@field{#1}{text}%
4405 }
```

Get the plural form:

`\glentryplural`

```
4406 \newcommand*{\glentryplural}[1]{%
4407   \@gls@entry@field{#1}{plural}%
4408 }
```

`\Glsentryplural`

```
4409 \newrobustcmd*{\Glsentryplural}[1]{%
4410   \@Gls@entry@field{#1}{plural}%
4411 }
```

Get the symbol associated with this entry. The argument is the label associated with the entry.

`\glsentrysymbol`

```
4412 \newcommand*{\glsentrysymbol}[1]{%
4413   \@gls@entry@field{#1}{symbol}%
4414 }
```

`\Glsentrysymbol`

```
4415 \newrobustcmd*{\Glsentrysymbol}[1]{%
4416   \@Gls@entry@field{#1}{symbol}%
4417 }
```

Plural form:

`trysymbolplural`

```
4418 \newcommand*{\glsentrysymbolplural}[1]{%
4419   \@gls@entry@field{#1}{symbolplural}%
4420 }
```

`trysymbolplural`

```
4421 \newrobustcmd*{\Glsentrysymbolplural}[1]{%
4422   \@Gls@entry@field{#1}{symbolplural}%
4423 }
```

Get the entry text to be used when the entry is first used in the document (as specified by the first key when the entry was defined).

`\glsentryfirst`

```
4424 \newcommand*{\glsentryfirst}[1]{%
4425   \@gls@entry@field{#1}{first}%
4426 }
```

`\Glsentryfirst`

```
4427 \newrobustcmd*{\Glsentryfirst}[1]{%
4428   \@Gls@entry@field{#1}{first}%
4429 }
```

Get the plural form (as specified by the firstplural key when the entry was defined).

`ntryfirstplural`

```
4430 \newcommand*{\glsentryfirstplural}[1]{%
4431   \@gls@entry@field{#1}{firstpl}%
4432 }
```

`ntryfirstplural`

```
4433 \newrobustcmd*{\Glsentryfirstplural}[1]{%
4434   \@Gls@entry@field{#1}{firstpl}%
4435 }
```

sentrytitlecase

```
4436 \newrobustcmd*{\@glsentrytitlecase}[2]{%
4437   \glsfieldfetch{#1}{#2}{\@gls@value}%
4438   \xcapitalisewords{\@gls@value}%
4439 }
4440 \ifdef\texorpdfstring
4441 {
4442   \newcommand*{\glsentrytitlecase}[2]{%
4443     \texorpdfstring
4444       {\@glsentrytitlecase{#1}{#2}}%
4445       {\@gls@entry@field{#1}{#2}}%
4446   }
4447 }
4448 {
4449   \newcommand*{\glsentrytitlecase}[2]{\@glsentrytitlecase{#1}{#2}}
4450 }
```

Display the glossary type with which this entry is associated (as specified by the type key used when the entry was defined)

\glsentrytype

```
4451 \newcommand*{\glsentrytype}[1]{\@gls@entry@field{#1}{type}}
```

Display the sort text used for this entry. Note that the sort key is sanitize, so unexpected results may occur if the sort key contained commands.

\glsentrysort

```
4452 \newcommand*{\glsentrysort}[1]{%
4453   \@gls@entry@field{#1}{sort}%
4454 }
```

\glsentryuseri Get the first user key (as specified by the user1 when the entry was defined). The argument is the label associated with the entry.

```
4455 \newcommand*{\glsentryuseri}[1]{%
4456   \@gls@entry@field{#1}{useri}%
4457 }
```

\Glsentryuseri

```
4458 \newrobustcmd*{\Glsentryuseri}[1]{%
4459   \@Gls@entry@field{#1}{useri}%
4460 }
```

\glsentryuserii Get the second user key (as specified by the user2 when the entry was defined). The argument is the label associated with the entry.

```
4461 \newcommand*{\glsentryuserii}[1]{%
4462   \@gls@entry@field{#1}{userii}%
4463 }
```


\Glsentryuserii

```
4464 \newrobustcmd*{\Glsentryuserii}[1]{%
4465   \@Gls@entry@field{#1}{userii}%
4466 }
```

glsentryuseriii Get the third user key (as specified by the user3 when the entry was defined). The argument is the label associated with the entry.

```
4467 \newcommand*{\glsentryuseriii}[1]{%
4468   \@Gls@entry@field{#1}{useriii}%
4469 }
```

Glsentryuseriii

```
4470 \newrobustcmd*{\Glsentryuseriii}[1]{%
4471   \@Gls@entry@field{#1}{useriii}%
4472 }
```

\glsentryuseriv Get the fourth user key (as specified by the user4 when the entry was defined). The argument is the label associated with the entry.

```
4473 \newcommand*{\glsentryuseriv}[1]{%
4474   \@Gls@entry@field{#1}{useriv}%
4475 }
```

\Glsentryuseriv

```
4476 \newrobustcmd*{\Glsentryuseriv}[1]{%
4477   \@Gls@entry@field{#1}{useriv}%
4478 }
```

\glsentryuserv Get the fifth user key (as specified by the user5 when the entry was defined). The argument is the label associated with the entry.

```
4479 \newcommand*{\glsentryuserv}[1]{%
4480   \@Gls@entry@field{#1}{userv}%
4481 }
```

\Glsentryuserv

```
4482 \newrobustcmd*{\Glsentryuserv}[1]{%
4483   \@Gls@entry@field{#1}{userv}%
4484 }
```

\glsentryuservi Get the sixth user key (as specified by the user6 when the entry was defined). The argument is the label associated with the entry.

```
4485 \newcommand*{\glsentryuservi}[1]{%
4486   \@Gls@entry@field{#1}{uservi}%
4487 }
```

\Glsentryuservi

```
4488 \newrobustcmd*{\Glsentryuservi}[1]{%
4489   \@Gls@entry@field{#1}{uservi}%
4490 }
```

`\glsentryshort` Get the short key (as specified by the short the entry was defined). The argument is the label associated with the entry.

```
4491 \newcommand*{\glsentryshort}[1]{\@gls@entry@field{#1}{short}}
```

`\Glsentryshort`

```
4492 \newrobustcmd*{\Glsentryshort}[1]{%
4493   \@Gls@entry@field{#1}{short}%
4494 }
```

`\glsentryshortpl` Get the short plural key (as specified by the shortplural the entry was defined). The argument is the label associated with the entry.

```
4495 \newcommand*{\glsentryshortpl}[1]{\@gls@entry@field{#1}{shortpl}}
```

`\Glsentryshortpl`

```
4496 \newrobustcmd*{\Glsentryshortpl}[1]{%
4497   \@Gls@entry@field{#1}{shortpl}%
4498 }
```

`\glsentrylong` Get the long key (as specified by the long the entry was defined). The argument is the label associated with the entry.

```
4499 \newcommand*{\glsentrylong}[1]{\@gls@entry@field{#1}{long}}
```

`\Glsentrylong`

```
4500 \newrobustcmd*{\Glsentrylong}[1]{%
4501   \@Gls@entry@field{#1}{long}%
4502 }
```

`\glsentrylongpl` Get the long plural key (as specified by the longplural the entry was defined). The argument is the label associated with the entry.

```
4503 \newcommand*{\glsentrylongpl}[1]{\@gls@entry@field{#1}{longpl}}
```

`\Glsentrylongpl`

```
4504 \newrobustcmd*{\Glsentrylongpl}[1]{%
4505   \@Gls@entry@field{#1}{longpl}%
4506 }
```

Short cut macros to access full form:

`\glsentryfull`

```
4507 \newcommand*{\glsentryfull}[1]{%
4508   \acrfullformat{\glsentrylong{#1}}{\acronymfont{\glsentryshort{#1}}}%
4509 }
```

`\Glsentryfull`

```
4510 \newrobustcmd*{\Glsentryfull}[1]{%
4511   \acrfullformat{\Glsentrylong{#1}}{\acronymfont{\glsentryshort{#1}}}%
4512 }
```

`\glsentryfullpl`

```
4513 \newcommand*{\glsentryfullpl}[1]{%
4514   \acrfullformat{\glsentrylongpl{#1}}{\acronymfont{\glsentryshortpl{#1}}}%
4515 }
```

`\Glsentryfullpl`

```
4516 \newrobustcmd*{\Glsentryfullpl}[1]{%
4517   \acrfullformat{\Glsentrylongpl{#1}}{\acronymfont{\glsentryshortpl{#1}}}%
4518 }
```

`entrynumberlist` Displays the number list as is.

```
4519 \newcommand*{\glsentrynumberlist}[1]{%
4520   \glsdoifexists{#1}%
4521   {%
4522     \@gls@entry@field{#1}{numberlist}%
4523   }%
4524 }
```

`splaynumberlist` Formats the number list for the given entry label. Doesn't work with hyperref.

```
4525 \@ifpackageloaded{hyperref} {%
4526   \newcommand*{\glsdisplaynumberlist}[1]{%
4527     \GlossariesWarning
4528     {%
4529       \string\glsdisplaynumberlist\space
4530       doesn't work with hyperref.^^JUsing
4531       \string\glsentrynumberlist\space instead%
4532     }%
4533     \glsentrynumberlist{#1}%
4534   }%
4535 }%
4536 {%
4537   \newcommand*{\glsdisplaynumberlist}[1]{%
4538     \glsdoifexists{#1}%
4539     {%
4540       \bgroup

4541       \edef\@glo@label{\glsdetoklabel{#1}}%
4542       \let\@org@glsglsnumberformat\glsglsnumberformat
4543       \def\glsglsnumberformat##1{##1}%
4544       \protected@edef\the@numberlist{%
4545         \csname glo@\@glo@label @numberlist\endcsname}%
4546       \def\@gls@numlist@sep{%
4547       \def\@gls@numlist@nextsep{%
4548       \def\@gls@numlist@lastsep{%
4549       \def\@gls@thislist{%
4550       \def\@gls@donext@def{%
4551       \renewcommand\do[1]{%
4552         \protected@edef\@gls@thislist{%
4553         \@gls@thislist
```

```

4554         \noexpand\@gls@numlist@sep
4555         ##1%
4556     }%
4557     \let\@gls@numlist@sep\@gls@numlist@nextsep
4558     \def\@gls@numlist@nextsep{\glsnumlistsep}%
4559     \@gls@donext@def
4560     \def\@gls@donext@def{%
4561         \def\@gls@numlist@lastsep{\glsnumlistlastsep}%
4562     }%
4563 }%
4564 \expandafter \glsnumlistparser \expandafter{\the@numberlist}%
4565 \let\@gls@numlist@sep\@gls@numlist@lastsep
4566 \@gls@thislist
4567 \egroup
4568 }%
4569 }
4570 }

```

`\glsnumlistsep`

```

4571 \newcommand*{\glsnumlistsep}{, }

```

`\glsnumlistlastsep`

```

4572 \newcommand*{\glsnumlistlastsep}{ \& }

```

`\gls hyperlink`

Provide a hyperlink to a glossary entry without adding information to the glossary file. The entry needs to be added using a command like `\gls link` or `\gls add` to ensure that the target is defined. The first (optional) argument specifies the link text. The entry name is used by default. The second argument is the entry label.

```

4573 \newcommand*{\gls hyperlink}[2][\glsentrytext{\@glo@label}]{%
4574   \def\@glo@label{#2}%
4575   \@gls link{\glo link prefix\glsdetoklabel{#2}}{#1}}

```

1.12 Adding an entry to the glossary without generating text

The following keys are provided for `\gls add` and `\gls add all`:

```

4576 \define@key{gloss add}{counter}{\def\@gls@counter{#1}}
4577 \define@key{gloss add}{format}{\def\@gls number format{#1}}

```

This key is only used by `\gls add all`:

```

4578 \define@key{gloss add}{types}{\def\@glo@type{#1}}

```

`\gls add[<options>]{<label>}`

Add a term to the glossary without generating any link text. The optional argument indicates which counter to use, and how to format it (using a key-value list) the second argument is the entry label. Note that *<options>* only has two keys: counter and format (the types key will be ignored).

`\glsadd`

```
4579 \newrobustcmd*{\glsadd}[2] [] {%
```

Need to move to horizontal mode if not already in it, but only if not in preamble.

```
4580 \@gls@adjustmode
```

```
4581 \glsdoifexists{#2}%
```

```
4582 {%
```

```
4583 \def\@glsnumberformat{glsnumberformat}%
```

```
4584 \edef\@gls@counter{\csname glo@\glsdetoklabel{#2}@counter\endcsname}%
```

```
4585 \setkeys{glossadd}{#1}%
```

Store the entry's counter in `\theglsentrycounter`

```
4586 \@gls@saveentrycounter
```

This should use `\@@do@wrglossary` rather than `\do@wrglossary` since the whole point of `\glsadd` is to add a line to the glossary.

```
4587 \@@do@wrglossary{#2}%
```

```
4588 }%
```

```
4589 }
```

`@gls@adjustmode`

```
4590 \newcommand*{\@gls@adjustmode}{}%
```

```
4591 \AtBeginDocument{\renewcommand*{\@gls@adjustmode}{\ifvmode\mbox{}\fi}}
```

`\glsaddall[<option list>]`

Add all terms defined for the listed glossaries (without displaying any text). If `types` key is omitted, apply to all glossary types.

`\glsaddall`

```
4592 \newrobustcmd*{\glsaddall}[1] [] {%
```

```
4593 \edef\@glo@type{\@glo@types}%
```

```
4594 \setkeys{glossadd}{#1}%
```

```
4595 \forallglsentries[\@glo@type]{\@glo@entry}{%
```

```
4596 \glsadd[#1]{\@glo@entry}%
```

```
4597 }%
```

```
4598 }
```

`\glsaddallunused`

`\glsaddallunused[<glossary type>]`

Add all used terms defined for the listed glossaries (without displaying any text). If optional argument is omitted, apply to all glossary types. This should typically go at the end of the document.

```
4599 \newrobustcmd*{\glsaddallunused}[1] [\@glo@types] {%
```

```
4600 \forallglsentries[#1]{\@glo@entry}%
```

```
4601 {%
```

```
4602 \ifglsused{\@glo@entry}{\glsadd[format=glsignore]{\@glo@entry}}%
```

```
4603 }%
4604 }
```

`\glsignore`

```
4605 \newcommand*{\glsignore}[1]{}
```

1.13 Creating associated files

The `\writeist` command creates the associated customized `.ist` makeindex style file. While defining this command, some characters have their catcodes temporarily changed to ensure they get written to the `.ist` file correctly. The makeindex actual character (usually `@`) is redefined to be a `?`, to allow internal commands to be written to the glossary file output file.

The special characters are stored in `\@gls@actualchar`, `\@gls@encapchar`, `\@gls@levelchar` and `\@gls@quotechar` to make them easier to use later, but don't change these values, because the characters are encoded in the command definitions that are used to escape the special characters (which means that the user no longer needs to worry about makeindex special characters).

The symbols and numbers label for group headings are hardwired into the `.ist` file as `glssymbols` and `glsnumbers`, the group titles can be translated (so that `\glssymbolsgroupname` replaces `glssymbols` and `\glsnumbersgroupname` replaces `glsnumbers`) using the command `\glsgetgrouptitle` which is defined in `.` This is done to prevent any problem characters in `\glssymbolsgroupname` and `\glsnumbersgroupname` from breaking hyperlinks.

`\glsopenbrace` Define `\glsopenbrace` to make it easier to write an opening brace to a file.

```
4606 \edef\glsopenbrace{\expandafter\@gobble\string\{}
```

`\glsclosebrace` Define `\glsclosebrace` to make it easier to write an opening brace to a file.

```
4607 \edef\glsclosebrace{\expandafter\@gobble\string\}}
```

`\glsbackslash` Define `\glsbackslash` to make it easier to write a backslash to a file.

```
4608 \edef\glsbackslash{\expandafter\@gobble\string\\}
```

`\glsquote` Define command that makes it easier to write quote marks to a file in the event that the double quote character has been made active.

```
4609 \edef\glsquote#1{\string"#1\string"}
```

`\glsperscentchar` Define `\glsperscentchar` to make it easier to write a percent character to a file.

```
4610 \edef\glsperscentchar{\expandafter\@gobble\string\%}
```

`\glstildechar` Define `\glstildechar` to make it easier to write a tilde character to a file.

```
4611 \edef\glstildechar{\string~}
```

`@glsfirstletter` Define the first letter to come after the digits 0,...,9. Only required for xindy.

```
4612 \ifglsxindy
```

```
4613 \newcommand*{\@glsfirstletter}{A}
```

```
4614 \fi
```

letterAfterDigits Sets the first letter to come after the digits 0,...,9. The starred version sanitizes.

```

4615 \newcommand*{\GlsSetXdyFirstLetterAfterDigits}{%
4616   \@ifstar\s@GlsSetXdyFirstLetterAfterDigits\@GlsSetXdyFirstLetterAfterDigits}
4617 \ifglsxindy
4618   \newcommand*{\@GlsSetXdyFirstLetterAfterDigits}[1]{%
4619     \renewcommand*{\@glsfirstletter}{#1}}
4620   \newcommand*{\s@GlsSetXdyFirstLetterAfterDigits}[1]{%
4621     \renewcommand*{\@glsfirstletter}{#1}%
4622     \@onelevel@sanitize\@glsfirstletter
4623   }
4624 \else
4625   \newcommand*{\@GlsSetXdyFirstLetterAfterDigits}[1]{%
4626     \glsnoxywarning\GlsSetXdyFirstLetterAfterDigits}
4627   \newcommand*{\s@GlsSetXdyFirstLetterAfterDigits}{%
4628     \@GlsSetXdyFirstLetterAfterDigits
4629   }
4630 \fi

```

numbergrouporder Specifies the order of the number group.

```

4631 \ifglsxindy
4632   \newcommand*{\@xdynumbergrouporder}{:before \string"\@glsfirstletter\string"}
4633 \fi

```

numberGroupOrder Sets the relative location of the number group. The starred version sanitizes.

```

4634 \newcommand*{\GlsSetXdyNumberGroupOrder}[1]{%
4635   \@ifstar\s@GlsSetXdyNumberGroupOrder\@GlsSetXdyNumberGroupOrder
4636 }
4637 \ifglsxindy
4638   \newcommand*{\@GlsSetXdyNumberGroupOrder}[1]{%
4639     \renewcommand*{\@xdynumbergrouporder}{#1}%
4640   }
4641   \newcommand*{\s@GlsSetXdyNumberGroupOrder}[1]{%
4642     \renewcommand*{\@xdynumbergrouporder}{#1}%
4643     \@onelevel@sanitize\@xdynumbergrouporder
4644   }
4645 \else
4646   \newcommand*{\@GlsSetXdyNumberGroupOrder}[1]{%
4647     \glsnoxywarning\GlsSetXdyNumberGroupOrder}
4648   \newcommand*{\s@GlsSetXdyNumberGroupOrder}{%
4649     \@GlsSetXdyNumberGroupOrder}
4650 \fi

```

\@glsminrange Define the minimum number of successive location references to merge into a range.

```

4651 \newcommand*{\@glsminrange}{2}

```

xyMinRangeLength Set the minimum range length. The value must either be none or a positive integer. The glossaries package doesn't check if the argument is valid, that is left to xindy.

```

4652 \ifglsxindy

```

```

4653 \newcommand*{\GlsSetXdyMinRangeLength}[1]{%
4654 \renewcommand*{\@glsminrange}{#1}}
4655 \else
4656 \newcommand*{\GlsSetXdyMinRangeLength}[1]{%
4657 \glsnnoxindywarning\GlsSetXdyMinRangeLength}
4658 \fi

```

\writeist

```

4659 \ifglsxindy
    Code to use if xindy is required.
4660 \def\writeist{%
    Define write register if not already defined
4661 \ifundef{\glswrite}{\newwrite\glswrite}{}%
    Update attributes list
4662 \@gls@addpredefinedattributes
    Open the file.
4663 \openout\glswrite=\istfilename
    Write header comment at the start of the file
4664 \write\glswrite{;; xindy style file created by the glossaries
4665 package}%
4666 \write\glswrite{;; for document '\jobname' on
4667 \the\year-\the\month-\the\day}%
    Specify the required styles
4668 \write\glswrite{^^J; required styles^^J}
4669 \@for\@xdystyle:=\@xdyrequiredstyles\do{%
4670 \ifx\@xdystyle\@empty
4671 \else
4672 \protected@write\glswrite{{(require
4673 \string"\@xdystyle.xdy\string")}}%
4674 \fi
4675 }%
    List the allowed attributes (possible values used by the format key)
4676 \write\glswrite{^^J%
4677 ; list of allowed attributes (number formats)^^J}%
4678 \write\glswrite{(define-attributes ((\@xdyattributes)))}%
    Define any additional alphabets
4679 \write\glswrite{^^J; user defined alphabets^^J}%
4680 \write\glswrite{\@xdyuseralphabets}%
    Define location classes.
4681 \write\glswrite{^^J; location class definitions^^J}%
    As from version 3.0, locations are now specified as {\<Hprefix>}{\<number>}, so need to add all
    possible combinations of location types.
4682 \@for\@gls@classI:=\@gls@xdy@locationlist\do{%

```


Case where $\langle Hprefix \rangle$ is empty:

```

4683 \protected@write\glswrite{}\{(define-location-class
4684 \string"\@gls@classI\string"^^J\space\space\space
4685 (
4686 :sep "{"
4687 \csname @gls@xdy@Lclass@\@gls@classI\endcsname\space
4688 :sep "}"
4689 )
4690 ^^J\space\space\space
4691 :min-range-length \@glsminrange^^J%
4692 )
4693 }%
```

Nested iteration over all classes:

```

4694 {%
4695 \@for\@gls@classII:=\@gls@xdy@locationlist\do{%
4696 \protected@write\glswrite{}\{(define-location-class
4697 \string"\@gls@classII-\@gls@classI\string"
4698 ^^J\space\space\space
4699 (
4700 :sep "{"
4701 \csname @gls@xdy@Lclass@\@gls@classII\endcsname\space
4702 :sep "{"
4703 \csname @gls@xdy@Lclass@\@gls@classI\endcsname\space
4704 :sep "}"
4705 )
4706 ^^J\space\space\space
4707 :min-range-length \@glsminrange^^J%
4708 )
4709 }%
4710 }%
4711 }%
4712 }%
```

User defined location classes (needs checking for new location format).

```

4713 \write\glswrite{^^J; user defined location classes}%
4714 \write\glswrite{\@xdyuserlocationdefs}%
```

Cross-reference class. (The unverified option is used as the cross-references are supplied using the list of labels along with the optional argument for `\glsseeformat` which xindy won't recognise.)

```

4715 \write\glswrite{^^J; define cross-reference class^^J}%
4716 \write\glswrite{(define-crossref-class \string"see\string"
4717 :unverified )}%
```

Define how cross-references should be displayed. This adds an empty set of braces after the cross-referencing information allowing for the final argument of `\glsseeformat` which gets ignored. (When using `makeindex` this final argument contains the location information which is not required.)

```

4718 \write\glswrite{(markup-crossref-list
```

```

4719      :class \string"see\string"^^J\space\space\space
4720      :open \string"\string\glsseeformat\string"
4721      :close \string"{\string"}}%

```

Provide hook to write extra material here (used by glossaries-extra to define a seealso class).

```

4722      \@xdycrossrefhook

```

List the order to sort the classes.

```

4723      \write\glswrite{^^J; define the order of the location classes}%
4724      \write\glswrite{(define-location-class-order
4725        (\@xdylocationclassorder))}%

```

Specify what to write to the start and end of the glossary file.

```

4726      \write\glswrite{^^J; define the glossary markup^^J}%

4727      \write\glswrite{(markup-index^^J\space\space\space
4728        :open \string"\string
4729        \glossarysection[\string\glossarytoctitle]{\string
4730        \glossarytitle}\string\glossarypreamble}%

```

Add all the xindy-only macro definitions (needed to prevent errors in the event that the user changes from xindy to makeindex)

```

4731      \@for\@this@ctr:=\@xdycounters\do{%
4732        {%
4733          \@for\@this@attr:=\@xdyattributelist\do{%
4734            \protected@write\glswrite{}{\string\providecommand*%
4735              \expandafter\string
4736              \csname glsX\@this@ctr X\@this@attr\endcsname[2]}%
4737            {%
4738              \string\setentrycounter
4739              [\expandafter\@gobble\string\#1]{\@this@ctr}%
4740              \expandafter\string
4741              \csname\@this@attr\endcsname
4742              {\expandafter\@gobble\string\#2}%
4743            }%
4744          }%
4745        }%
4746      }%
4747    }%

```

Add the end part of the open tag and the rest of the markup-index information:

```

4748      \write\glswrite{%
4749        \string\begin
4750        {theglossary}\string\glossaryheader\glstildechar n\string" ^^J\space
4751        \space\space:close \string"\glspercentchar\glstildechar n\string
4752        \end{theglossary}\string\glossarypostamble
4753        \glstildechar n\string" ^^J\space\space\space
4754        :tree)}}%

```

Specify what to put between letter groups

```

4755      \write\glswrite{(markup-letter-group-list
4756        :sep \string"\string\glsgroupskip\glstildechar n\string")}%

```

Specify what to put between entries

```
4757 \write\glswrite{(markup-indexentry
4758 :open \string\string\relax \string\glsresetentrylist
4759 \glstildechar n\string)}}%
```

Specify how to format entries

```
4760 \write\glswrite{(markup-locclass-list :open
4761 \string\glsopenbrace\string\glossaryentrynumbers
4762 \glsopenbrace\string\relax\space \string^^J\space\space\space
4763 :sep \string", \string"
4764 :close \string\glsclosebrace\glsclosebrace\string)}}%
```

Specify how to separate location numbers

```
4765 \write\glswrite{(markup-locref-list
4766 :sep \string\string\delimN\space\string)}}%
```

Specify how to indicate location ranges

```
4767 \write\glswrite{(markup-range
4768 :sep \string\string\delimR\space\string)}}%
```

Specify 2-page and 3-page suffixes, if defined. First, the values must be sanitized to write them explicitly.

```
4769 \@onelevel@sanitize\gls@suffixF
4770 \@onelevel@sanitize\gls@suffixFF
4771 \ifx\gls@suffixF\@empty
4772 \else
4773 \write\glswrite{(markup-range
4774 :close "\gls@suffixF" :length 1 :ignore-end)}}%
4775 \fi
4776 \ifx\gls@suffixFF\@empty
4777 \else
4778 \write\glswrite{(markup-range
4779 :close "\gls@suffixFF" :length 2 :ignore-end)}}%
4780 \fi
```

Specify how to format locations.

```
4781 \write\glswrite{^^J; define format to use for locations^^J}%
4782 \write\glswrite{@xdylocref}%
```

Specify how to separate letter groups.

```
4783 \write\glswrite{^^J; define letter group list format^^J}%
4784 \write\glswrite{(markup-letter-group-list
4785 :sep \string\string\glsgroupskip\glstildechar n\string)}}%
```

Define letter group headings.

```
4786 \write\glswrite{^^J; letter group headings^^J}%
4787 \write\glswrite{(markup-letter-group
4788 :open-head \string\string\glsgroupheading
4789 \glsopenbrace\string^^J\space\space\space
4790 :close-head \string\glsclosebrace\string)}}%
```

Define additional letter groups.

```
4791 \write\glswrite{^^J; additional letter groups^^J}%
4792 \write\glswrite{\@xdylettergroups}%
```

Define additional sort rules

```
4793 \write\glswrite{^^J; additional sort rules^^J}
4794 \write\glswrite{\@xdysortrules}%
```

Hook for any additional information:

```
4795 \@gls@writeisthook
```

Close the style file

```
4796 \closeout\glswrite
```

Suppress any further calls.

```
4797 \let\writeist\relax
4798 }
4799 \else
```

Code to use if makeindex is required.

```
4800 \edef\@gls@actualchar{\string?}
4801 \edef\@gls@encapchar{\string|}
4802 \edef\@gls@levelchar{\string!}
4803 \edef\@gls@quotechar{\string"}%
4804 \let\GlsSetQuote\gls@nosetquote
4805 \def\writeist{\relax
4806 \ifundef{\glswrite}{\newwrite\glswrite}{\relax
4807 \openout\glswrite=\istfilename
4808 \write\glswrite{\glspersentchar\space makeindex style file
4809 created by the glossaries package}
4810 \write\glswrite{\glspersentchar\space for document
4811 '\jobname' on \the\year-\the\month-\the\day}
4812 \write\glswrite{actual '\@gls@actualchar'}
4813 \write\glswrite{encap '\@gls@encapchar'}
4814 \write\glswrite{level '\@gls@levelchar'}
4815 \write\glswrite{quote '\@gls@quotechar'}
4816 \write\glswrite{keyword \string"\string\glossaryentry\string"}
4817 \write\glswrite{preamble \string"\string\glossarysection[\string
4818 \glossarytoctitle]{\string\glossarytitle}\string
4819 \glossarypreamble\string\n\string\begin{theglossary}\string
4820 \glossaryheader\string\n\string"}
4821 \write\glswrite{postamble \string"\string%\string\n\string
4822 \end{theglossary}\string\glossarypostamble\string\n
4823 \string"}
4824 \write\glswrite{group_skip \string"\string\glsgroupskip\string\n
4825 \string"}
4826 \write\glswrite{item_0 \string"\string%\string\n\string"}
4827 \write\glswrite{item_1 \string"\string%\string\n\string"}
4828 \write\glswrite{item_2 \string"\string%\string\n\string"}
4829 \write\glswrite{item_01 \string"\string%\string\n\string"}
4830 \write\glswrite{item_x1
```

```

4831     \string"\string\relax \string\glsresetentrylist\string\n
4832     \string"}
4833     \write\glswrite{item_12 \string"\string%\string\n\string"}
4834     \write\glswrite{item_x2
4835     \string"\string\relax \string\glsresetentrylist\string\n
4836     \string"}

4837     \write\glswrite{delim_0 \string"\string\{\string
4838     \glossaryentrynumbers\string\{\string\relax \string"}
4839     \write\glswrite{delim_1 \string"\string\{\string
4840     \glossaryentrynumbers\string\{\string\relax \string"}
4841     \write\glswrite{delim_2 \string"\string\{\string
4842     \glossaryentrynumbers\string\{\string\relax \string"}
4843     \write\glswrite{delim_t \string"\string\}\string\}\string"}
4844     \write\glswrite{delim_n \string"\string\delimN \string"}
4845     \write\glswrite{delim_r \string"\string\delimR \string"}
4846     \write\glswrite{headings_flag 1}
4847     \write\glswrite{heading_prefix
4848     \string"\string\glsgroupheading\string\{\string"}
4849     \write\glswrite{heading_suffix
4850     \string"\string\}\string\relax
4851     \string\glsresetentrylist \string"}
4852     \write\glswrite{symhead_positive \string"glssymbols\string"}
4853     \write\glswrite{numhead_positive \string"glslnumbers\string"}
4854     \write\glswrite{page_compositor \string"glscpositor\string"}
4855     \@gls@escbsdq\gls@suffixF
4856     \@gls@escbsdq\gls@suffixFF
4857     \ifx\gls@suffixF\@empty
4858     \else
4859     \write\glswrite{suffix_2p \string"\gls@suffixF\string"}
4860     \fi
4861     \ifx\gls@suffixFF\@empty
4862     \else
4863     \write\glswrite{suffix_3p \string"\gls@suffixFF\string"}
4864     \fi

```

Hook for any additional information:

```
4865     \@gls@writeisthook
```

Close the file and disable \writeist.

```

4866     \closeout\glswrite
4867     \let\writeist\relax
4868   }
4869 \fi

```

SetWriteIstHook Allow user to append information to the style file.

```

4870 \newcommand*{\GlsSetWriteIstHook}[1]{\renewcommand*{\@gls@writeisthook}{#1}}
4871 \@onlypremake\GlsSetWriteIstHook

```

ls@writeisthook

```
4872 \newcommand*{\@gls@writeisthook}{}
```

`\GlsSetQuote` Allow user to set the makeindex quote character. This is primarily for ngerman users who want to use makeindex's -g option.

```

4873 \ifglxindy
4874 \newcommand*{\GlsSetQuote}[1]{\glsnomakeindexwarning\GlsSetQuote}
4875 \newcommand*{\glsetnosetquote}[1]{\glsnomakeindexwarning\GlsSetQuote}
4876 \else
4877 \newcommand*{\GlsSetQuote}[1]{\edef\@gls@quotechar{\string#1}%

```

If German is in use, set the extra makeindex option so makeglossaries can pick it up.

```

4878 \ifpackageloaded{tracklang}%
4879 {%
4880 \IfTrackedLanguage{german}%
4881 {%
4882 \def\@gls@extramakeindexopts{-g}%
4883 }%
4884 }%
4885 }%
4886 {}%

```

Need to redefine `\@gls@checkquote`

```

4887 \edef\@gls@docheckquotedef{%
4888 \noexpand\def\noexpand\@gls@checkquote####1#1####2#1####3\noexpand\null{%
4889 \noexpand\@gls@tmpb=\noexpand\expandafter{\noexpand\@gls@checkedmkidx}%
4890 \noexpand\toks@={####1}%
4891 \noexpand\ifx\noexpand\null####2\noexpand\null
4892 \noexpand\ifx\noexpand\null####3\noexpand\null
4893 \noexpand\edef\noexpand\@gls@checkedmkidx{%
4894 \noexpand\the\noexpand\@gls@tmpb\noexpand\the\noexpand\toks@}%
4895 \noexpand\def\noexpand\@gls@checkquote{\noexpand\relax}%
4896 \noexpand\else
4897 \noexpand\edef\noexpand\@gls@checkedmkidx{%
4898 \noexpand\the\noexpand\@gls@tmpb\noexpand\the\noexpand\toks@
4899 \noexpand\@gls@quotechar\noexpand\@gls@quotechar
4900 \noexpand\@gls@quotechar\noexpand\@gls@quotechar}%
4901 \noexpand\def\noexpand\@gls@checkquote{%
4902 \noexpand\@gls@checkquote####3\noexpand\null}%
4903 \noexpand\fi
4904 \noexpand\else
4905 \noexpand\edef\noexpand\@gls@checkedmkidx{%
4906 \noexpand\the\noexpand\@gls@tmpb\noexpand\the\noexpand\toks@
4907 \noexpand\@gls@quotechar\noexpand\@gls@quotechar}%
4908 \noexpand\ifx\noexpand\null####3\noexpand\null
4909 \noexpand\def\noexpand\@gls@checkquote{%
4910 \noexpand\@gls@checkquote####2#1#1\noexpand\null}%
4911 \noexpand\else
4912 \noexpand\def\noexpand\@gls@checkquote{%
4913 \noexpand\@gls@checkquote####2#1####3\noexpand\null}%
4914 \noexpand\fi
4915 \noexpand\fi
4916 \noexpand\@gls@checkquote

```

```

4917 }%
4918 }%
4919 \@gls@docheckquotedef
4920 \edef\@gls@docheckquotedef{%
4921   \noexpand\renewcommand{\noexpand\@gls@checkmkidxchars}[1]{%
4922     \noexpand\def\noexpand\@gls@checkedmkidx{%
4923       \noexpand\expandafter\noexpand\@gls@checkquote####1\noexpand\@nil
4924       #1#1\noexpand\null
4925       \noexpand\expandafter\noexpand\@gls@updatechecked
4926       \noexpand\@gls@checkedmkidx{####1}%
4927       \noexpand\def\noexpand\@gls@checkedmkidx{%
4928         \noexpand\expandafter\noexpand\@gls@checkescquote####1\noexpand\@nil
4929         \expandonce{\csname#1\endcsname}\expandonce{\csname#1\endcsname}%
4930         \noexpand\null
4931         \noexpand\expandafter\noexpand\@gls@updatechecked
4932         \noexpand\@gls@checkedmkidx{####1}%
4933         \noexpand\def\noexpand\@gls@checkedmkidx{%
4934           \noexpand\expandafter\noexpand\@gls@checkescactual####1\noexpand\@nil
4935           \noexpand\?\noexpand\?\noexpand\null
4936           \noexpand\expandafter\noexpand\@gls@updatechecked
4937           \noexpand\@gls@checkedmkidx{####1}%
4938           \noexpand\def\noexpand\@gls@checkedmkidx{%
4939             \noexpand\expandafter\noexpand\@gls@checkactual####1\noexpand\@nil
4940             \noexpand?\noexpand?\noexpand\null
4941             \noexpand\expandafter\noexpand\@gls@updatechecked
4942             \noexpand\@gls@checkedmkidx{####1}%
4943             \noexpand\def\noexpand\@gls@checkedmkidx{%
4944               \noexpand\expandafter\noexpand\@gls@checkbar####1\noexpand\@nil
4945               \noexpand|\noexpand|\noexpand\null
4946               \noexpand\expandafter\noexpand\@gls@updatechecked
4947               \noexpand\@gls@checkedmkidx{####1}%
4948               \noexpand\def\noexpand\@gls@checkedmkidx{%
4949                 \noexpand\expandafter\noexpand\@gls@checkescbar####1\noexpand\@nil
4950                 \noexpand||\noexpand||\noexpand\null
4951                 \noexpand\expandafter\noexpand\@gls@updatechecked
4952                 \noexpand\@gls@checkedmkidx{####1}%
4953                 \noexpand\def\noexpand\@gls@checkedmkidx{%
4954                   \noexpand\expandafter\noexpand\@gls@checklevel####1\noexpand\@nil
4955                   \noexpand!\noexpand!\noexpand\null
4956                   \noexpand\expandafter\noexpand\@gls@updatechecked
4957                   \noexpand\@gls@checkedmkidx{####1}%
4958                 }%
4959               }%
4960             }%
4961           }%
4962         }%
4963       }%
4964     }%
4965   }%

```

```

4966 \noexpand\toks@={####1}%
4967 \noexpand\ifx\noexpand\null####2\noexpand\null
4968 \noexpand\ifx\noexpand\null####3\noexpand\null
4969 \noexpand\edef\noexpand\@gls@checkedmkidx{%
4970 \noexpand\the\noexpand\@gls@tmpb\noexpand\the\noexpand\toks@}%
4971 \noexpand\def\noexpand\@@gls@checkescquote{\noexpand\relax}%
4972 \noexpand\else
4973 \noexpand\edef\noexpand\@gls@checkedmkidx{%
4974 \noexpand\the\noexpand\@gls@tmpb\noexpand\the\noexpand\toks@
4975 \noexpand\@gls@quotechar\noexpand\string\expandonce{%
4976 \csname#1\endcsname}\noexpand\@gls@quotechar
4977 \noexpand\@gls@quotechar\noexpand\string\expandonce{%
4978 \csname#1\endcsname}\noexpand\@gls@quotechar}%
4979 \noexpand\def\noexpand\@@gls@checkescquote{%
4980 \noexpand\@gls@checkescquote####3\noexpand\null}%
4981 \noexpand\fi
4982 \noexpand\else
4983 \noexpand\edef\noexpand\@gls@checkedmkidx{%
4984 \noexpand\the\noexpand\@gls@tmpb\noexpand\the\noexpand\toks@
4985 \noexpand\@gls@quotechar\noexpand\string
4986 \expandonce{\csname#1\endcsname}\noexpand\@gls@quotechar}%
4987 \noexpand\ifx\noexpand\null####3\noexpand\null
4988 \noexpand\def\noexpand\@@gls@checkescquote{%
4989 \noexpand\@gls@checkescquote####2\expandonce{\csname#1\endcsname}%
4990 \expandonce{\csname#1\endcsname}\noexpand\null}%
4991 \noexpand\else
4992 \noexpand\def\noexpand\@@gls@checkescquote{%
4993 \noexpand\@gls@checkescquote####2\expandonce{\csname#1\endcsname}%
4994 ####3\noexpand\null}%
4995 \noexpand\fi
4996 \noexpand\fi
4997 \noexpand\@@gls@checkescquote
4998 }%
4999 }%
5000 \@gls@docheckquotedef
5001 }
5002 \newcommand*{\gls@nosetquote}[1]{\PackageError{glossaries}%
5003 {\string\GlsSetQuote\space not permitted here}%
5004 {Move \string\GlsSetQuote\space earlier in the preamble, as
5005 soon as possible after glossaries.sty has been loaded}}
5006 \fi

```

ramakeindexopts

```
5007 \newcommand*{\@gls@extramakeindexopts}[1]{}
```

The command `\noist` will suppress the creation of the `.ist` file. Obviously you need to use this command before `\writeist` to have any effect.

`\noist`

```
5008 \newcommand{\noist}{%
```


Update attributes list

```
5009 \@gls@addpredefinedattributes
5010 \let\writeist\relax
5011 }
```

`\@makeglossary` is an internal command that takes an argument indicating the glossary type. This command will create the glossary file required by `makeindex` for the given glossary type, using the extension supplied by the `<out-ext>` parameter used in `\newglossary` (and it will also activate the `\glossary` command, and create the customized `.ist` `makeindex` style file).

Note that you can't use `\@makeglossary` for only some of the defined glossaries. You either need to have a `\makeglossary` for all glossaries or none (otherwise you will end up with a situation where \TeX is trying to write to a non-existent file). The relevant glossary must be defined prior to using `\@makeglossary`.

`\@makeglossary`

```
5012 \newcommand*{\@makeglossary}[1]{%
5013   \ifglossaryexists{#1}%
5014   {%
```

Only create a new write if `savewrites=false` otherwise create a token to collect the information.

```
5015   \ifglssavewrites
5016     \expandafter\newtoks\csname glo@#1@filetok\endcsname
5017   \else
5018     \expandafter\newwrite\csname glo@#1@file\endcsname
5019     \expandafter\@glsopenfile\csname glo@#1@file\endcsname{#1}%
5020   \fi
5021   \@gls@renewglossary
5022   \writeist
5023 }%
5024 {%
5025   \PackageError{glossaries}%
5026   {Glossary type ‘#1’ not defined}%
5027   {New glossaries must be defined before using \string\makeglossary}%
5028 }%
5029 }
```

`\@glsopenfile` Open write file associated with the given glossary.

```
5030 \newcommand*{\@glsopenfile}[2]{%
5031   \immediate\openout#1=\jobname.\csname @glotype@#2@out\endcsname
5032   \PackageInfo{glossaries}{Writing glossary file
5033     \jobname.\csname @glotype@#2@out\endcsname}%
5034 }
```

`\@closegls`

```
5035 \newcommand*{\@closegls}[1]{%
5036   \closeout\csname glo@#1@file\endcsname
5037 }
```

\@gls@automake

```
5038 \ifglxindy
5039 \newcommand*{\@gls@automake}[1]{%
5040   \ifglossaryexists{#1}
5041   {%
5042     \@closegls{#1}%
5043     \ifdefstring{\glsorder}{letter}%
5044     {\def\@gls@order{-M ord/letorder }}%
5045     {\let\@gls@order\@empty}%
5046     \ifcsundef{xdy@#1@language}%
5047     {\let\@gls@langmod\@xdy@main@language}%
5048     {\letcs\@gls@langmod{xdy@#1@language}}%
5049     \edef\@gls@dothiswrite{\noexpand\write18{xindy
5050       -I xindy
5051       \@gls@order
5052       -L \@gls@langmod\space
5053       -M \@gls@istfilebase\space
5054       -C \@gls@codepage\space
5055       -t \jobname.\csuse{@glotype@#1@log}
5056       -o \jobname.\csuse{@glotype@#1@in}
5057       \jobname.\csuse{@glotype@#1@out}}}%
5058   }%
5059   \@gls@dothiswrite
5060 }%
5061 {%
5062   \GlossariesWarning{Can't make glossary '#1', it doesn't exist}%
5063 }%
5064 }
5065 \else
5066 \newcommand*{\@gls@automake}[1]{%
5067   \ifglossaryexists{#1}
5068   {%
5069     \@closegls{#1}%
5070     \ifdefstring{\glsorder}{letter}%
5071     {\def\@gls@order{-l }}%
5072     {\let\@gls@order\@empty}%
5073     \edef\@gls@dothiswrite{\noexpand\write18{makeindex \@gls@order
5074       -s \istfilename\space
5075       -t \jobname.\csuse{@glotype@#1@log}
5076       -o \jobname.\csuse{@glotype@#1@in}
5077       \jobname.\csuse{@glotype@#1@out}}}%
5078   }%
5079   \@gls@dothiswrite
5080 }%
5081 {%
5082   \GlossariesWarning{Can't make glossary '#1', it doesn't exist}%
5083 }%
5084 }
5085 \fi
```

```

\makeglossaries Issue warning that \makeglossaries hasn't been used.
5086 \newcommand*{\@warn@nomakeglossaries}{%
    Only use this if warning if \printglossary has been used without \makeglossaries
5087 \newcommand*{\@warn@nomakeglossaries}{\@warn@nomakeglossaries}

    \makeglossaries will use \@makeglossary for each glossary type that has been defined.
    New glossaries need to be defined before using \makeglossary, so have \makeglossaries
    redefine \newglossary to prevent it being used afterwards.

\makeglossaries
5088 \newcommand*{\makeglossaries}{%
    Define the write used for style file also used for all other output files if savewrites=true.
5089 \ifundef{\glswrite}{\newwrite\glswrite}{}%

    If the user removes the glossary package from their document, ensure the next run doesn't
    throw a load of undefined control sequence errors when the aux file is parsed.
5090 \protected@write\@auxout{}{\string\providecommand\string\@glsorder[1]{}}
5091 \protected@write\@auxout{}{\string\providecommand\string\@istfilename[1]{}}

    If \@@gls@extramakeindexopts has been defined, write it:
5092 \ifundef\@@gls@extramakeindexopts
5093 {}%
5094 {%
5095     \protected@write\@auxout{}{\string\providecommand
5096         \string\@gls@extramakeindexopts[1]{}}
5097     \protected@write\@auxout{}{\string\@gls@extramakeindexopts
5098         {\@@gls@extramakeindexopts}}%
5099 }%

    Write the name of the style file to the aux file (needed by makeglossaries)
5100 \protected@write\@auxout{}{\string\@istfilename{\istfilename}}%
5101 \protected@write\@auxout{}{\string\@glsorder{\glsorder}}

    Iterate through each glossary type and activate it.
5102 \@for\@glo@type:=\@glo@types\do{%
5103     \ifthenelse{\equal{\@glo@type}{}}{}{%
5104         \@makeglossary{\@glo@type}}%
5105 }%

    New glossaries must be created before \makeglossaries so disable \newglossary.
5106 \renewcommand*{\newglossary}[4][]{%
5107 \PackageError{glossaries}{New glossaries
5108 must be created before \string\makeglossaries}{You need
5109 to move \string\makeglossaries\space after all your
5110 \string\newglossary\space commands}}%

    Any subsequence instances of this command should have no effect
5111 \let\@makeglossary\relax
5112 \let\makeglossary\relax
5113 \let\makeglossaries\relax

```

Disable all commands that have no effect after \makeglossaries

```

5114 \let\@disable@onlypremakeg
    Allow see key:
5115 \let\gls@checkseeallowed\relax
    Suppress warning about no \makeglossaries
5116 \let\warn@nomakeglossaries\relax
    Activate warning about missing \printglossary
5117 \def\warn@noprintglossary{%
5118   \ifdefstring{\@glo@types}{,}%
5119   {%
5120     \GlossariesWarningNoLine{No glossaries have been defined}%
5121   }%
5122   {%
5123     \GlossariesWarningNoLine{No \string\printglossary\space
5124       or \string\printglossaries\space
5125       found. ^^J(Remove \string\makeglossaries\space if you
5126       don't want any glossaries.) ^^JThis document will not
5127       have a glossary}%
5128   }%
5129 }%
    Declare list parser for \glsdisplaynumberlist
5130 \ifglssavenumberlist
5131   \edef\@gls@ddeflistparser{\noexpand\DeclareListParser
5132     {\noexpand\glsnumlistparser}{\delimN}}%
5133   \@gls@ddeflistparser
5134 \fi
    Prevent user from also using \makenoidxglossaries
5135 \let\makenoidxglossaries\@no@makeglossaries
    Prohibit sort key in printgloss family:
5136 \renewcommand*{\@printgloss@setsort}{%
5137   \let\@glo@assign@sortkey\@glo@no@assign@sortkey
5138 }%
    Check the automake setting:
5139 \ifglsautomake
5140   \renewcommand*{\@gls@doautomake}{%
5141     \@for\@gls@type:=\@glo@types\do{%
5142       \ifdefempty{\@gls@type}{}%
5143       {\@gls@automake{\@gls@type}}%
5144     }%
5145   }%
5146 \fi
    Check the sort setting:
5147 \@glo@check@sortallowed\makeglossaries
5148 }

```

Must occur in the preamble:

```
5149 \@onlypreamble{\makeglossaries}
```

`\glswrite` The definition of `\glswrite` has now been moved to `\makeglossaries` so that it's only defined if needed.

The `\makeglossary` command is redefined to be identical to `\makeglossaries`. (This is done to reinforce the message that you must either use `\@makeglossary` for all the glossaries or for none of them.)

`\makeglossary`

```
5150 \let\makeglossary\makeglossaries
```

If `\makeglossaries` hasn't been used, issue a warning. Also issue a warning if neither `\printglossaries` nor `\printglossary` have been used.

```
5151 \AtEndDocument{%
```

```
5152   \warn@nomakeglossaries
```

```
5153   \warn@noprintglossary
```

```
5154 }%
```

`noidxglossaries` Analogous to `\makeglossaries` this activates the commands needed for `\printnoidxglossary`

```
5155 \newcommand*{\makenoidxglossaries}{%
```

Redefine empty glossary warning:

```
5156   \renewcommand{\@gls@noref@warn}[1]{%
```

```
5157     \GlossariesWarning{Empty glossary for
```

```
5158     \string\printnoidxglossary[type={##1}].
```

```
5159     Rerun may be required (or you may have forgotten to use
```

```
5160     commands like \string\gls)}}%
```

```
5161   }%
```

Don't escape makeindex/xindy characters

```
5162   \let\@gls@checkmkidxchars\@gobble
```

Write glossary information to aux instead of glossary files

```
5163   \let\@do@wrglossary\gls@noidxglossary
```

Switch on group headings that use the character code:

```
5164   \let\@gls@getgrouptitle\@gls@noidx@getgrouptitle
```

Allow see key:

```
5165   \let\gls@checkseeallowed\relax
```

Redefine cross-referencing macro:

```
5166   \renewcommand{\@do@seeglossary}[2]{%
```

```
5167     \edef\@gls@label{\glsdetoklabel{##1}}%
```

```
5168     \protected@write\@auxout{}{%
```

```
5169       \string\@gls@reference
```

```
5170       {\csname glo@\@gls@label @type\endcsname}%
```

```
5171       {\@gls@label}}%
```

```
5172     {%
```

```

5173         \string\glsseeformat##2{}}%
5174     }%
5175 }%
5176 }%

```

If user removes the glossaries package from their document, ensure the next run doesn't throw a load of undefined control sequence errors when the aux file is parsed.

```

5177 \AtBeginDocument
5178 {%
5179     \write\@auxout{\string\providecommand\string\@gls@reference[3]{}}%
5180 }%

```

Change warning about no glossaries

```

5181 \def\warn@noprintglossary{%
5182     \GlossariesWarningNoLine{No \string\printnoidxglossary\space
5183         or \string\printnoidxglossaries ^^J
5184         found. (Remove \string\makenoidxglossaries\space if you
5185         don't want any glossaries.)^^JThis document will not have a glossary}%
5186 }%

```

Suppress warning about no \makeglossaries

```

5187 \let\warn@nomakeglossaries\relax

```

Prevent user from also using \makeglossaries

```

5188 \let\makeglossaries\@no@makeglossaries

```

Allow sort key in printgloss family:

```

5189 \renewcommand*{\@printgloss@setsort}{%
5190     \let\@glo@assign@sortkey\@glo@assign@sortkey

```

Initialise default sort order:

```

5191     \def\@glo@sorttype{\@glo@default@sorttype}%
5192 }%

```

All entries must be defined in the preamble:

```

5193 \renewcommand*\new@glossaryentry[2]{%
5194     \PackageError{glossaries}{Glossary entries must be
5195         defined in the preamble^^Jwhen you use
5196         \string\makenoidxglossaries}%
5197     {Either move your definitions to the preamble or use
5198         \string\makeglossaries}%
5199 }%

```

Redefine \glsentrynumberlist

```

5200 \renewcommand*\glsentrynumberlist[1]{%
5201     \letcs{\@gls@loclist}{glo@\glsdetoklabel{##1}@loclist}%
5202     \ifdef\@gls@loclist
5203     {%
5204         \glsnoidxloclist{\@gls@loclist}%
5205     }%
5206     {%
5207         ??\glsdoifexists{##1}%

```

```

5208     {%
5209         \GlossariesWarning{Missing location list for ‘##1’. Either
5210             a rerun is required or you haven’t referenced the entry}%
5211     }%
5212 }%
5213 }%

Redefine \glsdisplaynumberlist
5214 \renewcommand*{\glsdisplaynumberlist}[1]{%
5215     \letcs{\@gls@loclist}{glo@\glsdetoklabel{##1}@loclist}%
5216     \ifdef\@gls@loclist
5217     {%
5218         \def\@gls@noidxloclist@sep{%
5219             \def\@gls@noidxloclist@sep{%
5220                 \def\@gls@noidxloclist@sep{%
5221                     \glsnumlistsep
5222                 }%
5223                 \def\@gls@noidxloclist@finalsep{\glsnumlistlastsep}%
5224             }%
5225         }%
5226         \def\@gls@noidxloclist@finalsep{}%
5227         \def\@gls@noidxloclist@prev{}%
5228         \forlistloop{\glsnoidxdisplayloclisthandler}{\@gls@loclist}%
5229         \@gls@noidxloclist@finalsep
5230         \@gls@noidxloclist@prev
5231     }%
5232     {%
5233         ??\glsdoifexists{##1}%
5234         {%
5235             \GlossariesWarning{Missing location list for ‘##1’. Either
5236                 a rerun is required or you haven’t referenced the entry}%
5237         }%
5238     }%
5239 }%

```

Provide a generic way of iterating through the number list:

```

5240 \renewcommand*{\glsnumberlistloop}[3]{%
5241     \letcs{\@gls@loclist}{glo@\glsdetoklabel{##1}@loclist}%
5242     \let\@gls@org@glsnoidxdisplayloc\glsnoidxdisplayloc
5243     \let\@gls@org@glsseeformat\glsseeformat
5244     \let\glsnoidxdisplayloc##2\relax
5245     \let\glsseeformat##3\relax
5246     \ifdef\@gls@loclist
5247     {%
5248         \forlistloop{\glsnoidxnumberlistloophandler}{\@gls@loclist}%
5249     }%
5250     {%
5251         ??\glsdoifexists{##1}%
5252         {%
5253             \GlossariesWarning{Missing location list for ‘##1’. Either

```

```

5254         a rerun is required or you haven't referenced the entry}%
5255     }%
5256 }%
5257 \let\glsnoidxdisplayloc\@gls@org@glsnoidxdisplayloc
5258 \let\glsseeformat\@gls@org@glsseeformat
5259 }%

```

Modify sanitize sort function

```

5260 \let\@gls@sanitizesort\@gls@noidx@sanitizesort
5261 \let\@gls@nosanitizesort\@gls@noidx@nosanitizesort
5262 \@gls@noidx@setsanitizesort

```

Check sort option allowed.

```

5263 \@gls@check@sortallowed\makenoidxglossaries
5264 }

```

Preamble-only command:

```

5265 \@onlypreamble{\makenoidxglossaries}

```

`\glsnumberlistloop` `\glsnumberlistloop{<label>}{<handler>}`

```

5266 \newcommand*{\glsnumberlistloop}[2]{%
5267   \PackageError{glossaries}{\string\glsnumberlistloop\space
5268     only works with \string\makenoidxglossaries}{}%
5269 }

```

`\listloophandler` Handler macro for `\glsnumberlistloop`. (The argument should be in the form `\glsnoidxdisplayloc {<prefix>}{<counter>}{<format>}{<n>}`)

```

5270 \newcommand*{\glsnoidxnumberlistloophandler}[1]{%
5271   #1%
5272 }

```

`@makeglossaries` Can't use both `\makeglossaries` and `\makenoidxglossaries`

```

5273 \newcommand*{\@no@makeglossaries}{%
5274   \PackageError{glossaries}{You can't use both
5275     \string\makeglossaries\space and \string\makenoidxglossaries}%
5276   {Either use one or other (or none) of those commands but not both
5277     together.}%
5278 }

```

`@gls@noref@warn` Warning when no instances of `\@gls@reference` found.

```

5279 \newcommand{\@gls@noref@warn}[1]{%
5280   \GlossariesWarning{\string\makenoidxglossaries\space
5281     is required to make \string\printnoidxglossary[type={#1}] work}%
5282 }

```

`s@noidxglossary` Write the glossary information to the aux file:

```

5283 \newcommand*{\@gls@noidxglossary}{%

```



```

5284 \protected@write\@auxout{}\{}%
5285 \string\@gls@reference
5286 {\csname glo@\@gls@label @type\endcsname}%
5287 {\@gls@label}%
5288 {\string\glsnoidxdisplayloc
5289 {\@glo@counterprefix}%
5290 {\@gls@counter}%
5291 {\@glsnumberformat}%
5292 {\@glslocref}%
5293 }%
5294 }%
5295 }

```

1.14 Writing information to associated files

`\istfile` Deprecated.

```
5296 \def\istfile{\@glswrite}
```

At the end of the document, the files should be created if `savewrites=true`.

```

5297 \AtEndDocument{%
5298 \glswritefiles
5299 }

```

`\@glswritefiles` Only write the files if `savewrites=true`

```
5300 \newcommand*{\@glswritefiles}{%
```

Iterate through all the glossaries

```
5301 \foralllglossaries{\@glo@type}{%
```

Check for empty glossaries (patch provided by Patrick Häcker)

```

5302 \ifcsundef{glo@\@glo@type @filetok}%
5303 {%
5304 \def\gls@tmp{}%
5305 }%
5306 {%
5307 \edef\gls@tmp{\expandafter\the
5308 \csname glo@\@glo@type @filetok\endcsname}%
5309 }%
5310 \ifx\gls@tmp\@empty
5311 \ifx\@glo@type\glsdefaulttype
5312 \GlossariesWarningNoLine{Glossary '@@glo@type' has no
5313 entries.^^JRemember to use package option 'nomain' if
5314 you
5315 don't want to^^Juse the main glossary}%
5316 \else
5317 \GlossariesWarningNoLine{Glossary '@@glo@type' has no
5318 entries}%
5319 \fi
5320 \else

```

```

5321      \@glsopenfile{\glswrite}{\@glo@type}%
5322      \immediate\write\glswrite{%
5323          \expandafter\the
5324          \csname glo@\@glo@type @filetok\endcsname}%
5325      \immediate\closeout\glswrite
5326  \fi
5327  }%
5328 }

```

As from v4.10, the `\glossary` command is used by the `glossaries` package. Since the user isn't expected to use this command (as `glossaries` takes care of the particular format required for `makeindex/xindy`) there's no need for a user level command. Using a custom internal command prevents any conflict with other packages (and with the `\mark` mechanism).

In v4.10, the redefinition of `\glossary` was removed since it wasn't intended as a user level command, however it seems there are packages that have hacked the internal macros used by `glossaries` and no longer work with this redefinition removed, so it's been restored in v4.11 but is not used at all by `glossaries`. (This may be removed or moved to a compatibility mode in future.)

`\glossary`

```

5329 \if@gls@docloaded
5330 \else
5331   \renewcommand*{\glossary}[1][main]{\gls@glossary{#1}}
5332 \fi

```

The associated number should be stored in `\theglstrycounter` before using `\gls@glossary`.

`\gls@glossary`

```

5333 \newcommand*{\gls@glossary}[1]{%
5334   \@gls@glossary{#1}%
5335 }

```

`\@gls@glossary` (In v4.10, `\@glossary` was redefined to `\@gls@glossary` to avoid conflict with other packages.) Define internal `\@gls@glossary` to ignore its argument. This gets redefined in `\@makeglossary`. This is defined to just `\index` as memoir changes the definition of `\@index`. (Thanks to Dan Luecking for pointing this out.) The argument #1 is the glossary type.

```

5336 \newcommand*{\@gls@glossary}[2]{%
5337   \if@gls@debug
5338     \PackageInfo{glossaries}{wrglossary(#1)(#2)}%
5339   \fi
5340   \index{#2}%
5341 }

```

This is a convenience command to set `\@gls@glossary`. It's used by `\@makeglossary` and then redefined to do nothing, as it only needs to be done once.

`s@renewglossary`

```

5342 \newcommand{\@gls@renewglossary}{%
5343   \gdef\@gls@glossary##1{\@bsphack\beginingroup\gls@wrglossary{##1}}%
5344   \let\@gls@renewglossary\empty
5345 }

```

The `\gls@wrglossary` command is defined to have two arguments. The first argument is the glossary type, the second argument is the glossary entry (the format of which is set in `\glslink`).

`\gls@wrglossary`

```

5346 \newcommand*{\gls@wrglossary}[2]{%
5347   \ifglssavewrites
5348     \protected@edef\@gls@tmp{\the\csname glo@#1@filetok\endcsname#2}%
5349     \expandafter\global\expandafter\csname glo@#1@filetok\endcsname
5350     \expandafter{\@gls@tmp~J}%
5351   \else
5352     \ifcsdef{glo@#1@file}%
5353     {%
5354       \expandafter\protected@write\csname glo@#1@file\endcsname{%
5355         \gls@disablepagerefexpansion}{#2}%
5356     }%
5357     {%
5358       \ifignoredglossary{#1}{}%
5359       {%
5360         \GlossariesWarning{No file defined for glossary ‘#1’}%
5361       }%
5362     }%
5363   \fi
5364   \endgroup\@esphack
5365 }

```

`\@do@wrglossary`

```

5366 \newcommand*{\@do@wrglossary}[1]{%
5367   \glswriteentry{#1}{\@do@wrglossary{#1}}%
5368 }

```

`\glswriteentry` Provide a user level command so the user can customize whether or not a line should be added to the glossary. The arguments are the label and the code that writes to the glossary file.

```

5369 \newcommand*{\glswriteentry}[2]{%
5370   \ifglindexonlyfirst
5371     \ifglused{#1}{#2}%
5372   \else
5373     #2%
5374   \fi
5375 }

```

`tected@pagefmts` List of page formats to be protected against expansion.

```

5376 \newcommand{\gls@protected@pagefmts}{%
5377   \gls@numberpage,\gls@alphpage,\gls@Alphpage,\gls@romanpage,\gls@Romanpage,\gls@arabicpage%
5378 }

```

agerefexpansion

```

5379 \newcommand*\gls@disablepagerefexpansion{%
5380   \@for\@gls@this:=\gls@protected@pagefmts\do
5381   {%
5382     \expandafter\let\@gls@this\relax
5383   }%
5384 }

```

\gls@alphpage

```

5385 \newcommand*\gls@alphpage{\@alph\c@page}

```

\gls@Alphpage

```

5386 \newcommand*\gls@Alphpage{\@Alph\c@page}

```

\gls@numberpage

```

5387 \newcommand*\gls@numberpage{\number\c@page}

```

\gls@arabicpage

```

5388 \newcommand*\gls@arabicpage{\@arabic\c@page}

```

\gls@romanpage

```

5389 \newcommand*\gls@romanpage{\romannumeral\c@page}

```

\gls@Romanpage

```

5390 \newcommand*\gls@Romanpage{\@Roman\c@page}

```

protectedpagefmt

```
\glsaddprotectedpagefmt{\csname}
```

Added a page format to the list of protected page formats. The argument should be the name (without a backslash) of the command that takes a \TeX register as the argument ($\langle csname \rangle \c@page$ must be valid).

```

5391 \newcommand*\glsaddprotectedpagefmt[1]{%
5392   \eappto\gls@protected@pagefmts{\expandonce{\csname gls#1page\endcsname}}%
5393   \csedef{gls#1page}{\expandonce{\csname#1\endcsname}\noexpand\c@page}%
5394   \eappto\@wrglossarynumberhook{%
5395     \noexpand\let\expandonce{\csname org@gls#1\endcsname}%
5396     \expandonce{\csname#1\endcsname}%
5397     \noexpand\def\expandonce{\csname#1\endcsname}{%
5398       \noexpand\@wrglossary@pageformat
5399       \expandonce{\csname gls#1page\endcsname}%
5400       \expandonce{\csname org@gls#1\endcsname}%
5401     }%
5402   }%
5403 }

```

ssarynumberhook Hook used by \@@do@wrglossary
5404 \newcommand*\@wrglossarynumberhook{}

sary@pageformat
5405 \newcommand{\@wrglossary@pageformat}[3]{%
5406 \ifx#3\c@page #1\else #2#3\fi
5407 }

@@do@wrglossary Write the glossary entry in the appropriate format.
5408 \newcommand*\@@do@wrglossary[1]{%
5409 \ifglsecllocations
5410 \@do@esc@wrglossary{#1}%
5411 \else
5412 \@do@noesc@wrglossary{#1}%
5413 \fi
5414 }

noesc@wrglossary Write the glossary entry in the appropriate format. The locations don't need to be pre-processed before writing the information to the glossary file, but the prefix still needs to be found.

5415 \newcommand*\@do@noesc@wrglossary[1]{%

Don't fully expand yet.

5416 \expandafter\def\expandafter\@glsloc\ref\expandafter{\the\glsentrycounter}%
5417 \expandafter\def\expandafter\@glsHloc\ref\expandafter{\the\Hglentrycounter}%

Find the prefix if \@glsHloc\ref and \@glsloc\ref aren't the same.

5418 \ifx\@glsHloc\ref\@glsloc\ref
5419 \def\@gls@counterprefix{}%
5420 \else

The value of the counter isn't important here as it's the prefix that's of interest. (\c@page will have the same value in both \the\glsentrycounter and \the\Hglentrycounter at this point, even if it hasn't been updated yet. The page number is not expected to occur in the prefix.)

5421 \protected@edef\@do@gls@getcounterprefix{\noexpand\@gls@getcounterprefix
5422 {\@glsloc\ref}{\@glsHloc\ref}}%
5423 }%
5424 \@do@gls@getcounterprefix
5425 \fi

De-tok label if required

5426 \edef\@gls@label{\glsdetoklabel{#1}}%

Write the information to file:

5427 \@do@@@wrglossary
5428 }

owprimitivemods Conditional to determine whether or not \@@do@esc@wrglossary should be allowed to temporarily redefine \the and \number.

5429 \newif\ifglswrallowprimitivemods

5430 \glswrallowprimitivemodstrue

@esc@wrglossary Write the glossary entry in the appropriate format. (Need to set \@glsnumberformat and \@gls@counter prior to use.) The argument is the entry's label. This is far more complicated with xindy than with other indexing methods. There are two necessary but conflicting requirements with xindy:

1. all backslashes in the location must be escaped;
2. \c@page can't be prematurely expanded.

(With makeindex there's the remote possibility that the page compositor is a makeindex special character, so that would also need to be escaped.)

For example, suppose \thepage is defined as

```
\renewcommand{\thepage}{\tally{page}}
\newcommand{\tally}[1]{\tallynum{\expandafter\the\csname c@#1\endcsname}}
```

where \tallynum is a robust command that takes a number as its argument. With all indexing methods other than xindy, a deferred write with \thepage as the location will expand to \tallynum{<n>} where <n> is the page number. Since the write is deferred, the page number is correct. (makeindex won't accept this location format, but \makenoidxglossaries and bib2gls are quite happy with it.) Unfortunately, this fails with xindy because xindy interprets this location as tallynum{<n>} because \t represents a the character "t". The location must be written as \\tallynum{<n>}.

This means that the location \tally{page} must be expanded and then the backslashes must be doubled. Unfortunately \c@page mustn't be expanded until the deferred write is performed, so the location actually needs to be expanded to \tallynum{\the\c@page} but the backslashes in \the\c@page mustn't be escaped. All other backslashes must be escaped. (In this case, only the backslash in \tallynum but the location format may include other control sequences.) The code below works on the assumption that commands like \tally are defined in the form

```
\newcommand{\tally}[1]{\tallynum{\expandafter\the\csname c@#1\endcsname}}
```

(note the use of \expandafter and \name) or in the form

```
\newcommand{\tally}[1]{\tallynum{\arabic{#1}}}
```

In the second case, \arabic is one of the known commands that's temporarily adjusted to prevent \c@page from being prematurely expanded. In the first case, \the is temporarily modified (unless \glswrallowprimitivemodsfalse) to check if it's followed by \c@page. The \expandafter ensures that it is. If \tally is defined in another way that hides \c@page for example using \the\value{#1} then the process fails.

With makeindex, \tallynum needs to expand to just the decimal number while writing the location to the glossary file, otherwise makeindex will reject it. This can be done by defining \glstallypage so that \tally can locally be set to \arabic while expansion is occurring. Again, \c@page must be protected from expansion until the deferred write occurs.

The expansion before the write occurs also allows the hyper prefix to be determined where `\theH<counter>` is defined in the form `<prefix>.\the<counter>`. It's possible (although again unlikely) that a `makeindex` character might occur in the prefix, which therefore needs escaping. The prefix is passed as the optional argument of `\setentrycounter` which is needed by commands like `\glshypernumber` to create a hyperlink for a given counter (like `\hyperpage` but for an arbitrary counter).

```
5431 \newcommand*{\@@do@esc@wrglossary}[1]{% please read documented code!
5432   \begingroup
```

First a bit of hackery to prevent premature expansion of `\c@page`. Store original definitions (scoped):

```
5433   \let\gls@orgthe\the
5434   \let\gls@orgnumber\number
5435   \let\gls@orgarabic\@arabic
5436   \let\gls@orgromannumeral\romannumeral
5437   \let\gls@orgalph\@alph
5438   \let\gls@orgAlph\@Alph
5439   \let\gls@orgRoman\@Roman
```

Redefine:

```
5440   \ifglswrallowprimitivemods
```

The redefinition of `\the` to use `\expandafter` solves the problem of `\the\csname c@<counter>\endcsname` but is only a partial solution to the problem of `\the\value`. With `\value`, `\c@page` is too deeply hidden and will be expanded too soon, but at least there won't be an error.

```
5441   \def\gls@the##1{%
5442     \ifx##1\c@page \gls@numberpage\else\gls@orgthe##1\fi}%
5443   \def\the{\expandafter\gls@the}%
5444   \def\gls@number##1{%
5445     \ifx##1\c@page \gls@numberpage\else\gls@orgnumber##1\fi}%
5446   \def\number{\expandafter\gls@number}%
5447   \fi
5448   \def\@arabic##1{%
5449     \ifx##1\c@page \gls@arabicpage\else\gls@orgarabic##1\fi}%
5450   \def\romannumeral##1{%
5451     \ifx##1\c@page \gls@romanpage\else\gls@orgromannumeral##1\fi}%
5452   \def\@Roman##1{%
5453     \ifx##1\c@page \gls@Romanpage\else\gls@orgRoman##1\fi}%
5454   \def\@alph##1{%
5455     \ifx##1\c@page \gls@alphpage\else\gls@orgalph##1\fi}%
5456   \def\@Alph##1{%
5457     \ifx##1\c@page \gls@Alphpage\else\gls@orgAlph##1\fi}%

```

Add hook to allow for other number formats:

```
5458   \@wrglossarynumberhook
```

Prevent expansion:

```
5459   \gls@disablepagerefexpansion
```

Now store location in `\@glslocref`:

```

5460 \protected@xdef\@glslocref{\theglsentrycounter}%
5461 \endgroup

```

Escape any special characters. It's possible that with `makeindex` the separator might be a `makeindex` special character. Although not likely, it still needs to be taken into account.

```

5462 \@gls@checkmkidxchars\@glslocref

```

Check if the hyper-location is the same as the location and set the hyper prefix.

```

5463 \expandafter\ifx\theglsentrycounter\theglsentrycounter\relax
5464 \def\@glo@counterprefix{}%
5465 \else
5466 \protected@edef\@glsHlocref{\theglsentrycounter}%
5467 \@gls@checkmkidxchars\@glsHlocref
5468 \edef\@do@gls@getcounterprefix{\noexpand\@gls@getcounterprefix
5469 {\@glslocref}{\@glsHlocref}%
5470 }%
5471 \@do@gls@getcounterprefix
5472 \fi

```

De-tok label if required

```

5473 \edef\@gls@label{\glsdetoklabel{#1}}%

```

Write the information to file:

```

5474 \@do@wrglossary
5475 }

```

@do@wrglossary

```

5476 \newcommand*{\@do@wrglossary}{%

```

Determine whether to use `xindy` or `makeindex` syntax

```

5477 \ifglsxindy

```

Need to determine if the formatting information starts with a (or) indicating a range.

```

5478 \expandafter\@glo@check@mkidxrangechar\@glsnumberformat\@nil
5479 \def\@glo@range{}%
5480 \expandafter\if\@glo@prefix(\relax
5481 \def\@glo@range{:open-range}%
5482 \else
5483 \expandafter\if\@glo@prefix)\relax
5484 \def\@glo@range{:close-range}%
5485 \fi
5486 \fi

```

Write to the glossary file using `xindy` syntax.

```

5487 \gls@glossary{\csname glo@\@gls@label @type\endcsname}{%
5488 (indexentry :tkey (\csname glo@\@gls@label @index\endcsname)

5489 :locref \string"\@glo@counterprefix}{\@glslocref}\string" %
5490 :attr \string"\@gls@counter\@glo@suffix\string"
5491 \@glo@range
5492 )
5493 }%
5494 \else

```


Convert the format information into the format required for makeindex

```
5495 \set@glo@numformat{\@glo@numfmt}{\@gls@counter}{\@glsnumberformat}%
5496 {\@glo@counterprefix}%
```

Write to the glossary file using makeindex syntax.

```
5497 \gls@glossary{\csname glo@\@gls@label @type\endcsname}{%
5498 \string\glossaryentry{\csname glo@\@gls@label @index\endcsname
5499 \@gls@encapchar\@glo@numfmt}{\@gls@locref}}%
5500 \fi
5501 }
```

`etcounterprefix` Get the prefix that needs to be prepended to counter in order to get the hyper counter. (For example, with the standard article class and hyperref, `\theequation` needs to be prefixed with `<section num>`. to get the equivalent `\theHequation`.) NB this assumes that the prefix ends with a dot, which is the standard. (Otherwise it makes the xindy location classes more complicated.)

```
5502 \newcommand*\@gls@getcounterprefix[2]{%
5503 \edef\@gls@thisloc{#1}\edef\@gls@thisHloc{#2}%
5504 \ifx\@gls@thisloc\@gls@thisHloc
5505 \def\@glo@counterprefix{}%
5506 \else
5507 \def\@gls@get@counterprefix##1.#1##2\end@getprefix{%
5508 \def\@glo@tmp{##2}%
5509 \ifx\@glo@tmp\@empty
5510 \def\@glo@counterprefix{}%
5511 \else
5512 \def\@glo@counterprefix{##1}%
5513 \fi
5514 }%
5515 \@gls@get@counterprefix#2.#1\end@getprefix
```

Warn if no prefix can be formed.

```
5516 \ifx\@glo@counterprefix\@empty
5517 \GlossariesWarning{Hyper target ‘#2’ can’t be formed by
5518 prefixing^^Jlocation ‘#1’. You need to modify the
5519 definition of \string\theH\@gls@counter^^Jotherwise you
5520 will get the warning: “name{\@gls@counter.#1}’ has been^^J
5521 referenced but does not exist”}%
5522 \fi
5523 \fi
5524 }
```

1.15 Glossary Entry Cross-References

`@do@seeglossary` Write the glossary entry with a cross reference. The first argument is the entry’s label, the second must be in the form `[<tag>]{<list>}`, where `<tag>` is a tag such as “see” and `<list>` is a list of labels.

```
5525 \newcommand{\@do@seeglossary}[2]{%
```

```

5526 \def\@gls@xref{#2}%
5527 \@onelevel@sanitize\@gls@xref
5528 \@gls@checkmkidxchars\@gls@xref
5529 \ifglxsindy
5530   \gls@glossary{\csname glo@#1@type\endcsname}{%
5531     (indexentry
5532       :tkey (\csname glo@#1@index\endcsname)
5533       :xref (\string"\@gls@xref\string")
5534       :attr \string"see\string"
5535     )
5536   }%
5537 \else
5538   \gls@glossary{\csname glo@#1@type\endcsname}{%
5539     \string\glossaryentry{\csname glo@#1@index\endcsname
5540       \@gls@encapchar glsseeformat\@gls@xref}{Z}}%
5541 \fi
5542 }

```

`\@gls@fixbraces` If no optional argument is specified, list needs to be enclosed in a set of braces.

```

5543 \def\@gls@fixbraces#1#2#3\@nil{%
5544   \ifx#2[\relax
5545     \@gls@fixbraces#1#2#3\@end@fixbraces
5546   \else
5547     \def#1{{#2#3}}%
5548   \fi
5549 }

```

`@@gls@fixbraces`

```

5550 \def\@@gls@fixbraces#1[#2]#3\@end@fixbraces{%
5551   \def#1{[#2]{#3}}%
5552 }

```

`\glssee` `\glssee{<label>}{<cross-ref list>}`

```

5553 \DeclareRobustCommand*\glssee{3}[\seename]{%
5554   \@do@seeglossary{#2}{#1}{#3}}
5555 \newcommand*\@glssee{3}[\seename]{%
5556   \glssee[#1]{#3}{#2}}

```

`\glsseeformat` The first argument specifies what tag to use (e.g. “see”), the second argument is a comma-separated list of labels. The final argument (the location) is ignored.

```

5557 \DeclareRobustCommand*\glsseeformat{3}[\seename]{%
5558   \emph{#1} \glsseelist{#2}}

```

`\glsseelist` `\glsseelist{<list>}` formats list of entry labels.

```

5559 \DeclareRobustCommand*\glsseelist{1}{%

```

If there is only one item in the list, set the last separator to do nothing.

```

5560   \let\@gls@dolast\relax

```

Don't display separator on the first iteration of the loop

```
5561 \let\@gls@donext\relax
```

Iterate through the labels

```
5562 \@for\@gls@thislabel:=#1\do{%
```

Check if on last iteration of loop

```
5563 \ifx\@xfor@nextelement\@nnil
5564 \@gls@dolast
5565 \else
5566 \@gls@donext
5567 \fi
```

Display the entry for this label. (Expanding label as it's a temporary control sequence that's used elsewhere.)

```
5568 \expandafter\glsseeitem\expandafter{\@gls@thislabel}%
```

Update separators

```
5569 \let\@gls@dolast\glsseelastsep
5570 \let\@gls@donext\glsseesep
5571 }%
5572 }
```

`\glsseelastsep` Separator to use between penultimate and ultimate entries in a cross-referencing list.

```
5573 \newcommand*{\glsseelastsep}{\space\andname\space}
```

`\glsseesep` Separator to use between entries in a cross-referencing list.

```
5574 \newcommand*{\glsseesep}{, }
```

`\glsseeitem` `\glsseeitem{<label>}` formats individual entry in a cross-referencing list.

```
5575 \DeclareRobustCommand*{\glsseeitem}[1]{\gls hyperlink[\glsseeitemformat{#1}]{#1}}
```

`\glsseeitemformat` As from v3.0, default is to use `\glsentrytext` instead of `\glsentryname`. (To avoid problems with the name key being sanitized, although this is no longer a problem now.)

```
5576 \newcommand*{\glsseeitemformat}[1]{\glsentrytext{#1}}
```

1.16 Displaying the glossary

An individual glossary is displayed in the text using `\printglossary[<key-val list>]`. If the type key is omitted, the default glossary is displayed. The optional argument can be used to specify an alternative glossary, and can also be used to set the style, title and entry in the table of contents. Available keys are defined below.

`\save@numberlist` Provide command to store number list.

```
5577 \newcommand*{\gls@save@numberlist}[1]{%
5578 \ifglssavenumberlist
5579 \toks@{#1}%
5580 \edef\@do@writeaux@info{%
```

```

5581      \noexpand\csgdef{glo@\glscurrententrylabel @numberlist}{\the\toks@}%
5582    }%
5583    \@onelevel@sanitize\@do@writeaux@info
5584    \protected@write\@auxout{}{\@do@writeaux@info}%
5585  \fi
5586 }

```

`noprintglossary` Warn the user if they have forgotten `\printglossaries` or `\printglossary`. (Will be suppressed if there is at least one occurrence of `\printglossary`. There is no check to ensure that there is a `\printglossary` for each defined glossary.)

```

5587 \newcommand*{\warn@noprintglossary}{}%

```

`\printglossary` The TOC title needs to be processed in a different manner to the main title in case the translator and hyperref packages are both being used.

```

5588 \ifcsundef{printglossary}{}%
5589 {%

```

If `\printglossary` is already defined, issue a warning and undefine it.

```

5590   \@gls@warnonglossdefined
5591   \undef\printglossary
5592 }

```

`\printglossary` has an optional argument. The default value is to set the glossary type to the main glossary.

```

5593 \newcommand*{\printglossary}[1][type=\glsdefaulttype]{%
5594   \@printglossary{#1}{\@print@glossary}%
5595 }

```

The `\printglossaries` command will do `\printglossary` for each glossary type that has been defined. It is better to use `\printglossaries` rather than individual `\printglossary` commands to ensure that you don't forget any new glossaries you may have created. It also makes it easier to chop and change the value of the acronym package option. However, if you want to list the glossaries in a different order, or if you want to set the title or table of contents entry, or if you want to use different glossary styles for each glossary, you will need to use `\printglossary` explicitly for each glossary type.

`printglossaries`

```

5596 \newcommand*{\printglossaries}{}%
5597   \forall@glossaries{\@glo@type}{\printglossary[type=\@glo@type]}%
5598 }

```

`ntnoidxglossary` Provide an alternative to `\printglossary` that doesn't require an external indexing application. Entries won't be sorted and the location list will be empty.

```

5599 \newcommand*{\printnoidxglossary}[1][type=\glsdefaulttype]{%
5600   \@printglossary{#1}{\@print@noidx@glossary}%
5601 }

```

noidxglossaries Analogous to \printglossaries

```

5602 \newcommand*{\printnoidxglossaries}{%
5603   \forallglossaries{\@glo@type}{\printnoidxglossary[type=\@glo@type]}}%
5604 }

```

ntgloss@setsort Initialise to do nothing.

```

5605 \newcommand*{\@printgloss@setsort}{}

```

preglossaryhook

```

5606 \newcommand*{\@gls@preglossaryhook}{}

```

\@printglossary Sets up the glossary for either \printglossary or \printnoidxglossary. The first argument is the options list, the second argument is the handler macro that deals with the actual glossary.

```

5607 \newcommand{\@printglossary}[2]{%
  Set up defaults.
5608   \def\@glo@type{\glsdefaulttype}%
5609   \def\glossarytitle{\csname @glo@type@\@glo@type @title\endcsname}%
5610   \def\glossarytoctitle{\glossarytitle}%
5611   \let\org@glossarytitle\glossarytitle
5612   \def\@glossarystyle{%
5613     \ifx\@glossary@default@style\relax
5614       \GlossariesWarning{No default glossary style provided \MessageBreak
5615         for the glossary '\@glo@type'. \MessageBreak
5616         Using deprecated fallback. \MessageBreak
5617         To fix this set the style with \MessageBreak
5618         \string\setglossarystyle\space or use the \MessageBreak
5619         style key=value option}%
5620     \fi
5621   }%
5622   \def\gls@dotoc@title{\glssettoc@title{\@glo@type}}%
  Store current value of \glossaryentrynumbers. (This may be changed via the optional argument)
5623   \let\@org@glossaryentrynumbers\glossaryentrynumbers
  Localise the effects of the optional argument
5624   \bgroup
  Activate or deactivate sort key:
5625   \@printgloss@setsort
  Determine settings specified in the optional argument.
5626   \setkeys{printgloss}{#1}%
  Does the glossary exist?
5627   \ifglossaryexists{\@glo@type}%
5628   {%

```

If title has been set, but toctitle hasn't, make toctitle the same as given title (rather than the title used when the glossary was defined)

```
5629 \ifx\glossarytitle\org@glossarytitle
5630 \else
5631 \expandafter\let\csname @glo@type @title\endcsname
5632 \glossarytitle
5633 \fi
```

Allow a high-level user command to indicate the current glossary

```
5634 \let\currentglossary\@glo@type
```

Enable individual number lists to be suppressed.

```
5635 \let\org@glossaryentrynumbers\glossaryentrynumbers
5636 \let\glsnonextpages\glsnonextpages
```

Enable individual number list to be activated:

```
5637 \let\glsnextpages\glsnextpages
```

Enable suppression of description terminators.

```
5638 \let\nopostdesc\@nopostdesc
```

Set up the entry for the TOC

```
5639 \gls@dotocitle
```

Set the glossary style

```
5640 \@glossarystyle
```

Added a way to fetch the current entry label (v3.08 updated for new \glossentry and \subglossentry, but this is now only needed for backward compatibility):

```
5641 \let\gls@org@glossaryentryfield\glossentry
5642 \let\gls@org@glossarysubentryfield\subglossentry
5643 \renewcommand{\glossentry}[1]{%
5644 \xdef\glscurrententrylabel{\glsdetoklabel{##1}}%
5645 \gls@org@glossaryentryfield{##1}%
5646 }%
5647 \renewcommand{\subglossentry}[2]{%
5648 \xdef\glscurrententrylabel{\glsdetoklabel{##2}}%
5649 \gls@org@glossarysubentryfield{##1}{##2}%
5650 }%
```

```
5651 \@gls@preglossaryhook
```

Now do the handler macro that deals with the actual glossary:

```
5652 #2%
5653 }%
5654 {\GlossariesWarning{Glossary '@glo@type' doesn't exist}}%
```

End the current scope

```
5655 \egroup
```

Reset \glossaryentrynumbers

```
5656 \global\let\glossaryentrynumbers\@org@glossaryentrynumbers
```

Suppress warning about no \printglossary

```
5657 \global\let\warn@noprntglossary\relax
5658 }
```

@print@glossary Internal workings of \printglossary dealing with reading the external file.

```
5659 \newcommand{\@print@glossary}{%
```

Some macros may end up being expanded into internals in the glossary, so need to make @ a letter. (Unlikely to be a problem since v3.08a but kept for backward compatibility.)

```
5660 \makeatletter
```

Input the glossary file, if it exists.

```
5661 \@input@{\jobname.\csname @glo@type@\@glo@type @in\endcsname}%
```

If the glossary file doesn't exist, do \null. (This ensures that the page is shipped out and all write commands are done.) This might produce an empty page, but at this point the document isn't complete, so it shouldn't matter.

```
5662 \IfFileExists{\jobname.\csname @glo@type@\@glo@type @in\endcsname}%
```

```
5663 {}%
```

```
5664 {\null}%
```

If xindy is being used, need to write the language dependent information to the .aux file for makeglossaries.

```
5665 \ifglxindy
```

```
5666 \ifcsundef{@xdy@\@glo@type @language}%
```

```
5667 {%
```

```
5668 \edef\@do@auxoutstuff{%
```

```
5669 \noexpand\AtEndDocument{%
```

If the user removes the glossary package from their document, ensure the next run doesn't throw a load of undefined control sequence errors when the aux file is parsed.

```
5670 \noexpand\immediate\noexpand\write\@auxout{%
```

```
5671 \string\providecommand\string\@xdylanguage[2]{}}%
```

```
5672 \noexpand\immediate\noexpand\write\@auxout{%
```

```
5673 \string\@xdylanguage{\@glo@type}{\@xdy@main@language}}%
```

```
5674 }%
```

```
5675 }%
```

```
5676 }%
```

```
5677 {%
```

```
5678 \edef\@do@auxoutstuff{%
```

```
5679 \noexpand\AtEndDocument{%
```

```
5680 \noexpand\immediate\noexpand\write\@auxout{%
```

```
5681 \string\providecommand\string\@xdylanguage[2]{}}%
```

```
5682 \noexpand\immediate\noexpand\write\@auxout{%
```

```
5683 \string\@xdylanguage{\@glo@type}{\csname @xdy@\@glo@type
```

```
5684 @language\endcsname}}%
```

```
5685 }%
```

```
5686 }%
```

```
5687 }%
```

```
5688 \@do@auxoutstuff
```

```

5689 \edef\@do@auxoutstuff{%
5690 \noexpand\AtEndDocument{%

```

If the user removes the glossaries package from their document, ensure the next run doesn't throw a load of undefined control sequence errors when the aux file is parsed.

```

5691 \noexpand\immediate\noexpand\write\@auxout{%
5692 \string\providecommand\string\@gls@codepage[2]{}}%
5693 \noexpand\immediate\noexpand\write\@auxout{%
5694 \string\@gls@codepage{\@glo@type}{\@gls@codepage}}%
5695 }%
5696 }%
5697 \@do@auxoutstuff
5698 \fi

```

Activate warning if \makeglossaries hasn't been used.

```

5699 \renewcommand*{\@warn@nomakeglossaries}{%
5700 \GlossariesWarningNoLine{\string\makeglossaries\space
5701 hasn't been used,^^Jthe glossaries will not be updated}%
5702 }%
5703 }

```

The sort macros all have the syntax:

$$\backslash\@glo@sortmacro@<order>\{<type>\}$$

where $<order>$ is the sort order as specified by the sort key and $<type>$ is the glossary type. (The referenced entry list is stored in $\backslash\@glsref@<type>$. The actual sorting is done by $\backslash\@glo@sortentries\{<handler>\}\{<type>\}$).

$\backslash\@glo@sortentries$

```

5704 \newcommand*{\@glo@sortentries}[2]{%
5705 \glosortentrieswarning
5706 \def\@glo@sortinglist{}%
5707 \def\@glo@sortinghandler{#1}%
5708 \edef\@glo@type{#2}%
5709 \forlistcsloop{\@glo@do@sortentries}{\@glsref@#2}%
5710 \csdef{\@glsref@#2}{}%
5711 \@for\@this@label:=\@glo@sortinglist\do{%

```

Has this entry already been added?

```

5712 \xifinlistcs{\@this@label}{\@glsref@#2}%
5713 {}%
5714 {%
5715 \listcsxadd{\@glsref@#2}{\@this@label}%
5716 }%
5717 \ifcsdef{\@glo@sortingchildren@\@this@label}%
5718 {%
5719 \@glo@addchildren{#2}{\@this@label}%
5720 }%
5721 {}%

```



```

5722 }%
5723 }

```

```
@glo@addchildren \@glo@addchildren{<type>}{<parent>}
```

```
5724 \newcommand*{\@glo@addchildren}[2]{%
```

Scope to allow nesting.

```

5725 \bgroup
5726 \letcs{\@glo@childlist}{\@glo@sortingchildren@#2}%
5727 \@for\@this@childlabel:=\@glo@childlist\do
5728 {%

```

Check this label hasn't already been added.

```

5729 \xifinlistcs{\@this@childlabel}{\@glsref@#1}%
5730 }%
5731 {%
5732 \listcsxadd{\@glsref@#1}{\@this@childlabel}%
5733 }%

```

Does this child have children?

```

5734 \ifcsdef{\@glo@sortingchildren@\@this@childlabel}%
5735 {%
5736 \@glo@addchildren{#1}{\@this@childlabel}%
5737 }%
5738 {%
5739 }%
5740 }%
5741 \egroup
5742 }

```

```
@do@sortentries
```

```

5743 \newcommand*{\@glo@do@sortentries}[1]{%
5744 \ifglshasparent{#1}%
5745 {%

```

This entry has a parent, so add it to the child list

```

5746 \edef\@glo@parent{\csuse{glo@\glsdetoklabel{#1}@parent}}%
5747 \ifcsundef{\@glo@sortingchildren@\@glo@parent}%
5748 {%
5749 \csdef{\@glo@sortingchildren@\@glo@parent}{}%
5750 }%
5751 }%
5752 \expandafter\@glo@sortedinsert
5753 \csname @glo@sortingchildren@\@glo@parent\endcsname{#1}%

```

Has the parent been added?

```

5754 \xifinlistcs{\@glo@parent}{\@glsref@\@glo@type}%
5755 {%

```

Yes, it has so do nothing.

```
5756 }%
5757 {%
```

No, it hasn't so add it now.

```
5758 \expandafter\@glo@do@sortentries\expandafter{\@glo@parent}%
5759 }%
5760 }%
5761 {%
5762 \@glo@sortedinsert{\@glo@sortinglist}{#1}%
5763 }%
5764 }
```

`glo@sortedinsert` `\@glo@sortedinsert{<list>}{<entry label>}`

Insert into list.

```
5765 \newcommand*{\@glo@sortedinsert}[2]{%
5766 \dtl@insertinto{#2}{#1}{\@glo@sortinghandler}%
5767 }%
```

The sort handlers need to be in the form required by datatool's `\dtl@sortlist` macro. These must set the count register `\dtl@sortresult` to either `-1` (`#1` less than `#2`), `0` (`#1 = #2`) or `+1` (`#1` greater than `#2`).

`orthandler@word`

```
5768 \newcommand*{\@glo@sorthandler@word}[2]{%
5769 \letcs\@gls@sort@A{glo@glstetoklabel{#1}@sort}%
5770 \letcs\@gls@sort@B{glo@glstetoklabel{#2}@sort}%
5771 \edef\glo@do@compare{%
5772 \noexpand\dtlwordindexcompare{\noexpand\dtl@sortresult}%
5773 {\expandonce\@gls@sort@B}%
5774 {\expandonce\@gls@sort@A}%
5775 }%
5776 \glo@do@compare
5777 }
```

`thandler@letter`

```
5778 \newcommand*{\@glo@sorthandler@letter}[2]{%
5779 \letcs\@gls@sort@A{glo@glstetoklabel{#1}@sort}%
5780 \letcs\@gls@sort@B{glo@glstetoklabel{#2}@sort}%
5781 \edef\glo@do@compare{%
5782 \noexpand\dtlletterindexcompare{\noexpand\dtl@sortresult}%
5783 {\expandonce\@gls@sort@B}%
5784 {\expandonce\@gls@sort@A}%
5785 }%
5786 \glo@do@compare
5787 }
```

orthandler@case Case-sensitive sort.

```
5788 \newcommand*{\@glo@sorthandler@case}[2]{%
5789   \letcs\@gls@sort@A{\glo\glsdetoklabel{#1}@sort}%
5790   \letcs\@gls@sort@B{\glo\glsdetoklabel{#2}@sort}%
5791   \edef\glo@do@compare{%
5792     \noexpand\dtlcompare{\noexpand\dtl@sortresult}%
5793     {\expandonce\@gls@sort@B}%
5794     {\expandonce\@gls@sort@A}%
5795   }%
5796   \glo@do@compare
5797 }
```

thandler@nocase Case-insensitive sort.

```
5798 \newcommand*{\@glo@sorthandler@nocase}[2]{%
5799   \letcs\@gls@sort@A{\glo\glsdetoklabel{#1}@sort}%
5800   \letcs\@gls@sort@B{\glo\glsdetoklabel{#2}@sort}%
5801   \edef\glo@do@compare{%
5802     \noexpand\dtlcompare{\noexpand\dtl@sortresult}%
5803     {\expandonce\@gls@sort@B}%
5804     {\expandonce\@gls@sort@A}%
5805   }%
5806   \glo@do@compare
5807 }
```

@sortmacro@word Sort macro for ‘word’

```
5808 \newcommand*{\@glo@sortmacro@word}[1]{%
5809   \ifdefstring{\@glo@default@sorttype}{standard}%
5810   {%
5811     \@glo@sortentries{\@glo@sorthandler@word}{#1}%
5812   }%
5813   {%
5814     \PackageError{glossaries}{Conflicting sort options:^^J
5815       \string\usepackage[sort=\@glo@default@sorttype]{glossaries}^^J
5816       \string\printnoidxglossary[sort=word]}{}%
5817   }%
5818 }
```

ortmacro@letter Sort macro for ‘letter’

```
5819 \newcommand*{\@glo@sortmacro@letter}[1]{%
5820   \ifdefstring{\@glo@default@sorttype}{standard}%
5821   {%
5822     \@glo@sortentries{\@glo@sorthandler@letter}{#1}%
5823   }%
5824   {%
5825     \PackageError{glossaries}{Conflicting sort options:^^J
5826       \string\usepackage[sort=\@glo@default@sorttype]{glossaries}^^J
5827       \string\printnoidxglossary[sort=letter]}{}%
5828   }%
5829 }
```

```

tmacro@standard  Sort macro for ‘standard’. (Use either ‘word’ or ‘letter’ order.)
5830 \newcommand*{\@glo@sortmacro@standard}[1]{%
5831   \ifdefstring{\@glo@default@sorttype}{standard}%
5832   {%
5833     \ifcsdef{\@glo@sorthandler@glorder}%
5834     {%
5835       \@glo@sortentries{\csuse{\@glo@sorthandler@glorder}}{#1}%
5836     }%
5837     {%
5838       \PackageError{glossaries}{Unknown sort handler ‘\glorder’}{}%
5839     }%
5840   }%
5841   {%
5842     \PackageError{glossaries}{Conflicting sort options:^^J
5843       \string\usepackage[sort=\@glo@default@sorttype]{glossaries}^^J
5844       \string\printnoidxglossary[sort=standard]}{}%
5845   }%
5846 }

@sortmacro@case  Sort macro for ‘case’
5847 \newcommand*{\@glo@sortmacro@case}[1]{%
5848   \ifdefstring{\@glo@default@sorttype}{standard}%
5849   {%
5850     \@glo@sortentries{\@glo@sorthandler@case}{#1}%
5851   }%
5852   {%
5853     \PackageError{glossaries}{Conflicting sort options:^^J
5854       \string\usepackage[sort=\@glo@default@sorttype]{glossaries}^^J
5855       \string\printnoidxglossary[sort=case]}{}%
5856   }%
5857 }

ortmacro@nocase  Sort macro for ‘nocase’
5858 \newcommand*{\@glo@sortmacro@nocase}[1]{%
5859   \ifdefstring{\@glo@default@sorttype}{standard}%
5860   {%
5861     \@glo@sortentries{\@glo@sorthandler@nocase}{#1}%
5862   }%
5863   {%
5864     \PackageError{glossaries}{Conflicting sort options:^^J
5865       \string\usepackage[sort=\@glo@default@sorttype]{glossaries}^^J
5866       \string\printnoidxglossary[sort=nocase]}{}%
5867   }%
5868 }

o@sortmacro@def  Sort macro for ‘def’. The order of definition is given in \glolist@<type>.
5869 \newcommand*{\@glo@sortmacro@def}[1]{%
5870   \def\@glo@sortinglist{%
5871     \forglsentries[#1]{\@gls@thislabel}%

```

```

5872 {%
5873   \xifinlistcs{\@gls@thislabel}{\@glsref@#1}%
5874   {%
5875     \listeadadd{\@glo@sortinglist}{\@gls@thislabel}%
5876   }%
5877   {%
      Hasn't been referenced.
5878   }%
5879 }%
5880 \cslet{\@glsref@#1}{\@glo@sortinglist}%
5881 }

```

ortmacro@def@do This won't include parent entries that haven't been referenced.

```

5882 \newcommand*{\@glo@sortmacro@def@do}[1]{%
5883   \ifinlistcs{#1}{\@glsref@{\@glo@type}}%
5884   {}%
5885   {%
5886     \listcsadd{\@glsref@{\@glo@type}}{#1}%
5887   }%
5888   \ifcsdef{\@glo@sortingchildren@#1}%
5889   {%
5890     \@glo@addchildren{\@glo@type}{#1}%
5891   }%
5892   {}%
5893 }

```

o@sortmacro@use Sort macro for 'use'. (No sorting is required, as the entries are already in order of use, so do nothing.)

```

5894 \newcommand*{\@glo@sortmacro@use}[1]{}

```

@noidx@glossary Glossary handler for \printnoidxglossary which doesn't use an indexing application. Since \printnoidxglossary may occur at the start of the document, we can't just check if an entry has been used. Instead, the first pass needs to write information to the aux file every time an entry is referenced. This needs to be read in on the second run and stored in a list corresponding to the appropriate glossary.

```

5895 \newcommand*{\@print@noidx@glossary}{%
5896   \ifcsdef{\@glsref@{\@glo@type}}%
5897   {%

```

Sort the entries:

```

5898   \ifcsdef{\@glo@sortmacro@\@glo@sorttype}%
5899   {%
5900     \csuse{\@glo@sortmacro@\@glo@sorttype}{\@glo@type}%
5901   }%
5902   {%
5903     \PackageError{glossaries}{Unknown sort handler '\@glo@sorttype'}{}%
5904   }%

```

Do the glossary heading and preamble

```
5905 \glossarysection[\glossarytoctitle]{\glossarytitle}%  
5906 \glossarypreamble
```

The glossary style might use a tabular-like environment, which may cause scoping problems when setting the current letter group. The predefined tabular-like styles don't support letter group headings, but there's nothing to stop the user from defining their own custom style that might, so any redefinition of this command within theglossary will have to be done globally.

```
5907 \def\@gls@currentlettergroup{%  
5908 \begin{theglossary}%  
5909 \glossaryheader  
5910 \glsresetentrylist
```

Iterate through the entries.

```
5911 \forlistcsloop{\@gls@noidx@do}{\@glsref@\@glo@type}%
```

Finally end the glossary and do the postamble:

```
5912 \end{theglossary}%  
5913 \glossarypostamble  
5914 }%  
5915 {%  
5916 \@gls@noref@warn{\@glo@type}%  
5917 }%  
5918 }
```

\glo@grabfirst

```
5919 \def\glo@grabfirst#1#2\@nil{%  
5920 \def\@gls@firsttok{#1}%  
5921 \ifdefempty\@gls@firsttok  
5922 {%  
5923 \def\@glo@thislettergrp{0}%  
5924 }%  
5925 {%
```

Sanitize it:

```
5926 \@onelevel@sanitize\@gls@firsttok
```

Fetch the first letter:

```
5927 \expandafter\@glo@grabfirst\@gls@firsttok{}{}\@nil  
5928 }%  
5929 }
```

\@glo@grabfirst

```
5930 \def\@glo@grabfirst#1#2\@nil{%  
5931 \ifdefempty\@glo@thislettergrp  
5932 {%  
5933 \def\@glo@thislettergrp{glssymbols}%  
5934 }%  
5935 {%  
5936 \count@=\uccode'#1\relax
```

```

5937 \ifnum\count@=0\relax
5938 \def\@glo@thislettergrp{glssymbols}%
5939 \else
5940 \ifdefstring\@glo@sorttype{case}%
5941 {%
5942 \count@=#1\relax
5943 }%
5944 {%
5945 }%
5946 \edef\@glo@thislettergrp{\the\count@}%
5947 \fi
5948 }%
5949 }

```

\@gls@noidx@do Handler for list iteration used by \@print@noidx@glossary. The argument is the entry label. This only allows one sublevel.

```

5950 \newcommand{\@gls@noidx@do}[1]{%

```

Get this entry's location list

```

5951 \global\letcs{\@gls@loclist}{glo@glstdetoklabel{#1}@loclist}%

```

Does this entry have a parent?

```

5952 \ifglshasparent{#1}%
5953 {%

```

Has a parent.

```

5954 \gls@level=\csuse{glo@glstdetoklabel{#1}@level}\relax
5955 \ifdefvoid{\@gls@loclist}
5956 {%
5957 \subglossentry{\gls@level}{#1}{}%
5958 }%
5959 {%
5960 \subglossentry{\gls@level}{#1}%
5961 {%
5962 \glossaryentrynumbers{\glsnoidxloclist{\@gls@loclist}}%
5963 }%
5964 }%
5965 }%
5966 {%

```

Doesn't have a parent Get this entry's sort key

```

5967 \letcs{\@gls@sort}{glo@glstdetoklabel{#1}@sort}%

```

Fetch the first letter:

```

5968 \expandafter\glo@grabfirst\@gls@sort{}\@nil
5969 \ifdefequal{\@glo@thislettergrp}{\@gls@currentlettergroup}%
5970 {}%
5971 {%

```

Do the group header:

```

5972 \ifdefempty{\@gls@currentlettergroup}{}%
5973 {%

```

The group skip may start a new scope, so make a global assignment.

```

5974      \global\let\@glo@thislettergrp\@glo@thislettergrp
5975      \glsgroupskip
5976    }%
5977      \glsgroupheading{\@glo@thislettergrp}%
5978    }%

5979    \global\let\@gls@currentlettergroup\@glo@thislettergrp

```

Do this entry:

```

5980    \ifdefvoid{\@gls@loclist}
5981    {%
5982      \glossentry{#1}{}%
5983    }%
5984    {%
5985      \glossentry{#1}%
5986      {%
5987        \glossaryentrynumbers{\glsnoidxloclist{\@gls@loclist}}%
5988      }%
5989    }%
5990  }%
5991 }

```

`\glsnoidxloclist` `\glsnoidxloclist{<list cs>}`

Display location list.

```

5992 \newcommand*{\glsnoidxloclist}[1]{%
5993   \def\@gls@noidxloclist@sep{}%
5994   \def\@gls@noidxloclist@prev{}%
5995   \forlistloop{\glsnoidxloclisthandler}{#1}%
5996 }

```

`xloclisthandler` Handler for location list iterator.

```

5997 \newcommand*{\glsnoidxloclisthandler}[1]{%
5998   \ifdefstring{\@gls@noidxloclist@prev}{#1}%
5999   {%

```

Same as previous location so skip.

```

6000 }%
6001 {%
6002   \@gls@noidxloclist@sep
6003   #1%
6004   \def\@gls@noidxloclist@sep{\delimN}%
6005   \def\@gls@noidxloclist@prev{#1}%
6006 }%
6007 }

```

`yloclisthandler` Handler for location list iterator when used with `\glsdisplaynumberlist`.


```

6008 \newcommand*{\glsnoidxdisplayloclisthandler}[1]{%
6009   \ifdefstring{\@gls@noidxloclist@prev}{#1}%
6010   {%
      Same as previous location so skip.
6011   }%
6012   {%
6013     \@gls@noidxloclist@sep
6014     \@gls@noidxloclist@prev
6015     \def\@gls@noidxloclist@prev{#1}%
6016   }%
6017 }

```

`\glsnoidxdisplayloc` `\glsnoidxdisplayloc{<prefix>}{<counter>}{<format>}{<location>}`

Display a location in the location list.

```

6018 \newcommand*\glsnoidxdisplayloc[4]{%
6019   \setentrycounter[#1]{#2}%
6020   \csuse{#3}{#4}%
6021 }

```

`\@gls@reference` `\@gls@reference{<type>}{<label>}{<loc>}`

Identifies that a reference has been used (for use in the aux file). All entries must be defined in the preamble.

```

6022 \newcommand*{\@gls@reference}[3]{%

```

Add to label list

```

6023   \glsdoifexistsorwarn{#2}%
6024   {%
6025     \ifcsundef{@glsref@#1}{\csgdef{@glsref@#1}{}}{}%
6026     \ifinlistcs{#2}{@glsref@#1}%
6027     {}%
6028     {\listcsgadd{@glsref@#1}{#2}}%

```

Add to location list

```

6029   \ifcsundef{glo@\glsdetoklabel{#2}@loclist}%
6030   {\csgdef{glo@\glsdetoklabel{#2}@loclist}{}}{}%
6031   {}%
6032   \listcsgadd{glo@\glsdetoklabel{#2}@loclist}{#3}%
6033 }%
6034 }

```

The keys that can be used in the optional argument to `\printglossary` or `\printnoidxglossary` are as follows: The type key sets the glossary type.

```

6035 \define@key{printgloss}{type}{\def\@glo@type{#1}}

```

The title key sets the title used in the glossary section header. This overrides the title used in `\newglossary`.

```
6036 \define@key{printgloss}{title}{%
6037   \def\glossarytitle{#1}%
6038   \let\gls@dotoc\title\relax
6039 }
```

The toctitle sets the text used for the relevant entry in the table of contents.

```
6040 \define@key{printgloss}{toctitle}{%
6041   \def\glossarytoctitle{#1}%
6042   \let\gls@dotoc\title\relax
6043 }
```

The style key sets the glossary style (but only for the given glossary).

```
6044 \define@key{printgloss}{style}{%
6045   \ifcsundef{@glsstyle@#1}%
6046   {%
6047     \PackageError{glossaries}%
6048     {Glossary style ‘#1’ undefined}{%
6049     }%
6050   }%
6051   \def\@glossarystyle{\setglossentrycompatibility
6052     \csname @glsstyle@#1\endcsname}%
6053   }%
6054 }
```

The numberedsection key determines if this glossary should be in a numbered section.

```
6055 \define@choicekey{printgloss}{numberedsection}[\val\nr]{%
6056   false,nolabel,autolabel,nameref}[nolabel]{%
6057     \ifcase\nr\relax
6058       \renewcommand*{\@glossarysecstar}{*}%
6059       \renewcommand*{\@glossaryseclabel}{}%
6060     \or
6061       \renewcommand*{\@glossarysecstar}{}%
6062       \renewcommand*{\@glossaryseclabel}{}%
6063     \or
6064       \renewcommand*{\@glossarysecstar}{}%
6065       \renewcommand*{\@glossaryseclabel}{\label{\glsautoprefix\@glo@type}}%
6066     \or
6067       \renewcommand*{\@glossarysecstar}{*}%
6068       \renewcommand*{\@glossaryseclabel}{%
6069         \protected@edef\@currentlabelname{\glossarytoctitle}%
6070         \label{\glsautoprefix\@glo@type}}%
6071     \fi
6072 }
```

The nogroupskip key determines whether or not there should be a vertical gap between glossary groups.

```
6073 \define@choicekey{printgloss}{nogroupskip}{true,false}[true]{%
6074   \csuse{glsnogroupskip#1}%
6075 }
```

The nopostdot key has the same effect as the package option of the same name.

```
6076 \define@choicekey{printgloss}{nopostdot}{true,false}[true]{%
6077   \csuse{glsnopostdot#1}%
6078 }
```

The entrycounter key is the same as the package option but localised to the current glossary.

```
6079 \define@choicekey{printgloss}{entrycounter}{true,false}[true]{%
6080   \csuse{glentrycounter#1}%
6081   \ifglentrycounter
6082     \ifx\@gls@counterwithin\@empty
6083       \newcounter{glossaryentry}%
6084     \else
6085       \newcounter{glossaryentry}[\@gls@counterwithin]%
6086     \fi
6087     \def\theHglossaryentry{\currentglossary.\theglossaryentry}%
6088     \renewcommand*{\glsresetentrycounter}{%
6089       \setcounter{glossaryentry}{0}%
6090     }%
6091     \renewcommand*{\glsstepentry}[1]{%
6092       \refstepcounter{glossaryentry}%
6093       \label{glsentry-\glsdetoklabel{##1}}%
6094     }%
6095     \renewcommand*{\glentrycounterlabel}{\theglossaryentry.\space}%
6096     \renewcommand*{\glentryitem}[1]{%
6097       \glsstepentry{##1}\glentrycounterlabel
6098     }%
6099   \else
6100     \renewcommand*{\glsresetentrycounter}{}%
6101     \renewcommand*{\glsstepentry}[1]{}%
6102     \renewcommand*{\glentrycounterlabel}{}%
6103     \renewcommand*{\glentryitem}[1]{\glsresetsubentrycounter}
6104   \fi
6105 }
```

The subentrycounter key is the same as the package option but localised to the current glossary. Note that this doesn't affect the master/slave counter attributes, which occurs if subentrycounter and entrycounter package options are set to true.

```
6106 \define@choicekey{printgloss}{subentrycounter}{true,false}[true]{%
6107   \csuse{glssubentrycounter#1}%
6108   \ifglssubentrycounter
6109     \ifundef\c@glossarysubentry
6110     {%
6111       \ifglentrycounter
6112         \newcounter{glossarysubentry}[glossaryentry]%
6113       \else
6114         \newcounter{glossarysubentry}
6115       \fi
6116     }{}%
6117     \renewcommand*{\glsstepsubentry}[1]{%
6118       \edef\currentglssubentry{\glsdetoklabel{##1}}%
```

```

6119     \refstepcounter{glossarysubentry}%
6120     \label{glsentry-\currentglssubentry}%
6121 }%
6122 \renewcommand*{\glsresetsubentrycounter}{%
6123     \setcounter{glossarysubentry}{0}%
6124 }%
6125 \renewcommand*{\glssubentryitem}[1]{%
6126     \glssubentry{##1}\glssubentrycounterlabel
6127 }%
6128 \renewcommand*{\glssubentrycounterlabel}{\theglossarysubentry\space}%
6129 \def\theHglossarysubentry{\currentglssubentry.\theglossarysubentry}
6130 \else
6131     \renewcommand*{\glssubentryitem}[1]{%
6132     \renewcommand*{\glssubentry}{[1]}%
6133     \renewcommand*{\glsresetsubentrycounter}{}%
6134     \renewcommand*{\glssubentrycounterlabel}{}%
6135 \fi
6136 }

```

The nonumberlist key determines if this glossary should have a number list.

```

6137 \define@boolkey{printgloss}[gls]{nonumberlist}[true]{%
6138 \ifglslnonumberlist
6139     \def\glossaryentrynumbers##1{%
6140 \else
6141     \def\glossaryentrynumbers##1{##1}%
6142 \fi}

```

The sort key sets the glossary sort handler (\printnoidxglossary only).

```

6143 \define@key{printgloss}{sort}{\@glo@assign@sortkey{#1}}

```

@assign@sortkey Issue error if used with \printglossary

```

6144 \newcommand*{\@glo@no@assign@sortkey}[1]{%
6145     \PackageError{glossaries}{'sort' key not permitted with
6146     \string\printglossary}%
6147     {The 'sort' key may only be used with \string\printnoidxglossary}%
6148 }

```

@assign@sortkey For use with \printnoidxglossary

```

6149 \newcommand*{\@glo@assign@sortkey}[1]{%
6150     \def\@glo@sorttype{#1}%
6151 }

```

@glslnonextpages Suppresses the next number list only. Global assignments required as it may not occur in the same level of grouping as the next numberlist. (For example, if \glslnonextpages is place in the entry's description and 3 column tabular style glossary is used.) \org@glossaryentrynumbers needs to be set at the start of each glossary, in the event that \glossaryentrynumber is re-defined.

```

6152 \newcommand*{\@glslnonextpages}{%
6153     \gdef\glossaryentrynumbers##1{%

```

```

6154 \glsresetentrylist
6155 }%
6156 }

```

`\@glsnextpages` Activate the next number list only. Global assignments required as it may not occur in the same level of grouping as the next numberlist. (For example, if `\glsnextpages` is place in the entry's description and 3 column tabular style glossary is used.) `\org@glossaryentrynumbers` needs to be set at the start of each glossary, in the event that `\glossaryentrynumber` is re-defined.

```

6157 \newcommand*{\@glsnextpages}{%
6158 \gdef\glossaryentrynumbers##1{%
6159 ##1\glsresetentrylist}}

```

`glsresetentrylist` Resets `\glossaryentrynumbers`

```

6160 \newcommand*{\glsresetentrylist}{%
6161 \global\let\glossaryentrynumbers\org@glossaryentrynumbers}

```

`\glsnonextpages` Outside of `\printglossary` this does nothing.

```

6162 \newcommand*{\glsnonextpages}{}

```

`\glsnextpages` Outside of `\printglossary` this does nothing.

```

6163 \newcommand*{\glsnextpages}{}

```

`glossaryentry` If the `entrycounter` package option has been used, define a counter to number each level 0 entry.

```

6164 \ifgl sentrycounter
6165 \ifx\@gls@counterwithin\@empty
6166 \newcounter{glossaryentry}
6167 \else
6168 \newcounter{glossaryentry}[\@gls@counterwithin]
6169 \fi
6170 \def\theHglossaryentry{\currentglossary.\theglossaryentry}
6171 \fi

```

`glossarysubentry` If the `subentrycounter` package option has been used, define a counter to number each level 1 entry.

```

6172 \ifglssubentrycounter
6173 \ifgl sentrycounter
6174 \newcounter{glossarysubentry}[glossaryentry]
6175 \else
6176 \newcounter{glossarysubentry}
6177 \fi
6178 \def\theHglossarysubentry{\currentglssubentry.\theglossarysubentry}
6179 \fi

```

`glsresetentrylist` Resets the `glossarysubentry` counter.

```

6180 \ifglssubentrycounter

```

```

6181 \newcommand*{\glsresetsubentrycounter}{%
6182   \setcounter{glossarysubentry}{0}%
6183 }
6184 \else
6185 \newcommand*{\glsresetsubentrycounter}{}
6186 \fi

```

subentrycounter Resets the glossaryentry counter.

```

6187 \ifglssentrycounter
6188 \newcommand*{\glsresetentrycounter}{%
6189   \setcounter{glossaryentry}{0}%
6190 }
6191 \else
6192 \newcommand*{\glsresetentrycounter}{}
6193 \fi

```

\glsstepentry Advance the glossaryentry counter if in use. The argument is the label associated with the entry.

```

6194 \ifglssentrycounter
6195 \newcommand*{\glsstepentry}[1]{%
6196   \refstepcounter{glossaryentry}%
6197   \label{glsentry-\glsdetoklabel{#1}}%
6198 }
6199 \else
6200 \newcommand*{\glsstepentry}[1]{}
6201 \fi

```

glsstepsubentry Advance the glossarysubentry counter if in use. The argument is the label associated with the subentry.

```

6202 \ifglsssubentrycounter
6203 \newcommand*{\glsstepsubentry}[1]{%
6204   \edef\currentglsssubentry{\glsdetoklabel{#1}}%
6205   \refstepcounter{glossarysubentry}%
6206   \label{glsentry-\currentglsssubentry}%
6207 }
6208 \else
6209 \newcommand*{\glsstepsubentry}[1]{}
6210 \fi

```

\glsrefentry Reference the entry or sub-entry counter if in use, otherwise just do \gls.

```

6211 \ifglssentrycounter
6212 \newcommand*{\glsrefentry}[1]{\ref{glsentry-\glsdetoklabel{#1}}}
6213 \else
6214 \ifglsssubentrycounter
6215 \newcommand*{\glsrefentry}[1]{\ref{glsentry-\glsdetoklabel{#1}}}
6216 \else
6217 \newcommand*{\glsrefentry}[1]{\gls{#1}}
6218 \fi
6219 \fi

```

`trycounterlabel` Defines how to display the `glossaryentry` counter.

```
6220 \ifglentrycounter
6221   \newcommand*{\glentrycounterlabel}{\theglossaryentry.\space}
6222 \else
6223   \newcommand*{\glentrycounterlabel}{}
6224 \fi
```

`trycounterlabel` Defines how to display the `glossarysubentry` counter.

```
6225 \ifglssubentrycounter
6226   \newcommand*{\glssubentrycounterlabel}{\theglossarysubentry}\space}
6227 \else
6228   \newcommand*{\glssubentrycounterlabel}{}
6229 \fi
```

`\glentryitem` Step and display `glossaryentry` counter, if appropriate.

```
6230 \ifglentrycounter
6231   \newcommand*{\glentryitem}[1]{%
6232     \glstepentry{#1}\glentrycounterlabel
6233   }
6234 \else
6235   \newcommand*{\glentryitem}[1]{\glresetsubentrycounter}
6236 \fi
```

`glssubentryitem` Step and display `glossarysubentry` counter, if appropriate.

```
6237 \ifglssubentrycounter
6238   \newcommand*{\glssubentryitem}[1]{%
6239     \glstepsubentry{#1}\glssubentrycounterlabel
6240   }
6241 \else
6242   \newcommand*{\glssubentryitem}[1]{}
6243 \fi
```

`theglossary` If the `theglossary` environment has already been defined, a warning will be issued. This environment should be redefined by glossary styles.

```
6244 \ifcsundef{theglossary}%
6245 {%
6246   \newenvironment{theglossary}{}{}%
6247 }%
6248 {%
6249   \@gls@warnontheglossdefined
6250   \renewenvironment{theglossary}{}{}%
6251 }
```

The glossary header is given by `\glossaryheader`. This forms part of the glossary style, and must indicate what should appear immediately after the start of the `theglossary` environment. (For example, if the glossary uses a tabular-like environment, it may be used to set the header row.) Note that if you don't want a header row, the glossary style must redefine `\glossaryheader` to do nothing.

`\glossaryheader`

```
6252 \newcommand*{\glossaryheader}{}%
```

`\glstarget` `\glstarget{<label>}{<name>}`

Provide user interface to `\glstarget` to make it easier to modify the glossary style in the document.

```
6253 \newcommand*{\glstarget}[2]{\@glstarget{\glo@linkprefix#1}{#2}}%
```

As from version 3.08, glossary information is now written to the external files using `\glossentry` and `\subglossentry` instead of `\glossaryentryfield` and `\glossarysubentryfield`. The default definition provides backward compatibility for glossary styles that use the old forms.

`\compatibleglossentry`

```
\glossentry{<label>}{<page-list>}
```

```
6254 \providecommand*{\compatibleglossentry}[2]{%
6255   \toks@{#2}%
6256   \protected@edef\@do@glossentry{\noexpand\glossaryentryfield{#1}%
6257     {\noexpand\glsnamefont
6258       {\expandafter\expandonce\csname glo@#1@name\endcsname}}}%
6259     {\expandafter\expandonce\csname glo@#1@desc\endcsname}%
6260     {\expandafter\expandonce\csname glo@#1@symbol\endcsname}%
6261     {\the\toks@}}%
6262   }%
6263   \@do@glossentry
6264 }
```

`\glossentryname`

```
6265 \newcommand*{\glossentryname}[1]{%
6266   \glsdoifexistsorwarn{#1}%
6267   {%
6268     \letcs{\glo@name}{\glo@\glsdetoklabel{#1}@name}%
6269     \expandafter\glsnamefont\expandafter{\glo@name}%
6270   }%
6271 }
```

`\Glossentryname`

```
6272 \newcommand*{\Glossentryname}[1]{%
6273   \glsdoifexistsorwarn{#1}%
6274   {%
6275     \glsnamefont{\Glsentryname{#1}}%
6276   }%
6277 }
```

`\glossentrydesc`

```
6278 \newcommand*{\glossentrydesc}[1]{%
```



```

6279 \glsdoifexistsorwarn{#1}%
6280 {%
6281     \glsentrydesc{#1}%
6282 }%
6283 }

```

\Glossentrydesc

```

6284 \newcommand*{\Glossentrydesc}[1]{%
6285     \glsdoifexistsorwarn{#1}%
6286     {%
6287         \Glsentrydesc{#1}%
6288     }%
6289 }

```

lossentrysymbol

```

6290 \newcommand*{\glossentrysymbol}[1]{%
6291     \glsdoifexistsorwarn{#1}%
6292     {%
6293         \glsentrysymbol{#1}%
6294     }%
6295 }

```

lossentrysymbol

```

6296 \newcommand*{\Glossentrysymbol}[1]{%
6297     \glsdoifexistsorwarn{#1}%
6298     {%
6299         \Glsentrysymbol{#1}%
6300     }%
6301 }

```

blesubglossentry

$\backslash\text{subglossentry}\{\langle level \rangle\}\{\langle label \rangle\}\{\langle page-list \rangle\}$

```

6302 \providecommand*{\compatiblesubglossentry}[3]{%
6303     \toks@{#3}%
6304     \protected@edef\@do@subglossentry{\noexpand\glossarysubentryfield{\number#1}%
6305         {#2}%
6306         {\noexpand\glsnamefont
6307             {\expandafter\expandonce\csname glo@#2@name\endcsname}}%
6308         {\expandafter\expandonce\csname glo@#2@desc\endcsname}%
6309         {\expandafter\expandonce\csname glo@#2@symbol\endcsname}%
6310         {\the\toks@}%
6311     }%
6312     \@do@subglossentry
6313 }

```

rycompatibility

```

6314 \newcommand*{\setglossentrycompatibility}{%

```

```

6315 \let\glossentry\compatibleglossentry
6316 \let\subglossentry\compatiblesubglossentry
6317 }
6318 \setglossentrycompatibility

```

glossaryentryfield \glossaryentryfield{<label>}{<name>}{<description>}{<symbol>}{<page-list>}

This command formerly governed how each entry row should be formatted in the glossary. Now deprecated.

```

6319 \newcommand{\glossaryentryfield}[5]{%
6320   \GlossariesWarning
6321   {Deprecated use of \string\glossaryentryfield.^^J
6322    I recommend you change to \string\glossentry.^^J
6323    If you've just upgraded, try removing your gls auxiliary
6324    files^^J and recompile}%
6325   \noindent\textbf{\glstarget{#1}{#2}} #4 #3. #5\par}

```

glossarysubentryfield \glossarysubentryfield{<level>}{<label>}{<name>}{<description>}{<symbol>}{<page-list>}

This command governs how each subentry should be formatted in the glossary. Glossary styles need to redefine this command. Most of the predefined styles ignore <symbol>. The first argument is a number indicating the level. (The level should be greater than or equal to 1.)

```

6326 \newcommand*{\glossarysubentryfield}[6]{%
6327   \GlossariesWarning
6328   {Deprecated use of \string\glossarysubentryfield.^^J
6329    I recommend you change to \string\subglossentry.^^J
6330    If you've just upgraded, try removing your gls auxiliary
6331    files^^J and recompile}%
6332   \glstarget{#2}{\strut}#4. #6\par}

```

Within each glossary, the entries form distinct groups which are determined by the first character of the sort key. When using makeindex, there will be a maximum of 28 groups: symbols, numbers, and the 26 alphabetical groups A, ..., Z. If you use xindy the groups will depend on whatever alphabet is used. This is determined by the language or custom alphabets can be created in the xindy style file. The command \glsgroupskip specifies what to do between glossary groups. Glossary styles must redefine this command. (Note that \glsgroupskip only occurs between groups, not at the start or end of the glossary.)

\glsgroupskip

```

6333 \newcommand*{\glsgroupskip}{}

```

Each of the 28 glossary groups described above is preceded by a group heading. This is formatted by the command \glsgroupheading which takes one argument which is the

label assigned to that group (not the title). The corresponding labels are: `glssymbols`, `glsnumbers`, `A`, ..., `Z`. Glossary styles must redefine this command. (In between groups, `\glsgroupheading` comes immediately after `\glsgroupskip`.)

`\glsgroupheading`

```
6334 \newcommand*{\glsgroupheading}[1]{}
```

It is possible to “trick” `makeindex` into treating entries as though they belong to the same group, even if the terms don’t start with the same letter, by modifying the sort key. For example, all entries belonging to one group could be defined so that the sort key starts with an `a`, while entries belonging to another group could be defined so that the sort key starts with a `b`, and so on. If you want each group to have a heading, you would then need to modify the translation control sequences `\glsgetgrouptitle` and `\glsgetgrouplabel` so that the label is translated into the required title (and vice-versa).

`\glsgetgrouptitle{<label>}`

This command produces the title for the glossary group whose label is given by `<label>`. By default, the group labelled `glssymbols` produces `\glssymbolsgroupname`, the group labelled `glsnumbers` produces `\glsnumbersgroupname` and all the other groups simply produce their label. As mentioned above, the group labels are: `glssymbols`, `glsnumbers`, `A`, ..., `Z`. If you want to redefine the group titles, you will need to redefine this command. Languages other than English may produce labels that are non-expandable, so we need to check for that otherwise it will create a “missing `\endcsname` inserted” error.

`\glsgetgrouptitle`

```
6335 \newcommand*{\glsgetgrouptitle}[1]{%
6336   \@gls@getgrouptitle{#1}{\@gls@grptitle}%
6337   \@gls@grptitle
6338 }
```

`\@gls@getgrouptitle` Gets the group title specified by the label (first argument) and stores in the second argument, which must be a control sequence.

```
6339 \newcommand*{\@gls@getgrouptitle}[2]{%
```

Even if the argument appears to be a single letter, it won’t be considered a single letter by `\dtl@ifsingle` if it’s an active character.

```
6340   \dtl@ifsingle{#1}%
6341   {%
6342     \ifcsundef{#1groupname}{\def#2{#1}}{\letcs#2{#1groupname}}%
6343   }%
6344   {%
6345     \ifboolexpr{test{\ifstrequal{#1}{glssymbols}}
6346               or test{\ifstrequal{#1}{glsnumbers}}}%
6347     {%
6348       \ifcsundef{#1groupname}{\def#2{#1}}{\letcs#2{#1groupname}}%
6349     }%
6350   }%
```

```

6351      \def#2{#1}%
6352    }%
6353  }%
6354 }

```

`x@getgrouptitle` Version for the no-indexing app option:

```

6355 \newcommand*{\@gls@noidx@getgrouptitle}[2]{%
6356   \DTLifint{#1}%
6357   {\edef#2{\char#1\relax}}%
6358   {%
6359     \ifcsundef{#1groupname}{\def#2{#1}}{\letcs#2{#1groupname}}%
6360   }%
6361 }

```

`\glsgetgrouplabel{<title>}`

This command does the reverse to the previous command. The argument is the group title, and it produces the group label. Note that if you redefine `\glsgetgrouptitle`, you will also need to redefine `\glsgetgrouplabel`.

`lsgetgrouplabel`

```

6362 \newcommand*{\glsgetgrouplabel}[1]{%
6363   \ifthenelse{\equal{#1}{\glssymbolsgroupname}}{\glssymbols}{%
6364   \ifthenelse{\equal{#1}{\glsnumbersgroupname}}{\glsnumbers}{#1}}

```

The command `\setentrycounter` sets the entry's associated counter (required by `\glshypernumber` etc.) `\glslink` and `\glsadd` encode the `\glossary` argument so that the relevant counter is set prior to the formatting command.

`setentrycounter`

```

6365 \newcommand*{\setentrycounter}[2] []{%
6366   \def\@glo@counterprefix{#1}%
6367   \ifx\@glo@counterprefix\@empty
6368     \def\@glo@counterprefix{.}%
6369   \else
6370     \def\@glo@counterprefix{.#1.}%
6371   \fi
6372   \def\glsentrycounter{#2}%
6373 }

```

The current glossary style can be set using `\setglossarystyle{<style>}`.

`etglossarystyle`

```

6374 \newcommand*{\setglossarystyle}[1]{%
6375   \ifcsundef{@glsstyle@#1}%
6376   {%
6377     \PackageError{glossaries}{Glossary style ‘#1’ undefined}{}%
6378   }%

```

```

6379 {%
6380   \csname @glsstyle@#1\endcsname
6381 }%

```

Set the default style if it's not already set.

```

6382 \ifx\@glossary@default@style\relax
6383   \protected@edef\@glossary@default@style{#1}%
6384 \fi
6385 }

```

`\glossarystyle`

```

6386 \newcommand*{\glossarystyle}[1]{%
6387   \ifcsundef{@glsstyle@#1}%
6388   {%
6389     \PackageError{glossaries}{Glossary style ‘#1’ undefined}{}%
6390   }%
6391   {%
6392     \GlossariesWarning
6393     {Deprecated command \string\glossarystyle.^^J
6394     I recommend you switch to \string\setglossarystyle\space unless
6395     you want to maintain backward compatibility}%
6396     \setglossentrycompatibility
6397     \csname @glsstyle@#1\endcsname

6398     \ifcsdef{@glscompstyle@#1}%
6399     {\setglossentrycompatibility\csuse{@glscompstyle@#1}}%
6400   }%
6401 }%

```

Set the default style if it isn't already set so that `\printglossary` can warn if the fallback style is in use.

```

6402 \ifx\@glossary@default@style\relax
6403   \protected@edef\@glossary@default@style{#1}%
6404 \fi
6405 }

```

`\newglossarystyle` New glossary styles can be defined using:

```
\newglossarystyle{<name>}{<definition>}
```

The *<definition>* argument should redefine `\theglossary`, `\glossaryheader`, `\glsgroupheading`, `\glossaryentryfield` and `\glsgroupskip` (see [section 1.19](#) for the definitions of predefined styles). Glossary styles should not redefine `\glossary preamble` and `\glossary postamble`, as the user should be able to switch between styles without affecting the pre- and postambles.

```

6406 \newcommand{\newglossarystyle}[2]{%
6407   \ifcsundef{@glsstyle@#1}%
6408   {%
6409     \expandafter\def\csname @glsstyle@#1\endcsname{#2}%

```

```

6410 }%
6411 {%
6412   \PackageError{glossaries}{Glossary style ‘#1’ is already defined}{}%
6413 }%
6414 }

```

`\newglossarystyle` Code for this macro supplied by Marco Daniel.

```

6415 \newcommand{\renewglossarystyle}[2]{%
6416   \ifcsundef{@glsstyle@#1}%
6417   {%
6418     \PackageError{glossaries}{Glossary style ‘#1’ isn’t already defined}{}%
6419   }%
6420   {%
6421     \csdef{@glsstyle@#1}{#2}%
6422   }%
6423 }

```

Glossary entries are encoded so that the second argument to `\glossaryentryfield` is always specified as `\glsnamefont{<name>}`. This allows the user to change the font used to display the name term without having to redefine `\glossaryentryfield`. The default uses the surrounding font, so in the list type styles (which place the name in the optional argument to `\item`) the name will appear in bold.

`\glsnamefont`

```

6424 \newcommand*{\glsnamefont}[1]{#1}

```

Each glossary entry has an associated number list (usually page numbers) that indicate where in the document the entry has been used. The format for these number lists can be changed using the format key in commands like `\glslink`. The default format is given by `\glshypernumber`. This takes a single argument which may be a single number, a number range or a number list. The number ranges are delimited with `\delimR`, the number lists are delimited with `\delimN`.

If the document doesn’t have hyperlinks, the numbers can be displayed just as they are, but if the document supports hyperlinks, the numbers should link to the relevant location. This means extracting the individual numbers from the list or ranges. The package does this with the `\hyperpage` command, but this is encoded for comma and dash delimiters and only for the page counter, but this code needs to be more general. So I have adapted the code used in the package.

`\glshypernumber`

```

6425 \ifcsundef{hyperlink}%
6426 {%
6427   \def\glshypernumber#1{#1}%
6428 }%
6429 {%
6430   \def\glshypernumber#1{\@glshypernumber#1\nohyperpage{}}\@nil}
6431 }

```

`\@glshypernumber` This code was provided by Heiko Oberdiek to allow material to be attached to the location.

```
6432 \def\@glshypernumber#1\nohyperpage#2#3\@nil{%
6433   \ifx\#1\%
6434   \else
6435     \@delimR#1\delimR\delimR\%
6436   \fi
6437   \ifx\#2\%
6438   \else
6439     #2%
6440   \fi
6441   \ifx\#3\%
6442   \else
6443     \@glshypernumber#3\@nil
6444   \fi
6445 }
```

`\@delimR` displays a range of numbers for the counter whose name is given by `\@gls@counter` (which must be set prior to using `\glshypernumber`).

`\@delimR`

```
6446 \def\@delimR#1\delimR #2\delimR #3\{%
6447 \ifx\#2\%
6448   \@delimN{#1}%
6449 \else
6450   \@gls@numberlink{#1}\delimR\@gls@numberlink{#2}%
6451 \fi}
```

`\@delimN` displays a list of individual numbers, instead of a range:

`\@delimN`

```
6452 \def\@delimN#1{\@delimN#1\delimN \delimN\}
6453 \def\@delimN#1\delimN #2\delimN#3\{%
6454 \ifx\#3\%
6455   \@gls@numberlink{#1}%
6456 \else
6457   \@gls@numberlink{#1}\delimN\@gls@numberlink{#2}%
6458 \fi
6459 }
```

The following code is modified from `hyperref's \HyInd@pagelink` where the name of the counter being used is given by `\@gls@counter`.

```
6460 \def\@gls@numberlink#1{%
6461 \begingroup
6462   \toks@={}%
6463   \@gls@removespaces#1 \@nil
6464 \endgroup}

6465 \def\@gls@removespaces#1 #2\@nil{%
6466   \toks@=\expandafter{\the\toks@#1}%
6467   \ifx\#2\%
```

```

6468 \edef\x{\the\toks@}%
6469 \ifx\x\empty
6470 \else
6471 \hyperlink{\glentrycounter\@glo@counterprefix\the\toks@}%
6472 {\the\toks@}%
6473 \fi
6474 \else
6475 \@gls@ReturnAfterFi{%
6476 \@gls@removespaces#2\@nil
6477 }%
6478 \fi
6479 }
6480 \long\def\@gls@ReturnAfterFi#1\fi{\fi#1}

```

The following commands will switch to the appropriate font, and create a hyperlink, if hyperlinks are supported. If hyperlinks are not supported, they will just display their argument in the appropriate font.

`\hyperrm`

```
6481 \newcommand*\hyperrm[1]{\textrm{\glshypernumber{#1}}}
```

`\hypersf`

```
6482 \newcommand*\hypersf[1]{\textsf{\glshypernumber{#1}}}
```

`\hypertt`

```
6483 \newcommand*\hypertt[1]{\texttt{\glshypernumber{#1}}}
```

`\hyperbf`

```
6484 \newcommand*\hyperbf[1]{\textbf{\glshypernumber{#1}}}
```

`\hypermd`

```
6485 \newcommand*\hypermd[1]{\textmd{\glshypernumber{#1}}}
```

`\hyperit`

```
6486 \newcommand*\hyperit[1]{\textit{\glshypernumber{#1}}}
```

`\hypersl`

```
6487 \newcommand*\hypersl[1]{\textsl{\glshypernumber{#1}}}
```

`\hyperup`

```
6488 \newcommand*\hyperup[1]{\textup{\glshypernumber{#1}}}
```

`\hypersc`

```
6489 \newcommand*\hypersc[1]{\textsc{\glshypernumber{#1}}}
```

`\hyperemph`

```
6490 \newcommand*\hyperemph[1]{\emph{\glshypernumber{#1}}}
```


1.17 Acronyms

`\oldacronym` `\oldacronym[⟨label⟩]{⟨abbrv⟩}{⟨long⟩}{⟨key-val list⟩}`

This emulates the way the old package defined acronyms. It is equivalent to `\newacronym[⟨key-val list⟩]{⟨label⟩}{⟨abbrv⟩}{⟨long⟩}` and it additionally defines the command `\⟨label⟩` which is equivalent to `\gls{⟨label⟩}` (thus `⟨label⟩` must only contain alphabetical characters). If `⟨label⟩` is omitted, `⟨abbrv⟩` is used. This only emulates the syntax of the old package. The way the acronyms appear in the list of acronyms is determined by the definition of `\newacronym` and the glossary style.

Note that `\⟨label⟩` can't have an optional argument if the package is loaded. If hasn't been loaded then you can do `\⟨label⟩[⟨insert⟩]` but you can't do `\⟨label⟩[⟨key-val list⟩]`. For example if you define the acronym `svm`, then you can do `\svm['s]` but you can't do `\svm[format=textbf]`. If the package is loaded, `\svm['s]` will appear as `svm ['s]` which is unlikely to be the desired result. In this case, you will need to use `\gls` explicitly, e.g. `\gls{svm}['s]`. Note that it is up to the user to load if desired.

```
6491 \newcommand{\oldacronym}[4][\gls@label]{%
6492   \def\gls@label{#2}%
6493   \newacronym[#4]{#1}{#2}{#3}%
6494   \ifcsundef{xspace}%
6495   {%
6496     \expandafter\edef\csname#1\endcsname{%
6497       \noexpand\@ifstar{\noexpand\Gls{#1}}{\noexpand\gls{#1}}}%
6498   }%
6499 }%
6500 {%
6501   \expandafter\edef\csname#1\endcsname{%
6502     \noexpand\@ifstar{\noexpand\Gls{#1}\noexpand\xspace}{%
6503       \noexpand\gls{#1}\noexpand\xspace}%
6504   }%
6505 }%
6506 }
```

`\newacronym[⟨key-val list⟩]{⟨label⟩}{⟨abbrv⟩}{⟨long⟩}`

This is a quick way of defining acronyms, using `\newglossaryentry` with the appropriate values. It sets the glossary type to `\acronymtype` which will be `acronym` if the package option `acronym` has been used, otherwise it will be the default glossary. Since `\newacronym` merely calls `\newglossaryentry`, the acronym is treated like any other glossary entry.

If you prefer a different format, you can redefine `\newacronym` as required. The optional argument can be used to override any of the settings.

This is just a stub. It's redefined by commands like `\SetDefaultAcronymStyle`.

`\newacronym`

```
6507 \newcommand{\newacronym}[4][{}]{}
```

Set up some convenient short cuts. These need to be changed if `\newacronym` is changed (or if the description key is changed).

`\acrpluralsuffix` Plural suffix used by `\newacronym`. This just defaults to `\glspluralsuffix` but is changed to include `\textup` if the `smallcaps` option is used, so that the suffix doesn't appear in small caps as it doesn't look right. For example, `ABCS` looks as though the “s” is part of the acronym, but `ABCS` looks as though the “s” is a plural suffix. Since the entire text `abcs` is set in `\textsc`, `\textup` is needed to cancel it out.

```
6508 \newcommand*{\acrpluralsuffix}{\glsacrpluralsuffix}
```

If `garamondx` has been loaded, need to use `\textulc` instead of `\textup`.

`\glstextup`

```
6509 \newrobustcmd*{\glstextup}[1]{\ifdef\textulc{\textulc{#1}}{\textup{#1}}}
```

The following are defined for compatibility with version 2.07 and earlier.

`\glsshortkey`

```
6510 \newcommand*{\glsshortkey}{short}
```

`\sshortpluralkey`

```
6511 \newcommand*{\glsshortpluralkey}{shortplural}
```

`\glslongkey`

```
6512 \newcommand*{\glslongkey}{long}
```

`\lslongpluralkey`

```
6513 \newcommand*{\glslongpluralkey}{longplural}
```

`\acrfull` Full form of the acronym.

```
6514 \newrobustcmd*{\acrfull}{\@gls@hyp@opt\@ns@acrfull}
```

```
6515 \newcommand*{\ns@acrfull}[2][]{\%
```

```
6516 \new@ifnextchar[{\@acrfull{#1}{#2}}{\%
```

```
6517 {\@acrfull{#1}{#2}[]}\%
```

```
6518 }
```

`\@acrfull` Low-level macro:

```
6519 \def\@acrfull#1#2[#3]{\%
```

Make it easier for acronym styles to change this:

```
6520 \acrfullfmt{#1}{#2}{#3}\%
```

```
6521 }
```

Using `\acrlinkfullformat` and `\acrfullformat` is now deprecated as it can cause complications with the first letter upper case variants, but the package needs to provide backward compatibility support.

```

\acrfullfmt   No case change full format.
6522 \newcommand*{\acrfullfmt}[3]{%
6523   \acrlinkfullformat{\@acrlong}{\@acrshort}{#1}{#2}{#3}%
6524 }

\acrlinkfullformat   Format for full links like \acrfull. Syntax: \acrlinkfullformat{<long cs>}{<short cs>}{<options>}{<label>}{<insert>}
6525 \newcommand{\acrlinkfullformat}[5]{%
6526   \acrfullformat{#1}{#3}{#4}[#5]{#2}{#3}{#4}[]}%
6527 }

\acrfullformat   Default full form is <long> (<short>).
6528 \newcommand{\acrfullformat}[2]{#1\glsspace(#2)}

\glsspace   Robust space to ensure it's written to the .glsdefs file.
6529 \newrobustcmd{\glsspace}{\space}

        Default format for full acronym

\Acrfull
6530 \newrobustcmd*{\Acrfull}{\@gls@hyp@opt\ns@Acrfull}

6531 \newcommand*{\ns@Acrfull}[2][]{%
6532   \new@ifnextchar[{\@Acrfull{#1}{#2}}%
6533     {\@Acrfull{#1}{#2}[]}%
6534 }

        Low-level macro:
6535 \def\@Acrfull#1#2[#3]{%

        Make it easier for acronym styles to change this:
6536   \Acrfullfmt{#1}{#2}{#3}%
6537 }

\Acrfullfmt   First letter upper case full format.
6538 \newcommand*{\Acrfullfmt}[3]{%
6539   \acrlinkfullformat{\@acrlong}{\@acrshort}{#1}{#2}{#3}%
6540 }

\ACRfull
6541 \newrobustcmd*{\ACRfull}{\@gls@hyp@opt\ns@ACRfull}

6542 \newcommand*{\ns@ACRfull}[2][]{%
6543   \new@ifnextchar[{\@ACRfull{#1}{#2}}%
6544     {\@ACRfull{#1}{#2}[]}%
6545 }

        Low-level macro:
6546 \def\@ACRfull#1#2[#3]{%

```

Make it easier for acronym styles to change this:

```
6547 \ACRfullfmt{#1}{#2}{#3}%  
6548 }
```

\ACRfullfmt All upper case full format.

```
6549 \newcommand*{\ACRfullfmt}[3]{%  
6550 \acrlinkfullformat{\@ACRlong}{\@ACRshort}{#1}{#2}{#3}%  
6551 }
```

Plural:

\acrfullpl

```
6552 \newrobustcmd*{\acrfullpl}{\@gls@hyp@opt\ns@acrfullpl}  
  
6553 \newcommand*\ns@acrfullpl[2][{}]{%  
6554 \new@ifnextchar[{\@acrfullpl{#1}{#2}}%  
6555 {\@acrfullpl{#1}{#2}[{}]}%  
6556 }
```

Low-level macro:

```
6557 \def\@acrfullpl#1#2[#3]{%
```

Make it easier for acronym styles to change this:

```
6558 \acrfullplfmt{#1}{#2}{#3}%  
6559 }
```

\acrfullplfmt No case change plural full format.

```
6560 \newcommand*{\acrfullplfmt}[3]{%  
6561 \acrlinkfullformat{\@acrlongpl}{\@acrshortpl}{#1}{#2}{#3}%  
6562 }
```

\Acrfullpl

```
6563 \newrobustcmd*{\Acrfullpl}{\@gls@hyp@opt\ns@Acrfullpl}  
  
6564 \newcommand*\ns@Acrfullpl[2][{}]{%  
6565 \new@ifnextchar[{\@Acrfullpl{#1}{#2}}%  
6566 {\@Acrfullpl{#1}{#2}[{}]}%  
6567 }
```

Low-level macro:

```
6568 \def\@Acrfullpl#1#2[#3]{%
```

Make it easier for acronym styles to change this:

```
6569 \Acrfullplfmt{#1}{#2}{#3}%  
6570 }
```

\Acrfullplfmt First letter upper case plural full format.

```
6571 \newcommand*{\Acrfullplfmt}[3]{%  
6572 \acrlinkfullformat{\@Acrlongpl}{\@acrshortpl}{#1}{#2}{#3}%  
6573 }
```

```

\ACRfullpl
6574 \newrobustcmd*{\ACRfullpl}{\@gls@hyp@opt\ns@ACRfullpl}

6575 \newcommand*\ns@ACRfullpl[2][{}]{%
6576   \new@ifnextchar[{\@ACRfullpl{#1}{#2}}{%
6577     {\@ACRfullpl{#1}{#2}[]}%
6578 }

```

Low-level macro:

```

6579 \def\@ACRfullpl#1#2[#3]{%
  Make it easier for acronym styles to change this:
6580   \ACRfullplfmt{#1}{#2}{#3}%
6581 }

```

```

\ACRfullplfmt  All upper case plural full format.
6582 \newcommand*{\ACRfullplfmt}[3]{%
6583   \acrlinkfullformat{\@ACRlongpl}{\@ACRshortpl}{#1}{#2}{#3}%
6584 }

```

1.18 Predefined acronym styles

```

\acronymfont  This is only used with the additional acronym styles:
6585 \newcommand{\acronymfont}[1]{#1}

```

```

firstacronymfont  This is only used with the additional acronym styles:
6586 \newcommand{\firstacronymfont}[1]{\acronymfont{#1}}

```

```

\acrnameformat  The styles that allow an additional description use \acrnameformat{<short>}{<long>} to de-
  termine what information is displayed in the name.
6587 \newcommand*{\acrnameformat}[2]{\acronymfont{#1}}

```

Define some tokens used by \newacronym:

```

\glskeylisttok
6588 \newtoks\glskeylisttok

```

```

\glslabeltok
6589 \newtoks\glslabeltok

```

```

\glsshorttok
6590 \newtoks\glsshorttok

```

```

\gslongtok
6591 \newtoks\gslongtok

```

```

\newacronymhook  Provide a hook for \newacronym:
6592 \newcommand*{\newacronymhook}{}

```

GenericNewAcronym New improved version of setting the acronym style.

```
6593 \newcommand*{\SetGenericNewAcronym}{%
```

Change the behaviour of \Glsentryname to workaround expansion issues that cause a problem for \makefirstuc

```
6594 \let\@Gls@entryname\@Gls@acrentryname
```

Change the way acronyms are defined:

```
6595 \renewcommand{\newacronym}[4][\{%
6596   \ifdefempty{\@glsacronymlists}%
6597   {%
6598     \def\@glo@type{\acronymtype}%
6599     \setkeys{glossentry}{##1}%
6600     \DeclareAcronymList{\@glo@type}%
6601   }%
6602 }%
6603 \glskeylisttok{##1}%
6604 \glslabeltok{##2}%
6605 \glsshorttok{##3}%
6606 \glslongtok{##4}%
6607 \newacronymhook
6608 \protected@edef\@do@newglossaryentry{%
6609   \noexpand\newglossaryentry{\the\glslabeltok}%
6610   {%
6611     type=\acronymtype,%
6612     name={\expandonce{\acronymentry{##2}}},%
6613     sort={\acronymssort{\the\glsshorttok}{\the\glslongtok}},%
6614     text={\the\glsshorttok},%
6615     short={\the\glsshorttok},%
6616     shortplural={\the\glsshorttok\noexpand\acrpluralsuffix},%
6617     long={\the\glslongtok},%
6618     longplural={\the\glslongtok\noexpand\acrpluralsuffix},%
6619     \GenericAcronymFields,%
6620     \the\glskeylisttok
6621   }%
6622 }%
6623 \@do@newglossaryentry
6624 }%
```

Make sure that \acrfull etc reflects the new style:

```
6625 \renewcommand*{\acrfullfmt}[3]{%
6626   \glslink[##1]{##2}{\genacrfullformat{##2}{##3}}}%
6627 \renewcommand*{\Acrfullfmt}[3]{%
6628   \glslink[##1]{##2}{\Genacrfullformat{##2}{##3}}}%
6629 \renewcommand*{\ACRfullfmt}[3]{%
6630   \glslink[##1]{##2}{%
6631     \mfirstucMakeUppercase{\genacrfullformat{##2}{##3}}}%
6632 \renewcommand*{\acrfullplfmt}[3]{%
6633   \glslink[##1]{##2}{\genplacrfullformat{##2}{##3}}}%
6634 \renewcommand*{\Acrfullplfmt}[3]{%
```

```

6635 \glslink{##1}{##2}{\Genplacrformat{##2}{##3}}}%
6636 \renewcommand*{\ACRfullplfmt}[3]{%
6637 \glslink{##1}{##2}{%
6638 \mfirstucMakeUppercase{\genplacrformat{##2}{##3}}}}%

```

Make sure that `\glsentryfull` etc reflects the new style:

```

6639 \renewcommand*{\glsentryfull}[1]{\genacrformat{##1}{}}%
6640 \renewcommand*{\Glsentryfull}[1]{\Genacrformat{##1}{}}%
6641 \renewcommand*{\glsentryfullpl}[1]{\genplacrformat{##1}{}}%
6642 \renewcommand*{\Glsentryfullpl}[1]{\Genplacrformat{##1}{}}%
6643 }

```

`\icAcronymFields` Fields used by `\SetGenericNewAcronym` that can be changed by the acronym style.

```

6644 \newcommand*{\GenericAcronymFields}{description={\the\glslongtok}}

```

`\acronymentry` `\acronymentry{<label>}`

Display style for the name field in the list of acronyms.

```

6645 \newcommand*{\acronymentry}[1]{\acronymfont{\glsentryshort{#1}}}

```

`\acronymsort` `\acronymsort{<short>}{<long>}`

Default sort format for acronyms.

```

6646 \newcommand*{\acronymsort}[2]{#1}

```

`\setacronymstyle` `\setacronymstyle{<style name>}`

```

6647 \newcommand*{\setacronymstyle}[1]{%
6648 \ifcsundef{@glsacr@dispstyle@#1}
6649 {%
6650 \PackageError{glossaries}{Undefined acronym style ‘#1’}{}%
6651 }%
6652 {%
6653 \ifdefempty{\@glsacronymlists}%
6654 {%
6655 \DeclareAcronymList{\acronymtype}%
6656 }%
6657 }%
6658 \SetGenericNewAcronym
6659 \GlsUseAcrStyleDefs{#1}%
6660 \@for\@gls@type:=\@glsacronymlists\do{%
6661 \defglsentryfmt[\@gls@type]{\GlsUseAcrEntryDispStyle{#1}}%
6662 }%
6663 }%
6664 }

```

\newacronymstyle	\newacronymstyle{<style name>}{<entry format definition>}{<display definitions>}
------------------	--

Defines a new acronym style called <style name>.

```

6665 \newcommand*{\newacronymstyle}[3]{%
6666   \ifcsdef{@glsacr@dispstyle@#1}%
6667   {%
6668     \PackageError{glossaries}{Acronym style ‘#1’ already exists}{}%
6669   }%
6670   {%
6671     \csdef{@glsacr@dispstyle@#1}{#2}%
6672     \csdef{@glsacr@styledefs@#1}{#3}%
6673   }%
6674 }
```

\renewacronymstyle Redefines the given acronym style.

```

6675 \newcommand*{\renewacronymstyle}[3]{%
6676   \ifcsdef{@glsacr@dispstyle@#1}%
6677   {%
6678     \csdef{@glsacr@dispstyle@#1}{#2}%
6679     \csdef{@glsacr@styledefs@#1}{#3}%
6680   }%
6681   {%
6682     \PackageError{glossaries}{Acronym style ‘#1’ doesn’t exist}{}%
6683   }%
6684 }
```

\rEntryDispStyle

```

6685 \newcommand*{\GlsUseAcrEntryDispStyle}[1]{\csuse{@glsacr@dispstyle@#1}}
```

\UseAcrStyleDefs

```

6686 \newcommand*{\GlsUseAcrStyleDefs}[1]{\csuse{@glsacr@styledefs@#1}}
```

Predefined acronym styles:

long-short <long> (<short>) acronym style.

```

6687 \newacronymstyle{long-short}%
6688 {%
```

Check for long form in case this is a mixed glossary.

```

6689   \ifglshaslong{\glslabel}{\glsgenacfmt}{\glsgenentryfmt}%
6690 }%
6691 {%
6692   \renewcommand*{\GenericAcronymFields}{description={\the\glslongtok}}%
6693   \renewcommand*{\genacrfullformat}[2]{%
6694     \glsentrylong{##1}##2\space
6695     (\protect\firstacronymfont{\glsentryshort{##1}})%
6696   }%
6697   \renewcommand*{\Genacrfullformat}[2]{%
```



```

6698 \Glsentrylong{##1}##2\space
6699 (\protect\firstacronymfont{\glsentryshort{##1}})%
6700 }%
6701 \renewcommand*{\genplacrfullformat}[2]{%
6702 \glsentrylongpl{##1}##2\space
6703 (\protect\firstacronymfont{\glsentryshortpl{##1}})%
6704 }%
6705 \renewcommand*{\Genplacrfullformat}[2]{%
6706 \Glsentrylongpl{##1}##2\space
6707 (\protect\firstacronymfont{\glsentryshortpl{##1}})%
6708 }%
6709 \renewcommand*{\acronymentry}[1]{\acronymfont{\glsentryshort{##1}}}%
6710 \renewcommand*{\acronymsort}[2]{##1}%
6711 \renewcommand*{\acronymfont}[1]{##1}%
6712 \renewcommand*{\firstacronymfont}[1]{\acronymfont{##1}}%
6713 \renewcommand*{\acrpluralsuffix}{\glspluralsuffix}%
6714 }

```

long-sp-short Similar to the previous style but allows the space between the long and short form to be customized.

```

6715 \newacronymstyle{long-sp-short}%
6716 {%
  Check for long form in case this is a mixed glossary.
6717 \ifglshaslong{\glslabel}{\glsgenacfmt}{\glsgenentryfmt}%
6718 }%
6719 {%
6720 \renewcommand*{\GenericAcronymFields}{description={\the\glslongtok}}%
6721 \renewcommand*{\genacrfullformat}[2]{%
6722 \glsentrylong{##1}##2\glsacspace{##1}%
6723 (\protect\firstacronymfont{\glsentryshort{##1}})%
6724 }%
6725 \renewcommand*{\Genacrfullformat}[2]{%
6726 \Glsentrylong{##1}##2\glsacspace{##1}%
6727 (\protect\firstacronymfont{\glsentryshort{##1}})%
6728 }%
6729 \renewcommand*{\genplacrfullformat}[2]{%
6730 \glsentrylongpl{##1}##2\glsacspace{##1}%
6731 (\protect\firstacronymfont{\glsentryshortpl{##1}})%
6732 }%
6733 \renewcommand*{\Genplacrfullformat}[2]{%
6734 \Glsentrylongpl{##1}##2\glsacspace{##1}%
6735 (\protect\firstacronymfont{\glsentryshortpl{##1}})%
6736 }%
6737 \renewcommand*{\acronymentry}[1]{\acronymfont{\glsentryshort{##1}}}%
6738 \renewcommand*{\acronymsort}[2]{##1}%
6739 \renewcommand*{\acronymfont}[1]{##1}%
6740 \renewcommand*{\firstacronymfont}[1]{\acronymfont{##1}}%
6741 \renewcommand*{\acrpluralsuffix}{\glspluralsuffix}%
6742 }

```

`\glsacspace` Space between long and short form for the above style. This uses a non-breakable space if the short form is less than 3em, otherwise it uses a regular space.

```
6743 \newcommand*{\glsacspace}[1]{%
6744   \settowidth{\dimen@}{(\firstacronymfont{\glsentryshort{#1}})}%
6745   \ifdim\dimen@<3em~\else\space\fi
6746 }
```

`short-long` *<short>* (*<long>*) acronym style.

```
6747 \newacronymstyle{short-long}%
6748 {%
  Check for long form in case this is a mixed glossary.
6749   \ifglshaslong{\glslabel}{\glsacspace}{\glsacspace}%
6750 }%
6751 {%
6752   \renewcommand*{\GenericAcronymFields}{description={\the\glslongtok}}%
6753   \renewcommand*{\genacrfullformat}[2]{%
6754     \protect\firstacronymfont{\glsentryshort{##1}}##2\space
6755     (\glsentrylong{##1})%
6756   }%
6757   \renewcommand*{\Genacrfullformat}[2]{%
6758     \protect\firstacronymfont{\Glsentryshort{##1}}##2\space
6759     (\glsentrylong{##1})%
6760   }%
6761   \renewcommand*{\genplacrfullformat}[2]{%
6762     \protect\firstacronymfont{\glsentryshortpl{##1}}##2\space
6763     (\glsentrylongpl{##1})%
6764   }%
6765   \renewcommand*{\Genplacrfullformat}[2]{%
6766     \protect\firstacronymfont{\Glsentryshortpl{##1}}##2\space
6767     (\glsentrylongpl{##1})%
6768   }%
6769   \renewcommand*{\acronymentry}[1]{\acronymfont{\glsentryshort{##1}}}%
6770   \renewcommand*{\acronymsort}[2]{##1}%
6771   \renewcommand*{\acronymfont}[1]{##1}%
6772   \renewcommand*{\firstacronymfont}[1]{\acronymfont{##1}}%
6773   \renewcommand*{\acrpluralsuffix}{\glspluralsuffix}%
6774 }
```

`long-sc-short` *<long>* (*\textsc{<short>}*) acronym style.

```
6775 \newacronymstyle{long-sc-short}%
6776 {%
6777   \GlsUseAcrEntryDispStyle{long-short}%
6778 }%
6779 {%
6780   \GlsUseAcrStyleDefs{long-short}%
6781   \renewcommand*{\acronymfont}[1]{\textsc{##1}}%
6782   \renewcommand*{\acrpluralsuffix}{\glsupacrpluralsuffix}%
6783 }
```

long-sm-short *<long>* (\textsmaller{<short>}) acronym style.

```

6784 \newacronymstyle{long-sm-short}%
6785 {%
6786   \GlsUseAcrEntryDisplayStyle{long-short}%
6787 }%
6788 {%
6789   \GlsUseAcrStyleDefs{long-short}%
6790   \renewcommand{\acronymfont}[1]{\textsmaller{##1}}%
6791   \renewcommand*{\acrpluralsuffix}{\glsacrpluralsuffix}%
6792 }

```

sc-short-long *<short>* (\textsc{<long>}) acronym style.

```

6793 \newacronymstyle{sc-short-long}%
6794 {%
6795   \GlsUseAcrEntryDisplayStyle{short-long}%
6796 }%
6797 {%
6798   \GlsUseAcrStyleDefs{short-long}%
6799   \renewcommand{\acronymfont}[1]{\textsc{##1}}%
6800   \renewcommand*{\acrpluralsuffix}{\glsupacrpluralsuffix}%
6801 }

```

sm-short-long *<short>* (\textsmaller{<long>}) acronym style.

```

6802 \newacronymstyle{sm-short-long}%
6803 {%
6804   \GlsUseAcrEntryDisplayStyle{short-long}%
6805 }%
6806 {%
6807   \GlsUseAcrStyleDefs{short-long}%
6808   \renewcommand{\acronymfont}[1]{\textsmaller{##1}}%
6809   \renewcommand*{\acrpluralsuffix}{\glsacrpluralsuffix}%
6810 }

```

long-short-desc *<long>* ({<short>}) acronym style that has an accompanying description (which the user needs to supply).

```

6811 \newacronymstyle{long-short-desc}%
6812 {%
6813   \GlsUseAcrEntryDisplayStyle{long-short}%
6814 }%
6815 {%
6816   \GlsUseAcrStyleDefs{long-short}%
6817   \renewcommand*{\GenericAcronymFields}{}%
6818   \renewcommand*{\acronymsort}[2]{##2}%
6819   \renewcommand*{\acronymentry}[1]{%
6820     \glsentrylong{##1}\space (\acronymfont{\glsentryshort{##1}})}%
6821 }

```

g-sp-short-desc *<long>* ({<short>}) acronym style that has an accompanying description (which the user needs to supply). The space between the long and short form is given by \glsacspace.

```

6822 \newacronymstyle{long-sp-short-desc}%
6823 {%
6824   \GlsUseAcrEntryDisplayStyle{long-sp-short}%
6825 }%
6826 {%
6827   \GlsUseAcrStyleDefs{long-sp-short}%
6828   \renewcommand*{\GenericAcronymFields}{}%
6829   \renewcommand*{\acronymsort}[2]{##2}%
6830   \renewcommand*{\acronymentry}[1]{%
6831     \glentrylong{##1}\glspacespace{##1}(\acronymfont{\glentryshort{##1}})}%
6832 }

```

g-sc-short-desc *<long>* (\textsc{<short>}) acronym style that has an accompanying description (which the user needs to supply).

```

6833 \newacronymstyle{long-sc-short-desc}%
6834 {%
6835   \GlsUseAcrEntryDisplayStyle{long-sc-short}%
6836 }%
6837 {%
6838   \GlsUseAcrStyleDefs{long-sc-short}%
6839   \renewcommand*{\GenericAcronymFields}{}%
6840   \renewcommand*{\acronymsort}[2]{##2}%
6841   \renewcommand*{\acronymentry}[1]{%
6842     \glentrylong{##1}\space (\acronymfont{\glentryshort{##1}})}%
6843 }

```

g-sm-short-desc *<long>* (\textsmaller{<short>}) acronym style that has an accompanying description (which the user needs to supply).

```

6844 \newacronymstyle{long-sm-short-desc}%
6845 {%
6846   \GlsUseAcrEntryDisplayStyle{long-sm-short}%
6847 }%
6848 {%
6849   \GlsUseAcrStyleDefs{long-sm-short}%
6850   \renewcommand*{\GenericAcronymFields}{}%
6851   \renewcommand*{\acronymsort}[2]{##2}%
6852   \renewcommand*{\acronymentry}[1]{%
6853     \glentrylong{##1}\space (\acronymfont{\glentryshort{##1}})}%
6854 }

```

short-long-desc *<short>* ({<long>}) acronym style that has an accompanying description (which the user needs to supply).

```

6855 \newacronymstyle{short-long-desc}%
6856 {%
6857   \GlsUseAcrEntryDisplayStyle{short-long}%
6858 }%
6859 {%
6860   \GlsUseAcrStyleDefs{short-long}%
6861   \renewcommand*{\GenericAcronymFields}{}%

```

```

6862 \renewcommand*{\acronymsort}[2]{##2}%
6863 \renewcommand*{\acronymentry}[1]{%
6864     \glsentrylong{##1}\space (\acronymfont{\glsentryshort{##1}})}%
6865 }

```

short-long-desc *<long>* (\textsc{<short>}) acronym style that has an accompanying description (which the user needs to supply).

```

6866 \newacronymstyle{sc-short-long-desc}%
6867 {%
6868     \GlsUseAcrEntryDispStyle{sc-short-long}%
6869 }%
6870 {%
6871     \GlsUseAcrStyleDefs{sc-short-long}%
6872     \renewcommand*{\GenericAcronymFields}{}%
6873     \renewcommand*{\acronymsort}[2]{##2}%
6874     \renewcommand*{\acronymentry}[1]{%
6875         \glsentrylong{##1}\space (\acronymfont{\glsentryshort{##1}})}%
6876 }

```

short-long-desc *<long>* (\textsmaller{<short>}) acronym style that has an accompanying description (which the user needs to supply).

```

6877 \newacronymstyle{sm-short-long-desc}%
6878 {%
6879     \GlsUseAcrEntryDispStyle{sm-short-long}%
6880 }%
6881 {%
6882     \GlsUseAcrStyleDefs{sm-short-long}%
6883     \renewcommand*{\GenericAcronymFields}{}%
6884     \renewcommand*{\acronymsort}[2]{##2}%
6885     \renewcommand*{\acronymentry}[1]{%
6886         \glsentrylong{##1}\space (\acronymfont{\glsentryshort{##1}})}%
6887 }

```

dua *<long>* only acronym style.

```

6888 \newacronymstyle{dua}%
6889 {%

```

Check for long form in case this is a mixed glossary.

```

6890 \ifdefempty\glscustomtext
6891 {%
6892     \ifglshaslong{\glslabel}%
6893     {%
6894         \glsifplural
6895         {%

```

Plural form:

```

6896         \glscapscase
6897         {%

```

Plural form, don't adjust case:

```
6898      \glentrylongpl{\glslabel}\glsinsert
6899      }%
6900      {%
```

Plural form, make first letter upper case:

```
6901      \Glentrylongpl{\glslabel}\glsinsert
6902      }%
6903      {%
```

Plural form, all caps:

```
6904      \mfirstucMakeUppercase
6905      {\glentrylongpl{\glslabel}\glsinsert}%
6906      }%
6907      }%
6908      {%
```

Singular form

```
6909      \glscapscase
6910      {%
```

Singular form, don't adjust case:

```
6911      \glentrylong{\glslabel}\glsinsert
6912      }%
6913      {%
```

Subsequent singular form, make first letter upper case:

```
6914      \Glentrylong{\glslabel}\glsinsert
6915      }%
6916      {%
```

Subsequent singular form, all caps:

```
6917      \mfirstucMakeUppercase
6918      {\glentrylong{\glslabel}\glsinsert}%
6919      }%
6920      }%
6921      }%
6922      {%
```

Not an acronym:

```
6923      \glsgenentryfmt
6924      }%
6925      }%
6926      {\glscustomtext\glsinsert}%
6927      }%
6928      {%
6929      \renewcommand*{\GenericAcronymFields}{description={\the\glslongtok}}%

6930      \renewcommand*{\acrfullfmt}[3]{%
6931      \glslink{##1}{##2}{\glentrylong{##2}##3\space
6932      (\acronymfont{\glentryshort{##2}})}}%
6933      \renewcommand*{\Acrfullfmt}[3]{%
```

```

6934 \glslink{##1}{##2}{\Glsentrylong{##2}##3\space
6935 (\acronymfont{\glsentryshort{##2}})}}}%
6936 \renewcommand*{\ACRfullfmt}[3]{%
6937 \glslink{##1}{##2}{%
6938 \mfirstucMakeUppercase{\glsentrylong{##2}##3\space
6939 (\acronymfont{\glsentryshort{##2}})}}}%

6940 \renewcommand*{\acrfullplfmt}[3]{%
6941 \glslink{##1}{##2}{\Glsentrylongpl{##2}##3\space
6942 (\acronymfont{\glsentryshortpl{##2}})}}}%

6943 \renewcommand*{\Acrfullplfmt}[3]{%
6944 \glslink{##1}{##2}{\Glsentrylongpl{##2}##3\space
6945 (\acronymfont{\glsentryshortpl{##2}})}}}%
6946 \renewcommand*{\ACRfullplfmt}[3]{%
6947 \glslink{##1}{##2}{%
6948 \mfirstucMakeUppercase{\glsentrylongpl{##2}##3\space
6949 (\acronymfont{\glsentryshortpl{##2}})}}}%
6950 \renewcommand*{\glsentryfull}[1]{%
6951 \glsentrylong{##1}\space(\acronymfont{\glsentryshort{##1}})%
6952 }%
6953 \renewcommand*{\Glsentryfull}[1]{%
6954 \Glsentrylong{##1}\space(\acronymfont{\glsentryshort{##1}})%
6955 }%
6956 \renewcommand*{\glsentryfullpl}[1]{%
6957 \glsentrylongpl{##1}\space(\acronymfont{\glsentryshortpl{##1}})%
6958 }%
6959 \renewcommand*{\Glsentryfullpl}[1]{%
6960 \Glsentrylongpl{##1}\space(\acronymfont{\glsentryshortpl{##1}})%
6961 }%
6962 \renewcommand*{\acronymentry}[1]{\acronymfont{\glsentryshort{##1}}}%
6963 \renewcommand*{\acronymsort}[2]{##1}%
6964 \renewcommand*{\acronymfont}[1]{##1}%
6965 \renewcommand*{\acrpluralsuffix}{\glsacrpluralsuffix}%
6966 }

```

dua-desc <long> only acronym style with user-supplied description.

```

6967 \newacronymstyle{dua-desc}%
6968 {%
6969 \GlsUseAcrEntryDispStyle{dua}%
6970 }%
6971 {%
6972 \GlsUseAcrStyleDefs{dua}%
6973 \renewcommand*{\GenericAcronymFields}{}%

6974 \renewcommand*{\acronymentry}[1]{\acronymfont{\glsentrylong{##1}}}%
6975 \renewcommand*{\acronymsort}[2]{##2}%
6976 }%

```

footnote *<short>*\footnote{*<long>*} acronym style.

```
6977 \newacronymstyle{footnote}%  
6978 {%
```

Check for long form in case this is a mixed glossary.

```
6979 \ifglshaslong{\glslabel}{\glsgenacfmt}{\glsgenentryfmt}%  
6980 }%  
6981 {%  
6982 \renewcommand*{\GenericAcronymFields}{description={\the\glslongtok}}%
```

Need to ensure hyperlinks are switched off on first use:

```
6983 \glshyperfirstfalse  
6984 \renewcommand*{\genacrfullformat}[2]{%  
6985 \protect\firstacronymfont{\glsentryshort{##1}}##2%  
6986 \protect\footnote{\glsentrylong{##1}}%  
6987 }%  
6988 \renewcommand*{\Genacrfullformat}[2]{%  
6989 \firstacronymfont{\Glseentryshort{##1}}##2%  
6990 \protect\footnote{\glseentrylong{##1}}%  
6991 }%  
6992 \renewcommand*{\genplacrfullformat}[2]{%  
6993 \protect\firstacronymfont{\glseentryshortpl{##1}}##2%  
6994 \protect\footnote{\glseentrylongpl{##1}}%  
6995 }%  
6996 \renewcommand*{\Genplacrfullformat}[2]{%  
6997 \protect\firstacronymfont{\Glseentryshortpl{##1}}##2%  
6998 \protect\footnote{\glseentrylongpl{##1}}%  
6999 }%  
7000 \renewcommand*{\acronymentry}[1]{\acronymfont{\glseentryshort{##1}}}%  
7001 \renewcommand*{\acronymsort}[2]{##1}%  
7002 \renewcommand*{\acronymfont}[1]{##1}%  
7003 \renewcommand*{\acrpluralsuffix}{\glssacrpluralsuffix}%
```

Don't use footnotes for \acrfull:

```
7004 \renewcommand*{\acrfullfmt}[3]{%  
7005 \glslink[##1]{##2}{\acronymfont{\glseentryshort{##2}}##3\space  
7006 (\glseentrylong{##2})}%  
7007 \renewcommand*{\Acrfullfmt}[3]{%  
7008 \glslink[##1]{##2}{\acronymfont{\Glseentryshort{##2}}##3\space  
7009 (\glseentrylong{##2})}%  
7010 \renewcommand*{\ACRfullfmt}[3]{%  
7011 \glslink[##1]{##2}{%  
7012 \mfirstucMakeUppercase{\acronymfont{\glseentryshort{##2}}##3\space  
7013 (\glseentrylong{##2})}}}%  
7014 \renewcommand*{\acrfullplfmt}[3]{%  
7015 \glslink[##1]{##2}{\acronymfont{\glseentryshortpl{##2}}##3\space  
7016 (\glseentrylongpl{##2})}%  
7017 \renewcommand*{\Acrfullplfmt}[3]{%  
7018 \glslink[##1]{##2}{\acronymfont{\Glseentryshortpl{##2}}##3\space  
7019 (\glseentrylongpl{##2})}%
```



```

7020 \renewcommand*{\ACRfullplfmt}[3]{%
7021   \glslink{##1}{##2}{%
7022     \mfirstucMakeUppercase{\acronymfont{\glsentryshortpl{##2}}##3\space
7023     (\glsentrylongpl{##2})}}}%

```

Similarly for \glsentryfull etc:

```

7024 \renewcommand*{\glsentryfull}[1]{%
7025   \acronymfont{\glsentryshort{##1}}\space(\glsentrylong{##1})}%
7026 \renewcommand*{\Glsentryfull}[1]{%
7027   \acronymfont{\Glsentryshort{##1}}\space(\glsentrylong{##1})}%
7028 \renewcommand*{\glsentryfullpl}[1]{%
7029   \acronymfont{\glsentryshortpl{##1}}\space(\glsentrylongpl{##1})}%
7030 \renewcommand*{\Glsentryfullpl}[1]{%
7031   \acronymfont{\Glsentryshortpl{##1}}\space(\glsentrylongpl{##1})}%
7032 }

```

footnote-sc \textsc{\<short>}\footnote{\<long>} acronym style.

```

7033 \newacronymstyle{footnote-sc}%
7034 {%
7035   \GlsUseAcrEntryDisplayStyle{footnote}%
7036 }%
7037 {%
7038   \GlsUseAcrStyleDefs{footnote}%
7039   \renewcommand{\acronymentry}[1]{\acronymfont{\glsentryshort{##1}}}
7040   \renewcommand{\acronymfont}[1]{\textsc{##1}}%
7041   \renewcommand*{\acrpluralsuffix}{\glsupacrpluralsuffix}%
7042 }%

```

footnote-sm \textsmaller{\<short>}\footnote{\<long>} acronym style.

```

7043 \newacronymstyle{footnote-sm}%
7044 {%
7045   \GlsUseAcrEntryDisplayStyle{footnote}%
7046 }%
7047 {%
7048   \GlsUseAcrStyleDefs{footnote}%
7049   \renewcommand{\acronymentry}[1]{\acronymfont{\glsentryshort{##1}}}
7050   \renewcommand{\acronymfont}[1]{\textsmaller{##1}}%
7051   \renewcommand*{\acrpluralsuffix}{\glsacrpluralsuffix}%
7052 }%

```

footnote-desc \<short>\footnote{\<long>} acronym style that has an accompanying description (which the user needs to supply).

```

7053 \newacronymstyle{footnote-desc}%
7054 {%
7055   \GlsUseAcrEntryDisplayStyle{footnote}%
7056 }%
7057 {%
7058   \GlsUseAcrStyleDefs{footnote}%
7059   \renewcommand*{\GenericAcronymFields}{}%

```

```

7060 \renewcommand*{\acronymsort}[2]{##2}%
7061 \renewcommand*{\acronymentry}[1]{%
7062   \glsentrylong{##1}\space (\acronymfont{\glsentryshort{##1}})}%
7063 }

```

ootnote-sc-desc \textsc{<short>}\footnote{<long>} acronym style that has an accompanying description (which the user needs to supply).

```

7064 \newacronymstyle{footnote-sc-desc}%
7065 {%
7066   \GlsUseAcrEntryDisplayStyle{footnote-sc}%
7067 }%
7068 {%
7069   \GlsUseAcrStyleDefs{footnote-sc}%
7070   \renewcommand*{\GenericAcronymFields}{}%
7071   \renewcommand*{\acronymsort}[2]{##2}%
7072   \renewcommand*{\acronymentry}[1]{%
7073     \glsentrylong{##1}\space (\acronymfont{\glsentryshort{##1}})}%
7074 }

```

ootnote-sm-desc \textsmaller{<short>}\footnote{<long>} acronym style that has an accompanying description (which the user needs to supply).

```

7075 \newacronymstyle{footnote-sm-desc}%
7076 {%
7077   \GlsUseAcrEntryDisplayStyle{footnote-sm}%
7078 }%
7079 {%
7080   \GlsUseAcrStyleDefs{footnote-sm}%
7081   \renewcommand*{\GenericAcronymFields}{}%
7082   \renewcommand*{\acronymsort}[2]{##2}%
7083   \renewcommand*{\acronymentry}[1]{%
7084     \glsentrylong{##1}\space (\acronymfont{\glsentryshort{##1}})}%
7085 }

```

AcronymSynonyms

```

7086 \newcommand*{\DefineAcronymSynonyms}{%

```

Short form

\acs

```

7087 \let\acs\acrshort

```

First letter uppercase short form

\Acs

```

7088 \let\Acs\Acrshort

```

Plural short form

\acsp

```

7089 \let\acsp\acrshortpl

```

First letter uppercase plural short form

\Acsp

7090 \let\Acsp\Acrshorttpl

Long form

\acl

7091 \let\acl\acrlong

Plural long form

\aclp

7092 \let\aclp\acrlongpl

First letter upper case long form

\Acl

7093 \let\Acl\Acrlong

First letter upper case plural long form

\Aclp

7094 \let\Aclp\Acrlongpl

Full form

\acf

7095 \let\acf\acrfull

Plural full form

\acfp

7096 \let\acfp\acrfullpl

First letter upper case full form

\Acf

7097 \let\Acf\Acrfull

First letter upper case plural full form

\Acfp

7098 \let\Acfp\Acrfullpl

Standard form

\ac

7099 \let\ac\gls

First upper case standard form

\Ac

7100 \let\Ac\Gls

Standard plural form

`\acp`

```
7101 \let\acp\glspl
```

Standard first letter upper case plural form

`\Acp`

```
7102 \let\Acp\Glspl
```

```
7103 }
```

Define synonyms if required

```
7104 \ifglsacrshortcuts
```

```
7105 \DefineAcronymSynonyms
```

```
7106 \fi
```

These commands for setting the style are now deprecated but are kept for backward compatibility.

`\glsAcronymDisplayStyle` Sets the default acronym display style for given glossary.

```
7107 \newcommand*{\SetDefaultAcronymDisplayStyle}[1]{%
```

```
7108 \defglsentryfmt[#1]{\glsentryfmt}%
```

```
7109 }
```

`\glsNewAcronymDef` Sets up the acronym definition for the default style. The information is provided by the tokens `\glslabeltok`, `\glsshorttok`, `\glslongtok` and `\glskeylisttok`.

```
7110 \newcommand*{\DefaultNewAcronymDef}{%
```

```
7111 \edef\@do@newglossaryentry{%
```

```
7112 \noexpand\newglossaryentry{\the\glslabeltok}%
```

```
7113 {%
```

```
7114 type=\acronymtype,%
```

```
7115 name={\the\glsshorttok},%
```

```
7116 sort={\the\glsshorttok},%
```

```
7117 text={\the\glsshorttok},%
```

```
7118 first={\acrfullformat{\the\glslongtok}{\the\glsshorttok}},%
```

```
7119 plural={\noexpand\expandonce\noexpand\@glo@shortpl},%
```

```
7120 firstplural={\acrfullformat{\noexpand\expandonce\noexpand\@glo@longpl}%
```

```
7121 {\noexpand\expandonce\noexpand\@glo@shortpl}},%
```

```
7122 short={\the\glsshorttok},%
```

```
7123 shortplural={\the\glsshorttok\noexpand\acrpluralsuffix},%
```

```
7124 long={\the\glslongtok},%
```

```
7125 longplural={\the\glslongtok\noexpand\acrpluralsuffix},%
```

```
7126 description={\the\glslongtok},%
```

```
7127 descriptionplural={\noexpand\expandonce\noexpand\@glo@longpl},%
```

Remaining options specified by the user:

```
7128 \the\glskeylisttok
```

```
7129 }%
```

```
7130 }%
```

```
7131 \let\@org@gls@assign@firstpl\gls@assign@firstpl
```

```

7132 \let\org@glsgls@assign@plural\glsgls@assign@plural
7133 \let\org@glsgls@assign@descplural\glsgls@assign@descplural
7134 \def\glsgls@assign@firstpl##1##2{%
7135   \@@glsgls@expand@field{##1}{firstpl}{##2}%
7136 }%
7137 \def\glsgls@assign@plural##1##2{%
7138   \@@glsgls@expand@field{##1}{plural}{##2}%
7139 }%
7140 \def\glsgls@assign@descplural##1##2{%
7141   \@@glsgls@expand@field{##1}{descplural}{##2}%
7142 }%
7143 \do@newglossaryentry
7144 \let\glsgls@assign@firstpl\org@glsgls@assign@firstpl
7145 \let\glsgls@assign@plural\org@glsgls@assign@plural
7146 \let\glsgls@assign@symbolplural\org@glsgls@assign@symbolplural
7147 }

```

ultAcronymStyle Set up the default acronym style:

```
7148 \newcommand*{\SetDefaultAcronymStyle}{%
```

Set the display style:

```

7149   \@for\@glsgls@type:=\@glsgls@acronymlists\do{%
7150     \SetDefaultAcronymDisplayStyle{\@glsgls@type}%
7151   }%

```

Set up the definition of `\newacronym`:

```
7152 \renewcommand{\newacronym}[4][\]{%
```

If user is just using the main glossary and hasn't identified it as a list of acronyms, then update.
(This is done to ensure backwards compatibility with versions prior to 2.04).

```

7153   \ifx\@glsgls@acronymlists\empty
7154     \def\@glo@type{\acronymtype}%
7155     \setkeys{glossentry}{##1}%
7156     \DeclareAcronymList{\@glo@type}%
7157     \SetDefaultAcronymDisplayStyle{\@glo@type}%
7158   \fi
7159   \glsglskeylisttok{##1}%
7160   \glsglslabeltok{##2}%
7161   \glsglsshorttok{##3}%
7162   \glsglslongtok{##4}%
7163   \newacronymhook
7164   \DefaultNewAcronymDef
7165 }%
7166 \renewcommand*{\acrpluralsuffix}{\glsglsacrpluralsuffix}%
7167 }

```

\acrfootnote Used by the footnote acronym styles.

```
7168 \newcommand*{\acrfootnote}[3]{\acrlinkfootnote{#1}{#2}{#3}}
```

acrlinkfootnote

```

7169 \newcommand*{\acrlinkfootnote}[3]{%
7170   \footnote{\glslink[#1]{#2}{#3}}%
7171 }

```

acrnolinkfootnote

```

7172 \newcommand*{\acrnolinkfootnote}[3]{%
7173   \footnote{#3}%
7174 }

```

acronymDisplayStyle Sets the acronym display style for given glossary for the description and footnote combination.

```

7175 \newcommand*{\SetDescriptionFootnoteAcronymDisplayStyle}[1]{%
7176   \def\glsentryfmt[#1]{%

7177     \ifdefempty\glscustomtext
7178     {%
7179       \ifglssused{\glslabel}%
7180       {%
7181         \acronymfont{\glsentryfmt}%
7182       }%
7183       {%
7184         \firstacronymfont{\glsentryfmt}%
7185         \ifglshassymbol{\glslabel}%
7186         {%
7187           \expandafter\protect\expandafter\acrfootnote\expandafter
7188             {\@gls@link@opts}{\@gls@link@label}%
7189           {%
7190             \glsifplural
7191               {\glsentrysymbolplural{\glslabel}}%
7192               {\glsentrysymbol{\glslabel}}%
7193             }%
7194           }%
7195         }%
7196       }%
7197     {\glscustomtext\glsinsert}%
7198   }%
7199 }

```

acronymNewAcronymDef

```

7200 \newcommand*{\DescriptionFootnoteNewAcronymDef}{%
7201   \edef\@do@newglossaryentry{%
7202     \noexpand\newglossaryentry{\the\glslabeltok}%
7203     {%
7204       type=\acronymtype,%
7205       name={\noexpand\acronymfont{\the\glsshorttok}},%
7206       sort={\the\glsshorttok},%
7207       first={\the\glsshorttok},%
7208       firstplural={\noexpand\expandonce\noexpand\@glo@shortpl},%
7209       text={\the\glsshorttok},%

```

```

7210 plural={\noexpand\expandonce\noexpand\@glo@shortpl},%
7211 short={\the\glsshorttok},%
7212 shortplural={\the\glsshorttok\noexpand\acrpluralsuffix},%
7213 long={\the\glslongtok},%
7214 longplural={\the\glslongtok\noexpand\acrpluralsuffix},%
7215 symbol={\the\glslongtok},%
7216 symbolplural={\noexpand\expandonce\noexpand\@glo@longpl},%
7217 \the\glskeylisttok
7218 }%
7219 }%
7220 \let\@org@gls@assign@firstpl\gls@assign@firstpl
7221 \let\@org@gls@assign@plural\gls@assign@plural
7222 \let\@org@gls@assign@symbolplural\gls@assign@symbolplural
7223 \def\gls@assign@firstpl##1##2{%
7224   \@gls@expand@field{##1}{firstpl}{##2}%
7225 }%
7226 \def\gls@assign@plural##1##2{%
7227   \@gls@expand@field{##1}{plural}{##2}%
7228 }%
7229 \def\gls@assign@symbolplural##1##2{%
7230   \@gls@expand@field{##1}{symbolplural}{##2}%
7231 }%
7232 \do@newglossaryentry
7233 \let\gls@assign@plural\@org@gls@assign@plural
7234 \let\gls@assign@firstpl\@org@gls@assign@firstpl
7235 \let\gls@assign@symbolplural\@org@gls@assign@symbolplural
7236 }

```

oteAcronymStyle If a description and footnote are both required, store the long form in the symbol key. Store the short form in text key. Note that since the long form is stored in the symbol key, if you want the long form to appear in the list of acronyms, you need to use a glossary style that displays the symbol key.

```

7237 \newcommand*{\SetDescriptionFootnoteAcronymStyle}{%
7238   \renewcommand{\newacronym}[4][\]{%
7239     \ifx\@glsacronymlists\@empty
7240       \def\@glo@type{\acronymtype}%
7241       \setkeys{glossentry}{##1}%
7242       \DeclareAcronymList{\@glo@type}%
7243       \SetDescriptionFootnoteAcronymDisplayStyle{\@glo@type}%
7244     \fi
7245     \glskeylisttok{##1}%
7246     \glslabeltok{##2}%
7247     \glsshorttok{##3}%
7248     \glslongtok{##4}%
7249     \newacronymhook
7250     \DescriptionFootnoteNewAcronymDef
7251   }%

```

If footnote package option is specified, set the first use to append the long form (stored in

symbol) as a footnote.

```
7252 \for\@gls@type:=\@glsacronymlists\do{%
7253   \SetDescriptionFootnoteAcronymDisplayStyle{\@gls@type}%
7254 }%
```

Redefine \acronymfont if small caps required. The plural suffix is set in an upright font so that it remains in normal lower case, otherwise it looks as though it's part of the acronym.

```
7255 \ifglsacrsmallcaps
7256   \renewcommand*{\acronymfont}[1]{\textsc{##1}}%
7257   \renewcommand*{\acrpluralsuffix}{\glsupacrpluralsuffix}%
7258 \else
7259   \ifglsacrsmaller
7260     \renewcommand*{\acronymfont}[1]{\textsmaller{##1}}%
7261   \fi
7262 \fi
```

Check for package option clash

```
7263 \ifglsacrdua
7264   \PackageError{glossaries}{Option clash: ‘footnote’ and ‘dua’
7265     can’t both be set}{}%
7266 \fi
7267 }%
```

nymDisplayStyle Sets the acronym display style for given glossary with description and dua combination.

```
7268 \newcommand*{\SetDescriptionDUAAcronymDisplayStyle}[1]{%
7269   \defglsentryfmt[##1]{\glsentryfmt}%
7270 }
```

UANewAcronymDef

```
7271 \newcommand*{\DescriptionDUANewAcronymDef}{%
7272   \edef\@do@newglossaryentry{%
7273     \noexpand\newglossaryentry{\the\glslabeltok}%
7274     {%
7275       type=\acronymtype,%
7276       name={\the\glslongtok},%
7277       sort={\the\glslongtok},%
7278       text={\the\glslongtok},%
7279       first={\the\glslongtok},%
7280       plural={\noexpand\expandonce\noexpand\@glo@longpl},%
7281       firstplural={\noexpand\expandonce\noexpand\@glo@longpl},%
7282       short={\the\glsshorttok},%
7283       shortplural={\the\glsshorttok\noexpand\acrpluralsuffix},%
7284       long={\the\glslongtok},%
7285       longplural={\the\glslongtok\noexpand\acrpluralsuffix},%
7286       symbol={\the\glsshorttok},%
7287       symbolplural={\noexpand\expandonce\noexpand\@glo@shortpl},%
7288       \the\glskeylisttok
7289     }%
7290   }%
```



```

7291 \let\@org@gl@s@assign@firstpl\gl@s@assign@firstpl
7292 \let\@org@gl@s@assign@plural\gl@s@assign@plural
7293 \let\@org@gl@s@assign@symbolplural\gl@s@assign@symbolplural
7294 \def\gl@s@assign@firstpl##1##2{%
7295   \@@gl@s@expand@field{##1}{firstpl}{##2}%
7296 }%
7297 \def\gl@s@assign@plural##1##2{%
7298   \@@gl@s@expand@field{##1}{plural}{##2}%
7299 }%
7300 \def\gl@s@assign@symbolplural##1##2{%
7301   \@@gl@s@expand@field{##1}{symbolplural}{##2}%
7302 }%
7303 \do@newglossaryentry
7304 \let\gl@s@assign@firstpl\@org@gl@s@assign@firstpl
7305 \let\gl@s@assign@plural\@org@gl@s@assign@plural
7306 \let\gl@s@assign@symbolplural\@org@gl@s@assign@symbolplural
7307 }

```

DUAACronymStyle Description, don't use acronym and no footnote. Note that the short form is stored in the symbol key, so if the short form needs to be displayed in the glossary, use a style the displays the symbol.

```

7308 \newcommand*{\SetDescriptionDUAACronymStyle}{%
7309   \ifgl@sacrsmallcaps
7310     \PackageError{glossaries}{Option clash: 'smallcaps' and 'dua'
7311       can't both be set}{}%
7312   \else
7313     \ifgl@sacrsmaller
7314       \PackageError{glossaries}{Option clash: 'smaller' and 'dua'
7315         can't both be set}{}%
7316     \fi
7317   \fi
7318   \renewcommand{\newacronym}[4][{}]{%
7319     \ifx\@gl@sacronymlists\@empty
7320       \def\@glo@type{\acronymtype}%
7321       \setkeys{glossentry}{##1}%
7322       \DeclareAcronymList{\@glo@type}%
7323       \SetDescriptionDUAACronymDisplayStyle{\@glo@type}%
7324     \fi
7325     \gl@keylisttok{##1}%
7326     \gl@labeltok{##2}%
7327     \gl@shorttok{##3}%
7328     \gl@longtok{##4}%
7329     \newacronymhook
7330     \DescriptionDUANewAcronymDef
7331   }%

```

Set display.

```

7332 \@for\@gl@s@type:=\@gl@sacronymlists\do{%
7333   \SetDescriptionDUAACronymDisplayStyle{\@gl@s@type}%

```

```

7334 }%
7335 }%

```

nymDisplayStyle Sets the acronym display style for given glossary using the description setting (but not footnote or dua).

```

7336 \newcommand*{\SetDescriptionAcronymDisplayStyle}[1]{%
7337   \def\glsentryfmt[#1]{%

7338     \ifdefempty\glscustomtext
7339     {%
7340       \ifglssused{\glslabel}%
7341       {%

```

Move the inserted text outside of \acronymfont

```

7342       \let\gls@org@insert\glsinsert
7343       \let\glsinsert\@empty
7344       \acronymfont{\glsentryfmt}\gls@org@insert
7345     }%
7346     {%
7347       \glsentryfmt
7348       \ifglshassymbol{\glslabel}%
7349       {%
7350         \glsifplural
7351         {%
7352           \def\@glo@symbol{\glsentrysymbolplural{\glslabel}}%
7353           }%
7354           {%
7355             \def\@glo@symbol{\glsentrysymbol{\glslabel}}%
7356             }%
7357             \space(\protect\firstacronymfont
7358             {\glscapscase
7359              {\@glo@symbol}
7360              {\@glo@symbol}
7361              {\mfirstucMakeUppercase{\@glo@symbol}}})%
7362           }%
7363           {}%
7364         }%
7365       }%
7366     {\glscustomtext\glsinsert}%
7367   }%
7368 }

```

onNewAcronymDef

```

7369 \newcommand*{\DescriptionNewAcronymDef}{%
7370   \edef\@do@newglossaryentry{%
7371     \noexpand\newglossaryentry{\the\glslabeltok}%
7372     {%
7373       type=\acronymtype,%
7374       name={\noexpand

```

```

7375     \acronymformat{\the\glsshorttok}{\the\glslongtok}},%
7376     sort={\the\glsshorttok},%
7377     first={\the\glslongtok},%
7378     firstplural={\noexpand\expandonce\noexpand\@glo@longpl},%
7379     text={\the\glsshorttok},%
7380     plural={\noexpand\expandonce\noexpand\@glo@shortpl},%
7381     short={\the\glsshorttok},%
7382     shortplural={\the\glsshorttok\noexpand\acrpluralsuffix},%
7383     long={\the\glslongtok},%
7384     longplural={\the\glslongtok\noexpand\acrpluralsuffix},%
7385     symbol={\noexpand\@glo@text},%
7386     symbolplural={\noexpand\expandonce\noexpand\@glo@shortpl},%
7387     \the\glskeylisttok}%
7388 }%
7389 \let\@org@gls@assign@firstpl\gls@assign@firstpl
7390 \let\@org@gls@assign@plural\gls@assign@plural
7391 \let\@org@gls@assign@symbolplural\gls@assign@symbolplural
7392 \def\gls@assign@firstpl##1##2{%
7393   \@gls@expand@field{##1}{firstpl}{##2}%
7394 }%
7395 \def\gls@assign@plural##1##2{%
7396   \@gls@expand@field{##1}{plural}{##2}%
7397 }%
7398 \def\gls@assign@symbolplural##1##2{%
7399   \@gls@expand@field{##1}{symbolplural}{##2}%
7400 }%
7401 \do@newglossaryentry
7402 \let\gls@assign@firstpl\@org@gls@assign@firstpl
7403 \let\gls@assign@plural\@org@gls@assign@plural
7404 \let\gls@assign@symbolplural\@org@gls@assign@symbolplural
7405 }

```

ionAcronymStyle Option description is used, but not dua or footnote. Store long form in first key and short form in text and symbol key. The name is stored using \acronymformat to allow the user to override the way the name is displayed in the list of acronyms.

```

7406 \newcommand*\SetDescriptionAcronymStyle{%
7407   \renewcommand{\newacronym}[4][]{%
7408     \ifx\@glsacronymlists\@empty
7409       \def\@glo@type{\acronymtype}%
7410       \setkeys{glossentry}{##1}%
7411       \DeclareAcronymList{\@glo@type}%
7412       \SetDescriptionAcronymDisplayStyle{\@glo@type}%
7413     \fi
7414     \glskeylisttok{##1}%
7415     \glslabeltok{##2}%
7416     \glsshorttok{##3}%
7417     \glslongtok{##4}%
7418     \newacronymhook
7419     \DescriptionNewAcronymDef

```

7420 }%

Set display.

7421 \@for\@gls@type:=\@glsacronymlists\do{%

7422 \SetDescriptionAcronymDisplayStyle{\@gls@type}%

7423 }%

Redefine \acronymfont if small caps required. The plural suffix is set in an upright font so that it remains in normal lower case, otherwise it looks as though it's part of the acronym.

7424 \ifglsacrsmallcaps

7425 \renewcommand{\acronymfont}[1]{\textsc{##1}}

7426 \renewcommand*{\acrpluralsuffix}{\glsupacrpluralsuffix}%

7427 \else

7428 \ifglsacrsmaller

7429 \renewcommand*{\acronymfont}[1]{\textsmaller{##1}}%

7430 \fi

7431 \fi

7432 }%

nymDisplayStyle Sets the acronym display style for given glossary with footnote setting (but not description or dua).

7433 \newcommand*{\SetFootnoteAcronymDisplayStyle}[1]{%

7434 \defglsentryfmt[#1]{%

7435 \ifdefempty\glscustomtext

7436 {%

Move the inserted text outside of \acronymfont

7437 \let\gls@org@insert\glsinsert

7438 \let\glsinsert\@empty

7439 \ifglsused{\glslabel}%

7440 {%

7441 \acronymfont{\glsgenentryfmt}\gls@org@insert

7442 }%

7443 {%

7444 \firstacronymfont{\glsgenentryfmt}\gls@org@insert

7445 \ifglsahaslong{\glslabel}%

7446 {%

7447 \expandafter\protect\expandafter\acrfootnote\expandafter

7448 {\@gls@link@opts}{\@gls@link@label}%

7449 {%

7450 \glsifplural

7451 {\glsentrylongpl{\glslabel}}%

7452 {\glsentrylong{\glslabel}}%

7453 }%

7454 }%

7455 {}%

7456 }%

7457 }%

```

7458     {\glscustomtext\glsinsert}%
7459   }%
7460 }

```

teNewAcronymDef

```

7461 \newcommand*{\FootnoteNewAcronymDef}{%
7462   \edef\@do@newglossaryentry{%
7463     \noexpand\newglossaryentry{\the\glslabeltok}%
7464     {%
7465       type=\acronymtype,%
7466       name={\noexpand\acronymfont{\the\glsshorttok}},%
7467       sort={\the\glsshorttok},%
7468       text={\the\glsshorttok},%
7469       plural={\noexpand\expandonce\noexpand\@glo@shortpl},%
7470       first={\the\glsshorttok},%
7471       firstplural={\noexpand\expandonce\noexpand\@glo@shortpl},%
7472       short={\the\glsshorttok},%
7473       shortplural={\the\glsshorttok\noexpand\acrpluralsuffix},%
7474       long={\the\glslongtok},%
7475       longplural={\the\glslongtok\noexpand\acrpluralsuffix},%
7476       description={\the\glslongtok},%
7477       descriptionplural={\noexpand\expandonce\noexpand\@glo@longpl},%
7478       \the\glskeylisttok
7479     }%
7480   }%
7481   \let\@org@gls@assign@plural\gls@assign@plural
7482   \let\@org@gls@assign@firstpl\gls@assign@firstpl
7483   \let\@org@gls@assign@descplural\gls@assign@descplural
7484   \def\gls@assign@firstpl##1##2{%
7485     \@@gls@expand@field{##1}{firstpl}{##2}%
7486   }%
7487   \def\gls@assign@plural##1##2{%
7488     \@@gls@expand@field{##1}{plural}{##2}%
7489   }%
7490   \def\gls@assign@descplural##1##2{%
7491     \@@gls@expand@field{##1}{descplural}{##2}%
7492   }%
7493   \@do@newglossaryentry
7494   \let\gls@assign@plural\@org@gls@assign@plural
7495   \let\gls@assign@firstpl\@org@gls@assign@firstpl
7496   \let\gls@assign@descplural\@org@gls@assign@descplural
7497 }

```

oteAcronymStyle If footnote package option is specified, set the first use to append the long form (stored in description) as a footnote. Use the description key to store the long form.

```

7498 \newcommand*{\SetFootnoteAcronymStyle}{%
7499   \renewcommand{\newacronym}[4][\]{%
7500     \ifx\@glsacronymlists\empty
7501       \def\@glo@type{\acronymtype}%

```

```

7502     \setkeys{glossentry}{##1}%
7503     \DeclareAcronymList{\@glo@type}%
7504     \SetFootnoteAcronymDisplayStyle{\@glo@type}%
7505     \fi
7506     \glskeylisttok{##1}%
7507     \glslabeltok{##2}%
7508     \glsshorttok{##3}%
7509     \glslongtok{##4}%
7510     \newacronymhook
7511     \FootnoteNewAcronymDef
7512 }%

```

Set display

```

7513 \@for\@gls@type:=\@glsacronymlists\do{%
7514   \SetFootnoteAcronymDisplayStyle{\@gls@type}%
7515 }%

```

Redefine `\acronymfont` if small caps required. The plural suffix is set in an upright font so that it remains in normal lower case, otherwise it looks as though it's part of the acronym.

```

7516 \ifglsacrsmallcaps
7517   \renewcommand*{\acronymfont}[1]{\textsc{##1}}%
7518   \renewcommand*{\acrpluralsuffix}{\glsupacrpluralsuffix}%
7519 \else
7520   \ifglsacrsmaller
7521     \renewcommand*{\acronymfont}[1]{\textsmaller{##1}}%
7522   \fi
7523 \fi

```

Check for option clash

```

7524 \ifglsacrdua
7525   \PackageError{glossaries}{Option clash: ‘footnote’ and ‘dua’
7526     can’t both be set}{}%
7527 \fi
7528 }%

```

`\parenifnotempty` Do a space followed by the argument if the argument doesn't expand to empty or `\relax`. If argument isn't empty (or `\relax`), apply the macro to it given in the second argument.

```

7529 \DeclareRobustCommand*\glsdoparenifnotempty[2]{%
7530   \protected@edef\gls@tmp{##1}%
7531   \ifdefempty\gls@tmp
7532   {}%
7533   {%
7534     \ifx\gls@tmp\@gls@default@value
7535     \else
7536       \space (#2{##1})%
7537     \fi
7538   }%
7539 }

```

`\nymDisplayStyle` Sets the acronym display style for given glossary where neither footnote nor description is required, but smallcaps or smaller specified.

```

7540 \newcommand*{\SetSmallAcronymDisplayStyle}[1]{%
7541   \def\glsentryfmt[#1]{%

7542     \ifdefempty\glscustomtext
7543     {%

      Move the inserted text outside of \acronymfont

7544       \let\gls@org@insert\glsinsert
7545       \let\glsinsert\@empty
7546       \ifglsused{\glslabel}%
7547       {%
7548         \acronymfont{\glsentryfmt}\gls@org@insert
7549       }%
7550       {%
7551         \glsentryfmt
7552         \ifgls hassymbol{\glslabel}%
7553         {%
7554           \glsifplural
7555           {%
7556             \def\@glo@symbol{\glsentrysymbolplural{\glslabel}}%
7557           }%
7558           {%
7559             \def\@glo@symbol{\glsentrysymbol{\glslabel}}%
7560           }%
7561           \space
7562           (\gls caps case
7563             {\firstacronymfont{\@glo@symbol}}%
7564             {\firstacronymfont{\@glo@symbol}}%
7565             {\firstacronymfont{\mfirstucMakeUppercase{\@glo@symbol}}})%
7566           }%
7567         }%
7568       }%
7569     }%
7570   {\gls customtext\glsinsert}%
7571 }%
7572 }
```

`\llNewAcronymDef`

```

7573 \newcommand*{\SmallNewAcronymDef}{%
7574   \edef\@do@newglossaryentry{%
7575     \noexpand\newglossaryentry{\the\glslabeltok}%
7576     {%
7577       type=\acronymtype,%
7578       name={\noexpand\acronymfont{\the\glsshorttok}},%
7579       sort={\the\glsshorttok},%
7580       text={\the\glsshorttok},%
```

Default to the short plural.

```

7581 plural={\noexpand\expandonce\noexpand\@glo@shortpl},%
7582 first={\the\glslongtok},%
    Default to the long plural.
7583 firstplural={\noexpand\expandonce\noexpand\@glo@longpl},%
7584 short={\the\glsshorttok},%
7585 shortplural={\the\glsshorttok\noexpand\acrpluralsuffix},%
7586 long={\the\glslongtok},%
7587 longplural={\the\glslongtok\noexpand\acrpluralsuffix},%
7588 description={\noexpand\@glo@first},%
7589 descriptionplural={\noexpand\expandonce\noexpand\@glo@longpl},%
7590 symbol={\the\glsshorttok},%
    Default to the short plural.
7591 symbolplural={\noexpand\expandonce\noexpand\@glo@shortpl},%
7592 \the\glskeylisttok
7593 }%
7594 }%
7595 \let\@org@gls@assign@firstpl\gls@assign@firstpl
7596 \let\@org@gls@assign@plural\gls@assign@plural
7597 \let\@org@gls@assign@descplural\gls@assign@descplural
7598 \let\@org@gls@assign@symbolplural\gls@assign@symbolplural
7599 \def\gls@assign@firstpl##1##2{%
7600   \@gls@expand@field{##1}{firstpl}{##2}%
7601 }%
7602 \def\gls@assign@plural##1##2{%
7603   \@gls@expand@field{##1}{plural}{##2}%
7604 }%
7605 \def\gls@assign@descplural##1##2{%
7606   \@gls@expand@field{##1}{descplural}{##2}%
7607 }%
7608 \def\gls@assign@symbolplural##1##2{%
7609   \@gls@expand@field{##1}{symbolplural}{##2}%
7610 }%
7611 \do@newglossaryentry
7612 \let\gls@assign@firstpl\@org@gls@assign@firstpl
7613 \let\gls@assign@plural\@org@gls@assign@plural
7614 \let\gls@assign@descplural\@org@gls@assign@descplural
7615 \let\gls@assign@symbolplural\@org@gls@assign@symbolplural
7616 }

```

allAcronymStyle Neither footnote nor description required, but smallcaps or smaller specified. Use the symbol key to store the short form and first to store the long form.

```

7617 \newcommand*{\SetSmallAcronymStyle}{%
7618   \renewcommand{\newacronym}[4][\]{%
7619     \ifx\@glsacronymlists\@empty
7620       \def\@glo@type{\acronymtype}%
7621       \setkeys{glossentry}{##1}%
7622       \DeclareAcronymList{\@glo@type}%
7623       \SetSmallAcronymDisplayStyle{\@glo@type}%

```



```

7624 \fi
7625 \glskeylisttok{##1}%
7626 \glslabeltok{##2}%
7627 \glsshorttok{##3}%
7628 \glslongtok{##4}%
7629 \newacronymhook
7630 \SmallNewAcronymDef
7631 }%

```

Change the display since first only contains long form.

```

7632 \@for\@gls@type:=\@glsacronymlists\do{%
7633 \SetSmallAcronymDisplayStyle{\@gls@type}%
7634 }%

```

Redefine \acronymfont if small caps required. The plural suffix is set in an upright font so that it remains in normal lower case, otherwise it looks as though it's part of the acronym.

```

7635 \ifglsacrsmallcaps
7636 \renewcommand*\acronymfont[1]{\textsc{##1}}
7637 \renewcommand*\acrpluralsuffix{\glsupacrpluralsuffix}%
7638 \else
7639 \renewcommand*\acronymfont[1]{\textsmaller{##1}}
7640 \fi

```

check for option clash

```

7641 \ifglsacrdua
7642 \ifglsacrsmallcaps
7643 \PackageError{glossaries}{Option clash: ‘smallcaps’ and ‘dua’
7644 can’t both be set}{}%
7645 \else
7646 \PackageError{glossaries}{Option clash: ‘smaller’ and ‘dua’
7647 can’t both be set}{}%
7648 \fi
7649 \fi
7650 }%

```

DUADisplayStyle Sets the acronym display style for given glossary with dua setting.

```

7651 \newcommand*\SetDUADisplayStyle[1]{%
7652 \defglsentryfmt[1]{\glsentryfmt}%
7653 }

```

UANewAcronymDef

```

7654 \newcommand*\DUANewAcronymDef{%
7655 \edef\@do@newglossaryentry{%
7656 \noexpand\newglossaryentry{\the\glslabeltok}%
7657 {%
7658 type=\acronymtype,%
7659 name={\the\glsshorttok},%
7660 text={\the\glslongtok},%
7661 first={\the\glslongtok},%
7662 plural={\noexpand\expandonce\noexpand\@glo@longpl},%

```

```

7663     firstplural={\noexpand\expandonce\noexpand\@glo@longpl},%
7664     short={\the\glsshorttok},%
7665     shortplural={\the\glsshorttok\noexpand\acrpluralsuffix},%
7666     long={\the\glslongtok},%
7667     longplural={\the\glslongtok\noexpand\acrpluralsuffix},%
7668     description={\the\glslongtok},%
7669     descriptionplural={\noexpand\expandonce\noexpand\@glo@longpl},%
7670     symbol={\the\glsshorttok},%
7671     symbolplural={\noexpand\expandonce\noexpand\@glo@shortpl},%
7672     \the\glskeylisttok
7673   }%
7674 }%
7675 \let\@org@gls@assign@firstpl\gls@assign@firstpl
7676 \let\@org@gls@assign@plural\gls@assign@plural
7677 \let\@org@gls@assign@symbolplural\gls@assign@symbolplural
7678 \let\@org@gls@assign@descplural\gls@assign@descplural
7679 \def\gls@assign@firstpl##1##2{%
7680   \@gls@expand@field{##1}{firstpl}{##2}%
7681 }%
7682 \def\gls@assign@plural##1##2{%
7683   \@gls@expand@field{##1}{plural}{##2}%
7684 }%
7685 \def\gls@assign@symbolplural##1##2{%
7686   \@gls@expand@field{##1}{symbolplural}{##2}%
7687 }%
7688 \def\gls@assign@descplural##1##2{%
7689   \@gls@expand@field{##1}{descplural}{##2}%
7690 }%
7691 \do@newglossaryentry
7692 \let\gls@assign@firstpl\@org@gls@assign@firstpl
7693 \let\gls@assign@plural\@org@gls@assign@plural
7694 \let\gls@assign@symbolplural\@org@gls@assign@symbolplural
7695 \let\gls@assign@descplural\@org@gls@assign@descplural
7696 }

```

\SetDUASStyle Always expand acronyms.

```

7697 \newcommand*{\SetDUASStyle}{%
7698   \renewcommand{\newacronym}[4][]{%
7699     \ifx\@glsacronymlists\@empty
7700       \def\@glo@type{\acronymtype}%
7701       \setkeys{glossentry}{##1}%
7702       \DeclareAcronymList{\@glo@type}%
7703       \SetDUADisplayStyle{\@glo@type}%
7704     \fi
7705     \glskeylisttok{##1}%
7706     \glslabeltok{##2}%
7707     \glsshorttok{##3}%
7708     \glslongtok{##4}%
7709     \newacronymhook

```

```

7710 \DUANewAcronymDef
7711 }%
    Set the display
7712 \@for\@gls@type:=\@glsacronymlists\do{%
7713 \SetDUADisplayStyle{\@gls@type}%
7714 }%
7715 }

```

SetAcronymStyle

```

7716 \newcommand*\SetAcronymStyle{%
7717 \SetDefaultAcronymStyle
7718 \ifglsacrdescription
7719 \ifglsacrfootnote
7720 \SetDescriptionFootnoteAcronymStyle
7721 \else
7722 \ifglsacrdua
7723 \SetDescriptionDUAAcronymStyle
7724 \else
7725 \SetDescriptionAcronymStyle
7726 \fi
7727 \fi
7728 \else
7729 \ifglsacrfootnote
7730 \SetFootnoteAcronymStyle
7731 \else
7732 \ifthenelse{\boolean{glsacrsmalldcaps}\OR
7733 \boolean{glsacrsmaller}}{%
7734 {%
7735 \SetSmallAcronymStyle
7736 }%
7737 {%
7738 \ifglsacrdua
7739 \SetDUASyle
7740 \fi
7741 }%
7742 \fi
7743 \fi
7744 }

```

Set the acronym style according to the package options

```
7745 \SetAcronymStyle
```

Allow user to define their own custom acronyms. (For compatibility with versions before v3.0, the short form is stored in the user1 key, the plural short form is stored in the user2 key, the long form is stored in the user3 key and the plural long form is stored in the user4 key.) Defaults to displaying only the acronym with the long form as the description.

`\SetCustomDisplayStyle` Sets the acronym display style.

```
7746 \newcommand*\SetCustomDisplayStyle}[1]{%
```

```

7747 \defglentryfmt[#1]{\glsgenentryfmt}%
7748 }

```

omAcronymFields

```

7749 \newcommand*{\CustomAcronymFields}{%
7750   name={\the\glsshorttok},%
7751   description={\the\glslongtok},%
7752   first={\acrfullformat{\the\glslongtok}{\the\glsshorttok}},%
7753   firstplural={\acrfullformat
7754     {\noexpand\glentrylongpl{\the\glslabeltok}}%
7755     {\noexpand\glentryshortpl{\the\glslabeltok}}},%

7756   text={\the\glsshorttok},%
7757   plural={\the\glsshorttok\noexpand\acrpluralsuffix}%
7758 }

```

omNewAcronymDef

```

7759 \newcommand*{\CustomNewAcronymDef}{%
7760   \protected@edef\@do@newglossaryentry{%
7761     \noexpand\newglossaryentry{\the\glslabeltok}%
7762     {%
7763       type=\acronymtype,%
7764       short={\the\glsshorttok},%
7765       shortplural={\the\glsshorttok\noexpand\acrpluralsuffix},%
7766       long={\the\glslongtok},%
7767       longplural={\the\glslongtok\noexpand\acrpluralsuffix},%
7768       user1={\the\glsshorttok},%
7769       user2={\the\glsshorttok\noexpand\acrpluralsuffix},%
7770       user3={\the\glslongtok},%
7771       user4={\the\glslongtok\noexpand\acrpluralsuffix},%
7772       \CustomAcronymFields,%
7773       \the\glskeylisttok
7774     }%
7775   }%
7776   \@do@newglossaryentry
7777 }

```

\SetCustomStyle

```

7778 \newcommand*{\SetCustomStyle}{%
7779   \renewcommand{\newacronym}[4][\{%
7780     \ifx\@glsacronymlists\@empty
7781       \def\@glo@type{\acronymtype}%
7782       \setkeys{glossentry}{##1}%
7783       \DeclareAcronymList{\@glo@type}%
7784       \SetCustomDisplayStyle{\@glo@type}%
7785     \fi
7786     \glskeylisttok{##1}%
7787     \glslabeltok{##2}%
7788     \glsshorttok{##3}%

```

```

7789 \glslongtok{##4}%
7790 \newacronymhook
7791 \CustomNewAcronymDef
7792 }%
Set the display
7793 \@for\@gls@type:=\@glsacronymlists\do{%
7794 \SetCustomDisplayStyle{\@gls@type}%
7795 }%
7796 }

```

1.19 Predefined Glossary Styles

The glossaries bundle comes with some predefined glossary styles. These need to be loaded now for the style option to use them.

First, the glossary hyper-navigation commands need to be loaded.

```
7797 \RequirePackage{glossary-hypermnav}
```

The styles that use list-like environments. These are not loaded if the nolist option is used:

```
7798 \@gls@loadlist
```

The styles that use the longtable environment. These are not loaded if the nolong package option is used.

```
7799 \@gls@loadlong
```

The styles that use the supertabular environment. These are not loaded if the nosuper package option is used or if the package isn't installed.

```
7800 \@gls@loadsuper
```

The tree-like styles. These are not loaded if the notree package option is used.

```
7801 \@gls@loadtree
```

The default glossary style is set according to the style package option, but can be overridden by \glossarystyle. The required style must be defined at this point.

```

7802 \ifx\@glossary@default@style\relax
7803 \else
7804 \setglossarystyle{\@glossary@default@style}
7805 \fi

```

1.20 Debugging Commands

\showgloparent `\showgloparent{\label}`

```

7806 \newcommand*{\showgloparent}[1]{%
7807 \expandafter\show\csname glo@\glsdetoklabel{#1}@parent\endcsname
7808 }

```

`\showglolevel` `\showglolevel{<label>}`

```
7809 \newcommand*{\showglolevel}[1]{%
7810   \expandafter\show\csname glo@glstetoklabel{#1}@level\endcsname
7811 }
```

`\showglotext` `\showglotext{<label>}`

```
7812 \newcommand*{\showglotext}[1]{%
7813   \expandafter\show\csname glo@glstetoklabel{#1}@text\endcsname
7814 }
```

`\showgloplural` `\showgloplural{<label>}`

```
7815 \newcommand*{\showgloplural}[1]{%
7816   \expandafter\show\csname glo@glstetoklabel{#1}@plural\endcsname
7817 }
```

`\showglofirst` `\showglofirst{<label>}`

```
7818 \newcommand*{\showglofirst}[1]{%
7819   \expandafter\show\csname glo@glstetoklabel{#1}@first\endcsname
7820 }
```

`\showglofirstpl` `\showglofirstpl{<label>}`

```
7821 \newcommand*{\showglofirstpl}[1]{%
7822   \expandafter\show\csname glo@glstetoklabel{#1}@firstpl\endcsname
7823 }
```

`\showglotype` `\showglotype{<label>}`

```
7824 \newcommand*{\showglotype}[1]{%
7825   \expandafter\show\csname glo@glstetoklabel{#1}@type\endcsname
7826 }
```

`\showglocounter`

`\showglocounter{<label>}`

```
7827 \newcommand*{\showglocounter}[1]{%
7828   \expandafter\show\csname glo@glstdetoklabel{#1}@counter\endcsname
7829 }
```

`\showglouser`

`\showglouser{<label>}`

```
7830 \newcommand*{\showglouser}[1]{%
7831   \expandafter\show\csname glo@glstdetoklabel{#1}@useri\endcsname
7832 }
```

`\showglouserii`

`\showglouserii{<label>}`

```
7833 \newcommand*{\showglouserii}[1]{%
7834   \expandafter\show\csname glo@glstdetoklabel{#1}@userii\endcsname
7835 }
```

`\showglouseriii`

`\showglouseriii{<label>}`

```
7836 \newcommand*{\showglouseriii}[1]{%
7837   \expandafter\show\csname glo@glstdetoklabel{#1}@useriii\endcsname
7838 }
```

`\showglouseriv`

`\showglouseriv{<label>}`

```
7839 \newcommand*{\showglouseriv}[1]{%
7840   \expandafter\show\csname glo@glstdetoklabel{#1}@useriv\endcsname
7841 }
```

`\showglouserv`

`\showglouserv{<label>}`

```
7842 \newcommand*{\showglouserv}[1]{%
7843   \expandafter\show\csname glo@glstdetoklabel{#1}@userv\endcsname
7844 }
```

\showglouservi \showglouservi{<label>}

```
7845 \newcommand*{\showglouservi}[1]{%
7846   \expandafter\show\csname glo@glstdetoklabel{#1}@uservi\endcsname
7847 }
```

\showgloname \showgloname{<label>}

```
7848 \newcommand*{\showgloname}[1]{%
7849   \expandafter\show\csname glo@glstdetoklabel{#1}@name\endcsname
7850 }
```

\showglodesc \showglodesc{<label>}

```
7851 \newcommand*{\showglodesc}[1]{%
7852   \expandafter\show\csname glo@glstdetoklabel{#1}@desc\endcsname
7853 }
```

howglodescplural \showglodescplural{<label>}

```
7854 \newcommand*{\showglodescplural}[1]{%
7855   \expandafter\show\csname glo@glstdetoklabel{#1}@descplural\endcsname
7856 }
```

\showglosort \showglosort{<label>}

```
7857 \newcommand*{\showglosort}[1]{%
7858   \expandafter\show\csname glo@glstdetoklabel{#1}@sort\endcsname
7859 }
```

\showglosymbol \showglosymbol{<label>}

```
7860 \newcommand*{\showglosymbol}[1]{%
7861   \expandafter\show\csname glo@glstdetoklabel{#1}@symbol\endcsname
7862 }
```


wglosymbolplural `\showglosymbolplural{<label>}`

```
7863 \newcommand*{\showglosymbolplural}[1]{%
7864   \expandafter\show\csname glo@glstetoklabel{#1}@symbolplural\endcsname
7865 }
```

\showgloshort `\showgloshort{<label>}`

```
7866 \newcommand*{\showgloshort}[1]{%
7867   \expandafter\show\csname glo@glstetoklabel{#1}@short\endcsname
7868 }
```

\showglolong `\showglolong{<label>}`

```
7869 \newcommand*{\showglolong}[1]{%
7870   \expandafter\show\csname glo@glstetoklabel{#1}@long\endcsname
7871 }
```

\showgloindex `\showgloindex{<label>}`

```
7872 \newcommand*{\showgloindex}[1]{%
7873   \expandafter\show\csname glo@glstetoklabel{#1}@index\endcsname
7874 }
```

\showgloflag `\showgloflag{<label>}`

```
7875 \newcommand*{\showgloflag}[1]{%
7876   \expandafter\show\csname ifglo@glstetoklabel{#1}@flag\endcsname
7877 }
```

\showgloloclist `\showgloloclist{<label>}`

```
7878 \newcommand*{\showgloloclist}[1]{%
7879   \expandafter\show\csname glo@glstetoklabel{#1}@loclist\endcsname
7880 }
```

`\showglofield` `\showglofield{<label>}{<field>}`

```
7881 \newcommand*{\showglofield}[2]{%
7882   \csshow{glo@glstetoklabel{#1}@#2}%
7883 }
```

`showacronymlists` `\showacronymlists`

Show list of glossaries that have been flagged as a list of acronyms.

```
7884 \newcommand*{\showacronymlists}{%
7885   \show\@glsacronymlists
7886 }
```

`\showglossaries` `\showglossaries`

Show list of defined glossaries.

```
7887 \newcommand*{\showglossaries}{%
7888   \show\@glo@types
7889 }
```

`\showglossaryin` `\showglossaryin{<glossary-label>}`

Show the ‘in’ extension for the given glossary.

```
7890 \newcommand*{\showglossaryin}[1]{%
7891   \expandafter\show\csname @glotype@#1@in\endcsname
7892 }
```

`\showglossaryout` `\showglossaryout{<glossary-label>}`

Show the ‘out’ extension for the given glossary.

```
7893 \newcommand*{\showglossaryout}[1]{%
7894   \expandafter\show\csname @glotype@#1@out\endcsname
7895 }
```

`showglossarytitle` `\showglossarytitle{<glossary-label>}`

Show the title for the given glossary.

```
7896 \newcommand*{\showglossarytitle}[1]{%
7897   \expandafter\show\csname @glotype@#1@title\endcsname
7898 }
```

wglossarycounter `\showglossarycounter{<glossary-label>}`

Show the counter for the given glossary.

```
7899 \newcommand*{\showglossarycounter}[1]{%
7900   \expandafter\show\csname @glotype@#1@counter\endcsname
7901 }
```

wglossaryentries `\showglossaryentries{<glossary-label>}`

Show the list of entry labels for the given glossary.

```
7902 \newcommand*{\showglossaryentries}[1]{%
7903   \expandafter\show\csname glolist@#1\endcsname
7904 }
```

1.21 Compatibility with version 2.07 and below

In order to fix some bugs in v3.0, it was necessary to change the way information is written to the `glo` file, which also meant a change in the format of the Xindy style file. The compatibility option is meant for documents that use a customised Xindy style file with `\noist`. With the compatibility option, hopefully xindy will still be able to process the old document, but the bugs will remain. The issues in versions 2.07 and below:

- With xindy, the counter used by the entry was hard-coded into the Xindy style file. This meant that you couldn't use the counter to swap counters.
- With both xindy and makeindex, if used with `hyperref` and `\theH<counter>` was different to `\thecounter`, the link in the location number would be undefined.

```
7905 \csname ifglcompatible-2.07\endcsname
7906   \RequirePackage{glossaries-compatible-207}
7907 \fi
```

2 Prefix Support (glossaries-prefix Code)

This package provides a means of adding prefixes to your glossary entries. For example, you may want to use “`\gls{<label>}`” on first use but use “`\an\gls{<label>}`” on subsequent use.

```
7908 \NeedsTeXFormat{LaTeX2e}
```

```
7909 \ProvidesPackage{glossaries-prefix}[2017/09/20 v4.33 (NLCT)]
```

Pass all options to glossaries:

```
7910 \DeclareOption*{\PassOptionsToPackage{\CurrentOption}{glossaries}}
```

Process options:

```
7911 \ProcessOptions
```

Load glossaries:

```
7912 \RequirePackage{glossaries}
```

Add the new keys:

```
7913 \define@key{glossentry}{prefixfirst}{\def\@glo@entryprefixfirst{#1}}%
```

```
7914 \define@key{glossentry}{prefixfirstplural}{\def\@glo@entryprefixfirstplural{#1}}%
```

```
7915 \define@key{glossentry}{prefix}{\def\@glo@entryprefix{#1}}%
```

```
7916 \define@key{glossentry}{prefixplural}{\def\@glo@entryprefixplural{#1}}%
```

Add them to `\gls@keymap`:

```
7917 \appto\@gls@keymap{,%
```

```
7918   {prefixfirst}{prefixfirst},%
```

```
7919   {prefixfirstplural}{prefixfirstplural},%
```

```
7920   {prefix}{prefix},%
```

```
7921   {prefixplural}{prefixplural}}%
```

```
7922 }
```

Set the default values:

```
7923 \appto\@newglossaryentryprehook{%
```

```
7924   \def\@glo@entryprefix{}
```

```
7925   \def\@glo@entryprefixplural{}
```

```
7926   \let\@glo@entryprefixfirst\@gls@default@value
```

```
7927   \let\@glo@entryprefixfirstplural\@gls@default@value
```

```
7928 }
```

Set the assignment code:

```
7929 \appto\@newglossaryentryposthook{%
```

```
7930   \gls@assign@field{ }\@glo@label{prefix}{\@glo@entryprefix}%
```

```
7931   \gls@assign@field{ }\@glo@label{prefixplural}{\@glo@entryprefixplural}%
```

If `prefixfirst` has not been supplied, make it the same as `prefix`.

```
7932 \expandafter\gls@assign@field\expandafter
```

```
7933   {\csname glo@\@glo@label @prefix\endcsname}{\@glo@label}{prefixfirst}%
```

```
7934   {\@glo@entryprefixfirst}}%
```

If prefixfirstplural has not been supplied, make it the same as prefixplural.

```

7935 \expandafter\gls@assign@field\expandafter
7936 {\csname glo@\@glo@label @prefixplural\endcsname}{\@glo@label}%
7937 {prefixfirstplural}{\@glo@entryprefixfirstplural}%
7938 }

```

Define commands to access these fields:

entryprefixfirst

```

7939 \newcommand*\glsentryprefixfirst[1]{\csuse{glo@#1@prefixfirst}}

```

entryfirstplural

```

7940 \newcommand*\glsentryprefixfirstplural[1]{\csuse{glo@#1@prefixfirstplural}}

```

\glsentryprefix

```

7941 \newcommand*\glsentryprefix[1]{\csuse{glo@#1@prefix}}

```

entryprefixplural

```

7942 \newcommand*\glsentryprefixplural[1]{\csuse{glo@#1@prefixplural}}

```

Now for the initial upper case variants:

entryprefixfirst

```

7943 \newrobustcmd*\Glsentryprefixfirst[1]{%
7944 \protected@edef\@glo@text{\csname glo@#1@prefixfirst\endcsname}%
7945 \xmakefirstuc\@glo@text
7946 }

```

entryfirstplural

```

7947 \newrobustcmd*\Glsentryprefixfirstplural[1]{%
7948 \protected@edef\@glo@text{\csname glo@#1@prefixfirstplural\endcsname}%
7949 \xmakefirstuc\@glo@text
7950 }

```

\Glsentryprefix

```

7951 \newrobustcmd*\Glsentryprefix[1]{%
7952 \protected@edef\@glo@text{\csname glo@#1@prefix\endcsname}%
7953 \xmakefirstuc\@glo@text
7954 }

```

entryprefixplural

```

7955 \newrobustcmd*\Glsentryprefixplural[1]{%
7956 \protected@edef\@glo@text{\csname glo@#1@prefixplural\endcsname}%
7957 \xmakefirstuc\@glo@text
7958 }

```

Define commands to determine if the prefix keys have been set:

\ifglshasprefix

```
7959 \newcommand*{\ifglshasprefix}[3]{%
7960   \ifcempty{glo@#1@prefix}%
7961   {#3}%
7962   {#2}%
7963 }
```

hasprefixplural

```
7964 \newcommand*{\ifglshasprefixplural}[3]{%
7965   \ifcempty{glo@#1@prefixplural}%
7966   {#3}%
7967   {#2}%
7968 }
```

shasprefixfirst

```
7969 \newcommand*{\ifglshasprefixfirst}[3]{%
7970   \ifcempty{glo@#1@prefixfirst}%
7971   {#3}%
7972   {#2}%
7973 }
```

efixfirstplural

```
7974 \newcommand*{\ifglshasprefixfirstplural}[3]{%
7975   \ifcempty{glo@#1@prefixfirstplural}%
7976   {#3}%
7977   {#2}%
7978 }
```

Define commands that insert the prefix before commands like \gls:

\pgls

```
7979 \newrobustcmd{\pgls}{\@gls@hyp@opt\@pgls}
```

\@pgls Unstarred version.

```
7980 \newcommand*{\@pgls}[2][ ]{%
7981   \new@ifnextchar[%
7982   {\@pgls@{#1}{#2}}%
7983   {\@pgls@{#1}{#2}[ ]}%
7984 }
```

\@pgls@ Read in the final optional argument:

```
7985 \def\@pgls@#1#2[#3]{%
7986   \glsdoifexists{#2}%
7987   {%
7988     \ifglsused{#2}%
7989     {%
7990       \glsentryprefix{#2}%
7991     }%

```

```

7992     {%
7993     \glsentryprefixfirst{#2}%
7994     }%
7995     \@gls@{#1}{#2}[#3]%
7996     }%
7997 }

```

Similarly for the plural version:

```

\pglsp1
7998 \newrobustcmd{\pglsp1}{\@gls@hyp@opt\@pglsp1}

```

\@pglsp1 Unstarred version.

```

7999 \newcommand*{\@pglsp1}[2][ ]{%
8000   \new@ifnextchar[%
8001   {\@pglsp1@{#1}{#2}}%
8002   {\@pglsp1@{#1}{#2}[ ]}%
8003 }

```

\@pglsp1@ Read in the final optional argument:

```

8004 \def\@pglsp1@#1#2[#3]{%
8005   \glsdoifexists{#2}%
8006   {%
8007     \ifglsused{#2}%
8008     {%
8009       \glsentryprefixplural{#2}%
8010     }%
8011     {%
8012       \glsentryprefixfirstplural{#2}%
8013     }%
8014     \@glspl@{#1}{#2}[#3]%
8015   }%
8016 }

```

Now for the first letter upper case versions:

```

\Pgls
8017 \newrobustcmd{\Pgls}{\@gls@hyp@opt\@Pgls}

```

\@Pgls Unstarred version.

```

8018 \newcommand*{\@Pgls}[2][ ]{%
8019   \new@ifnextchar[%
8020   {\@Pgls@{#1}{#2}}%
8021   {\@Pgls@{#1}{#2}[ ]}%
8022 }

```

\@Pgls@ Read in the final optional argument:

```

8023 \def\@Pgls@#1#2[#3]{%

```

```

8024 \glsdoifexists{#2}%
8025 {%
8026   \ifglsused{#2}%
8027   {%
8028     \ifglshasprefix{#2}%
8029     {%
8030       \Glsentryprefix{#2}%
8031       \@gls@{#1}{#2}[#3]%
8032     }%
8033     {\@Gls@{#1}{#2}[#3]}%
8034   }%
8035   {%
8036     \ifglshasprefixfirst{#2}%
8037     {%
8038       \Glsentryprefixfirst{#2}%
8039       \@gls@{#1}{#2}[#3]%
8040     }%
8041     {\@Gls@{#1}{#2}[#3]}%
8042   }%
8043 }%
8044 }

```

Similarly for the plural version:

```

\Pglspl
8045 \newrobustcmd{\Pglspl}{\@gls@hyp@opt\Pglspl}

```

\@Pglspl Unstarred version.

```

8046 \newcommand*{\@Pglspl}[2] [] {%
8047   \new@ifnextchar[%
8048   {\@Pglspl@{#1}{#2}}%
8049   {\@Pglspl@{#1}{#2} []}%
8050 }

```

\@Pglspl@ Read in the final optional argument:

```

8051 \def\@Pglspl@#1#2[#3] {%
8052   \glsdoifexists{#2}%
8053   {%
8054     \ifglsused{#2}%
8055     {%
8056       \ifglshasprefixplural{#2}%
8057       {%
8058         \Glsentryprefixplural{#2}%
8059         \@glspl@{#1}{#2}[#3]%
8060       }%
8061       {\@Glspl@{#1}{#2}[#3]}%
8062     }%
8063     {%
8064       \ifglshasprefixfirstplural{#2}%

```



```

8065      {%
8066      \Glsentryprefixfirstplural{#2}%
8067      \@glsp1@{#1}{#2}[#3]%
8068      }%
8069      {\@Glspl@{#1}{#2}[#3]}%
8070      }%
8071  }%
8072 }

```

Finally the all upper case versions:

\PGLS

```

8073 \newrobustcmd{\PGLS}{\@gls@hyp@opt\PGLS}

```

\@PGLS Unstarred version.

```

8074 \newcommand*{\@PGLS}[2][{}]{%
8075   \new@ifnextchar[%
8076   {\@PGLS@{#1}{#2}}%
8077   {\@PGLS@{#1}{#2}[]}%
8078 }

```

\@PGLS@ Read in the final optional argument:

```

8079 \def\@PGLS@#1#2[#3]{%
8080   \glsdoifexists{#2}%
8081   {%
8082     \ifglsused{#2}%
8083     {%
8084       \mfirstucMakeUppercase{\glsentryprefix{#2}}%
8085     }%
8086     {%
8087       \mfirstucMakeUppercase{\glsentryprefixfirst{#2}}%
8088     }%
8089     \@GLS@{#1}{#2}[#3]%
8090   }%
8091 }

```

Plural version:

\PGLSp1

```

8092 \newrobustcmd{\PGLSp1}{\@gls@hyp@opt\PGLSp1}

```

\@PGLSp1 Unstarred version.

```

8093 \newcommand*{\@PGLSp1}[2][{}]{%
8094   \new@ifnextchar[%
8095   {\@PGLSp1@{#1}{#2}}%
8096   {\@PGLSp1@{#1}{#2}[]}%
8097 }

```

\@PGLSp1@ Read in the final optional argument:

```
8098 \def\@PGLSp1@#1#2[#3]{%
8099   \glsdoifexists{#2}%
8100   {%
8101     \ifglsused{#2}%
8102     {%
8103       \mfirstucMakeUppercase{\glsentryprefixplural{#2}}%
8104     }%
8105     {%
8106       \mfirstucMakeUppercase{\glsentryprefixfirstplural{#2}}%
8107     }%
8108     \@GLSp1@{#1}{#2}[#3]%
8109   }%
8110 }
```

3 Glossary Styles

3.1 Glossary hyper-navigation definitions (glossary-hypernav package)

Package Definition:

```
8111 \ProvidesPackage{glossary-hypernav}[2017/09/20 v4.33 (NLCT)]
```

The commands defined in this package are provided to help navigate around the groups within a glossary (see [section 1.16.](#)) `\printglossary` (and `\printglossaries`) set `\@glo@type` to the label of the current glossary. This is used to create a unique hypertarget in the event of multiple glossaries.

`\glsnavhyperlink[⟨type⟩]{⟨label⟩}{⟨text⟩}`

This command makes `⟨text⟩` a hyperlink to the glossary group whose label is given by `⟨label⟩` for the glossary given by `⟨type⟩`.

`\glsnavhyperlink`

```
8112 \newcommand*{\glsnavhyperlink}[3][\@glo@type]{%
8113   \edef\gls@grplabel{#2}\protected@edef\gls@grptitle{#3}%
8114   \@glslink{\glsnavhyperlinkname{#1}{#2}}{#3}}
```

`\glsnavhyperlinkname`

Expands to the hypertarget name. The first argument is the glossary type. The second argument is the group label.

```
8115 \newcommand*{\glsnavhyperlinkname}[2]{\glsn:#1@#2}
```

`\glsnavhypertarget[⟨type⟩]{⟨label⟩}{⟨text⟩}`

This command makes `⟨text⟩` a hypertarget for the glossary group whose label is given by `⟨label⟩` in the glossary given by `⟨type⟩`. If `⟨type⟩` is omitted, `\@glo@type` is used which is set by `\printglossary` to the current glossary label.

`\glsnavhypertarget`

```
8116 \newcommand*{\glsnavhypertarget}[3][\@glo@type]{%
8117   \@glsnavhypertarget{#1}{#2}{#3}%
8118 }
```

The actual code is now in an internal command that doesn't have an optional argument, which makes it easier to save and restore the original behaviour.

`\glsnavhypertarget`

```
8119 \newcommand*{\@glsnavhypertarget}[3]{%}
```

Add this group to the aux file for re-run check.

```
8120 \protected@write\auxout{}\string\@gls@hypergroup{#1}{#2}}%
```

Add the target.

```
8121 \@glstarget{\glsnavhyperlinkname{#1}{#2}}{#3}%
```

Check list of known groups to determine if a re-run is required.

```
8122 \expandafter\let
```

```
8123 \expandafter\@gls@list\csname @gls@hypergroup@list@#1\endcsname
```

Iterate through list and terminate loop if this group is found.

```
8124 \@for\@gls@elem:=\@gls@list\do{%
```

```
8125 \ifthenelse{\equal{\@gls@elem}{#2}}{\@endfortrue}{}}%
```

Check if list terminated prematurely.

```
8126 \if@endfor
```

```
8127 \else
```

This group was not included in the list, so issue a warning.

```
8128 \GlossariesWarningNoLine{Navigation panel
```

```
8129 for glossary type ‘#1’~Jmissing group ‘#2’}%
```

```
8130 \gdef\gls@hypergroup@rerun{%
```

```
8131 \GlossariesWarningNoLine{Navigation panel
```

```
8132 has changed. Rerun LaTeX}}%
```

```
8133 \fi
```

```
8134 }
```

`hypergroup@rerun` Give a warning at the end if re-run required

```
8135 \let\gls@hypergroup@rerun\relax
```

```
8136 \AtEndDocument{\gls@hypergroup@rerun}
```

`@gls@hypergroup` This adds to (or creates) the command `\@gls@hypergroup@list@<glossary type>` which lists all groups for a given glossary, so that the navigation bar only contains those groups that are present. However it requires at least 2 runs to ensure the information is up-to-date.

```
8137 \newcommand*{\@gls@hypergroup}[2]{%
```

```
8138 \@ifundefined{\@gls@hypergroup@list@#1}{%
```

```
8139 \expandafter\xdef\csname @gls@hypergroup@list@#1\endcsname{#2}}%
```

```
8140 }{%
```

```
8141 \expandafter\let\expandafter\@gls@tmp
```

```
8142 \csname @gls@hypergroup@list@#1\endcsname
```

```
8143 \expandafter\xdef\csname @gls@hypergroup@list@#1\endcsname{%
```

```
8144 \@gls@tmp,#2}}%
```

```
8145 }%
```

```
8146 }
```

The `\glsnavigation` command displays a simple glossary group navigation. The symbol and number elements are defined separately, so that they can be suppressed if need be. (In earlier versions this command will produce a link to all 28 groups, but some groups may not be defined if there are groups that do not contain any terms, in which case you will get an undefined hyperlink warning. Version 1.14 changed this to only use labels for groups that are present.) Now for the whole navigation bit:

`\glsnavigation`

```
8147 \newcommand*{\glsnavigation}{%
8148   \def\@gls@between{}%
8149   \ifcsundef{\@gls@hypergroupplist@\@glo@type}%
8150   {%
8151     \def\@gls@list{}%
8152   }%
8153   {%
8154     \expandafter\let\expandafter\@gls@list
8155       \csname \@gls@hypergroupplist@\@glo@type\endcsname
8156   }%
8157   \@for\@gls@tmp:=\@gls@list\do{%
8158     \@gls@between

8159     \@gls@getgrouptitle{\@gls@tmp}{\@gls@grptitle}%
8160     \glsnavhyperlink{\@gls@tmp}{\@gls@grptitle}%
8161     \let\@gls@between\glshypernavsep
8162   }%
8163 }
```

`\glshypernavsep` Separator for the hyper navigation bar.

```
8164 \newcommand*{\glshypernavsep}{\space\textbar\space}
```

The `\glssymbolnav` produces a simple navigation set of links for just the symbol and number groups. This used to be used at the start of `\glsnavigation`. This command is no longer needed.

`\glssymbolnav`

```
8165 \newcommand*{\glssymbolnav}{%
8166   \glsnavhyperlink{glssymbols}{\@gls@getgrouptitle{glssymbols}}%
8167   \glshypernavsep
8168   \glsnavhyperlink{glsnumbers}{\@gls@getgrouptitle{glsnumbers}}%
8169   \glshypernavsep
8170 }
```

3.2 In-line Style (glossary-inline.sty)

This defines an in-line style where the entries are comma-separated with just the name and description displayed.

```
8171 \ProvidesPackage{glossary-inline}[2017/09/20 v4.33 (NLCT)]
```

`inline` Define the inline style.

```
8172 \newglossarystyle{inline}{%
    Start of glossary sets up first empty separator between entries. (This is then changed by
    \glossentry)
8173   \renewenvironment{theglossary}%
8174   {%
```

```

8175     \def\gls@inlinesep{}%
8176     \def\gls@inlinesubsep{}%
8177     \def\gls@inlinepostchild{}%
8178     }%
8179     {\glspostinline}%

```

No header:

```

8180 \renewcommand*{\glossaryheader}{}%

```

No group headings (if heading is required, add `\glsinlinedopostchild` to start definition in case heading follows a child entry):

```

8181 \renewcommand*{\glsgroupheading}[1]{}%

```

Just display separator followed by name and description:

```

8182 \renewcommand{\glossentry}[2]{%
8183     \glsinlinedopostchild
8184     \gls@inlinesep
8185     \glsentryitem{##1}%
8186     \glsinlinenameformat{##1}%
8187     \glossentryname{##1}%
8188     }%
8189 \ifglstdescsuppressed{##1}%
8190 {%
8191     \glsinlineemptydescformat
8192     {%
8193         \glossentrysymbol{##1}%
8194     }%
8195     {%
8196         ##2%
8197     }%
8198 }%
8199 {%
8200     \ifglshasdesc{##1}%
8201     {\glsinlinedescformat{\glossentrydesc{##1}}{\glossentrysymbol{##1}}{##2}}%
8202     {\glsinlineemptydescformat{\glossentrysymbol{##1}}{##2}}%
8203 }%
8204 \ifglshaschildren{##1}%
8205 {%
8206     \glsresetsubentrycounter
8207     \glsinlineparentchildseparator
8208     \def\gls@inlinesubsep{}%
8209     \def\gls@inlinepostchild{\glsinlinepostchild}%
8210 }%
8211 {}%
8212 \def\gls@inlinesep{\glsinlineseparator}%
8213 }%

```

Sub-entries display description:

```

8214 \renewcommand{\subglossentry}[3]{%
8215     \gls@inlinesubsep%
8216     \glsinlinesubnameformat{##2}%

```

```

8217     \glossentryname{##2}}}%
8218     \glssubentryitem{##2}%
8219     \glsinlinesubdescformat{\glossentrydesc{##2}}{\glossentrysymbol{##2}}{##3}%
8220     \def\gls@inlinesubsep{\glsinlinesubseparator}%
8221 }%

```

Nothing special between groups:

```

8222 \renewcommand*{\glsgroupskip}{}%
8223 }

```

linedopostchild

```

8224 \newcommand*{\glsinlinedopostchild}{%
8225     \gls@inlinepostchild
8226     \def\gls@inlinepostchild{}%
8227 }

```

inlineseparator Separator to use between entries.

```

8228 \newcommand*{\glsinlineseparator}{;\space}

```

inlinesubseparator Separator to use between sub-entries.

```

8229 \newcommand*{\glsinlinesubseparator}{,\space}

```

parentchildseparator Separator to use between parent and children.

```

8230 \newcommand*{\glsinlineparentchildseparator}{:\space}

```

inlinepostchild Hook to use between child and next entry

```

8231 \newcommand*{\glsinlinepostchild}{}

```

\glspostinline Terminator for inline glossary.

```

8232 \newcommand*{\glspostinline}{\glspostdescription\space}

```

inlinenameformat Formats the name of the entry (first argument label, second argument name):

```

8233 \newcommand*{\glsinlinenameformat}[2]{\glstarget{#1}{#2}}

```

inlinedescformat Formats the entry's description, symbol and location list:

```

8234 \newcommand*{\glsinlinedescformat}[3]{\space#1}

```

emptydescformat Formats the entry's symbol and location list when the description is empty:

```

8235 \newcommand*{\glsinlineemptydescformat}[2]{}

```

inlinesubnameformat Formats the name of the subentry (first argument label, second argument name):

```

8236 \newcommand*{\glsinlinesubnameformat}[2]{\glstarget{#1}{}}

```

inlinesubdescformat Formats the subentry's description, symbol and location list:

```

8237 \newcommand*{\glsinlinesubdescformat}[3]{#1}

```

3.3 List Style (glossary-list.sty)

The style file defines glossary styles that use the description environment. Note that since the entry name is placed in the optional argument to the `\item` command, it will appear in a bold font by default.

8238 \ProvidesPackage{glossary-list}[2017/09/20 v4.33 (NLCT)]

`\indexspace` There are a few classes that don't define `\indexspace`, so provide a definition if it hasn't been defined.

```
8239 \providecommand{\indexspace}{%
8240   \par \vskip 10\p@ \@plus 5\p@ \@minus 3\p@ \relax
8241 }
```

`groupheaderfmt` Provide a way of adjusting the format of the group headings.

```
8242 \newcommand*{\glslistgroupheaderfmt}[1]{#1}
```

`navigationitem` Provide a way of adjusting the format of the navigation header. This puts the navigation line inside the optional argument of `item` to prevent unwanted space occurring at the start, but this can cause a problem if the navigation line is too long. With this command, it makes it easier for the user to customise the style without having to remember to modify `\glossaryheader` after the style has been set.

```
8243 \newcommand*{\glslistnavigationitem}[1]{\item[#1]}
```

`list` The list glossary style uses the description environment. The group separator `\glsgroupskip` is redefined as `\indexspace` which produces a gap between groups. The glossary heading and the group headings do nothing. Sub-entries immediately follow the main entry without the sub-entry name. This style does not use the entry's symbol. This is used as the default style for the glossaries package.

```
8244 \newglossarystyle{list}{%
```

Use description environment:

```
8245   \renewenvironment{theglossary}%
8246     {\begin{description}}{\end{description}}%
```

No header at the start of the environment:

```
8247   \renewcommand*{\glossaryheader}{}%
```

No group headings:

```
8248   \renewcommand*{\glsgroupheading}[1]{}%
```

Main (level 0) entries start a new item in the list:

```
8249   \renewcommand*{\glossentry}[2]{%
8250     \item[\glsentryitem{##1}%
8251       \glstarget{##1}{\glossentryname{##1}}]
8252     \glossentrydesc{##1}\glspostdescription\space ##2}%
```

Sub-entries continue on the same line:

```
8253   \renewcommand*{\subglossentry}[3]{%
8254     \glssubentryitem{##2}%
```



```

8255 \glstarget{##2}{\strut}\space
8256 \glossentrydesc{##2}\glspostdescription\space ##3.}%

Add vertical space between groups:

8257 \renewcommand*{\glsgroupskip}{\ifglsnogroupskip\else\indexspace\fi}%
8258 }

```

listgroup The listgroup style is like the list style, but the glossary groups have headings.

```

8259 \newglossarystyle{listgroup}{%

Base it on the list style:

8260 \setglossarystyle{list}%

Each group has a heading:

8261 \renewcommand*{\glsgroupheading}[1]{%
8262 \item[\glslistgroupheaderfmt{\glsgrouptitle{##1}}]}

```

listhypergroup The listhypergroup style is like the listgroup style, but has a set of links to the groups at the start of the glossary.

```

8263 \newglossarystyle{listhypergroup}{%

Base it on the list style:

8264 \setglossarystyle{list}%

Add navigation links at the start of the environment.

8265 \renewcommand*{\glossaryheader}{%
8266 \glslistnavigationitem{\glsnavigation}}%

Each group has a heading with a hypertarget:

8267 \renewcommand*{\glsgroupheading}[1]{%
8268 \item[\glslistgroupheaderfmt
8269 {\glsnavhypertarget{##1}{\glsgrouptitle{##1}}]}

```

altlist The altlist glossary style is like the list style, but places the description on a new line. Sub-entries follow in separate paragraphs without the sub-entry name. This style does not use the entry's symbol.

```

8270 \newglossarystyle{altlist}{%

Base it on the list style:

8271 \setglossarystyle{list}%

Main (level 0) entries start a new item in the list with a line break after the entry name:

8272 \renewcommand*{\glossentry}[2]{%
8273 \item[\glssentryitem{##1}%
8274 \glstarget{##1}{\glossentryname{##1}}]}

```

Version 3.04 changed `\newline` to the following paragraph break stuff (thanks to Daniel Gebhardt for supplying the fix) to prevent a page break occurring at this point.

```

8275 \mbox{}\par\nobreak\@afterheading
8276 \glossentrydesc{##1}\glspostdescription\space ##2}%

```

Sub-entries start a new paragraph:

```
8277 \renewcommand{\subglossentry}[3]{%
8278   \par
8279   \glssubentryitem{##2}%
8280   \glstarget{##2}{\strut}\glossentrydesc{##2}\glspostdescription\space ##3}%
8281 }
```

altlistgroup The altlistgroup glossary style is like the altlist style, but the glossary groups have headings.

```
8282 \newglossarystyle{altlistgroup}{%
  Base it on the altlist style:
8283   \setglossarystyle{altlist}%
  Each group has a heading:
8284   \renewcommand*{\glsgroupeheading}[1]{%
8285     \item[\glslistgroupheaderfmt{\glsgroupeheading{##1}}]}
```

altlisthypergroup The altlisthypergroup glossary style is like the altlistgroup style, but has a set of links to the groups at the start of the glossary.

```
8286 \newglossarystyle{altlisthypergroup}{%
  Base it on the altlist style:
8287   \setglossarystyle{altlist}%
  Add navigation links at the start of the environment.
8288   \renewcommand*{\glossaryheader}{%
8289     \glslistnavigationitem{\glslistnavigation}}%
  Each group has a heading with a hypertarget:
8290   \renewcommand*{\glsgroupeheading}[1]{%
8291     \item[\glslistgroupheaderfmt
8292       {\glslistnavigationitem{##1}\glsgroupeheading{##1}}]}
```

listdotted The listdotted glossary style was supplied by Axel Menzel. I've modified it slightly so that the distance from the start of the name to the end of the dotted line is specified by `\glslistdottedwidth`. Note that this style ignores the page numbers as well as the symbol. Sub-entries are displayed in the same way as top-level entries.

```
8293 \newglossarystyle{listdotted}{%
  Base it on the list style:
8294   \setglossarystyle{list}%
  Each main (level 0) entry starts a new item:
8295   \renewcommand*{\glossentry}[2]{%
8296     \item[\makebox[\glslistdottedwidth][l]{%
8297       \glssentryitem{##1}%
8298       \glstarget{##1}{\glossentryname{##1}}%
8299       \unskip\leaders\hbox to 2.9mm{\hss.}\hfill\strut}\glossentrydesc{##1}}%
```

Sub entries have the same format as main entries:

```

8300 \renewcommand*{\subglossentry}[3]{%
8301   \item[\makebox[\glslistdottedwidth][l]{%
8302     \glssubentryitem{##2}}%
8303   \glstarget{##2}{\glossentryname{##2}}%
8304   \unskip\leaders\hbox to 2.9mm{\hss.}\hfill\strut}\glossentrydesc{##2}}%
8305 }
```

`listdottedwidth`

```

8306 \newlength\glslistdottedwidth
8307 \setlength{\glslistdottedwidth}{.5\hsize}
```

`sublistdotted` This style is similar to the `glostylelistdotted` style, except that the main entries just have the name displayed.

```
8308 \newglossarystyle{sublistdotted}{%
```

Base it on the `listdotted` style:

```
8309 \setglossarystyle{listdotted}%
```

Main (level 0) entries just display the name:

```

8310 \renewcommand*{\glossentry}[2]{%
8311   \item[\glssentryitem{##1}\glstarget{##1}{\glossentryname{##1}}}%
8312 }
```

3.4 Glossary Styles using `longtable` (the `glossary-long` package)

The glossary styles defined in the package used the `longtable` environment in the glossary.

```
8313 \ProvidesPackage{glossary-long}[2017/09/20 v4.33 (NLCT)]
```

Requires the package:

```
8314 \RequirePackage{longtable}
```

`\glsdescwidth` This is a length that governs the width of the description column. (There's a chance that the user may specify `nolong` and then load later, in which case `\glsdescwidth` may have already been defined by . The same goes for `\glspagelistwidth`.)

```

8315 \@ifundefined{glsdescwidth}{%
8316   \newlength\glsdescwidth
8317   \setlength{\glsdescwidth}{0.6\hsize}
8318 }{}
```

`lspagelistwidth` This is a length that governs the width of the page list column.

```

8319 \@ifundefined{glspagelistwidth}{%
8320   \newlength\glspagelistwidth
8321   \setlength{\glspagelistwidth}{0.1\hsize}
8322 }{}
```

long The long glossary style command which uses the longtable environment:

```
8323 \newglossarystyle{long}{%
```

Use longtable with two columns:

```
8324 \renewenvironment{theglossary}{%
8325     {\begin{longtable}\lp{\glstdescwidth}}}%
8326     {\end{longtable}}}%
```

Do nothing at the start of the environment:

```
8327 \renewcommand*{\glossaryheader}{}%
```

No heading between groups:

```
8328 \renewcommand*{\glsgroupheading}[1]{}%
```

Main (level 0) entries displayed in a row:

```
8329 \renewcommand{\glossentry}[2]{%
8330     \glssentryitem{##1}\glstarget{##1}{\glossentryname{##1}} &
8331     \glossentrydesc{##1}\glspostdescription\space ##2\tabularnewline
8332 }%
```

Sub entries displayed on the following row without the name:

```
8333 \renewcommand{\subglossentry}[3]{%
8334     &
8335     \glssubentryitem{##2}%
8336     \glstarget{##2}{\strut}\glossentrydesc{##2}\glspostdescription\space
8337     ##3\tabularnewline
8338 }%
```

Blank row between groups: The check for nogroupskip must occur outside \glsgroupskip (<http://www.dickimaw-books.com/cgi-bin/bugtracker.cgi?action=view&key=108>)

```
8339 \ifglsgroupskip
8340     \renewcommand*{\glsgroupskip}{}%
8341 \else
8342     \renewcommand*{\glsgroupskip}{ & \tabularnewline}%
8343 \fi
8344 }
```

longborder The longborder style is like the above, but with horizontal and vertical lines:

```
8345 \newglossarystyle{longborder}{%
```

Base it on the glostylelong style:

```
8346 \setglossarystyle{long}%
```

Use longtable with two columns with vertical lines between each column:

```
8347 \renewenvironment{theglossary}{%
8348     \begin{longtable}{|l|p{\glstdescwidth}|}{\end{longtable}}%
```

Place horizontal lines at the head and foot of the table:

```
8349 \renewcommand*{\glossaryheader}{\hline\endhead\hline\endfoot}%
8350 }
```

longheader The longheader style is like the long style but with a header:

```
8351 \newglossarystyle{longheader}{%
```

Base it on the `glostylelong` style:

```
8352 \setglossarystyle{long}%
```

Set the table's header:

```
8353 \renewcommand*{\glossaryheader}{%
8354   \bfseries \entryname & \bfseries \descriptionname\tabularnewline\endhead}%
8355 }
```

`longheaderborder` The `longheaderborder` style is like the `long` style but with a header and border:

```
8356 \newglossarystyle{longheaderborder}{%
```

Base it on the `glostylelongborder` style:

```
8357 \setglossarystyle{longborder}%
```

Set the table's header and add horizontal line to table's foot:

```
8358 \renewcommand*{\glossaryheader}{%
8359   \hline\bfseries \entryname & \bfseries
8360   \descriptionname\tabularnewline\hline
8361   \endhead
8362   \hline\endfoot}%
8363 }
```

`long3col` The `long3col` style is like `long` but with 3 columns

```
8364 \newglossarystyle{long3col}{%
```

Use a `longtable` with 3 columns:

```
8365 \renewenvironment{theglossary}%
8366   {\begin{longtable}{lp{\glsgdescwidth}p{\glspagelistwidth}}}%
8367   {\end{longtable}}%
```

No table header:

```
8368 \renewcommand*{\glossaryheader}{}%
```

No headings between groups:

```
8369 \renewcommand*{\glsgroupheading}[1]{}%
```

Main (level 0) entries on a row (name in first column, description in second column, page list in last column):

```
8370 \renewcommand{\glossentry}[2]{%
8371   \glstentryitem{##1}\glstarget{##1}{\glossentryname{##1}} &
8372   \glossentrydesc{##1} & ##2\tabularnewline
8373   }%
```

Sub-entries on a separate row (no name, description in second column, page list in third column):

```
8374 \renewcommand{\subglossentry}[3]{%
8375   &
8376   \glssubentryitem{##2}%
8377   \glstarget{##2}{\strut}\glossentrydesc{##2} &
8378   ##3\tabularnewline
8379   }%
```

Blank row between groups: The check for nogroupskip must occur outside \glsgroupskip
(<http://www.dickimaw-books.com/cgi-bin/bugtracker.cgi?action=view&key=108>)

```
8380 \ifglsgroupskip
8381 \renewcommand*{\glsgroupskip}{}%
8382 \else
8383 \renewcommand*{\glsgroupskip}{ & & \tabularnewline}%
8384 \fi
8385 }
```

long3colborder The long3colborder style is like the long3col style but with a border:

```
8386 \newglossarystyle{long3colborder}{%
    Base it on the glostylelong3col style:
8387 \setglossarystyle{long3col}%
    Use a longtable with 3 columns with vertical lines around them:
8388 \renewenvironment{theglossary}%
8389 {\begin{longtable}{|l|p{\glsgdescwidth}|p{\glspagelistwidth}|}%
8390 {\end{longtable}}%
    Place horizontal lines at the head and foot of the table:
8391 \renewcommand*{\glossaryheader}{\hline\endhead\hline\endfoot}%
8392 }
```

long3colheader The long3colheader style is like long3col but with a header row:

```
8393 \newglossarystyle{long3colheader}{%
    Base it on the glostylelong3col style:
8394 \setglossarystyle{long3col}%
    Set the table's header:
8395 \renewcommand*{\glossaryheader}{%
8396 \bfseries\entryname&\bfseries\descriptionname&
8397 \bfseries\pagelistname\tabularnewline\endhead}%
8398 }
```

colheaderborder The long3colheaderborder style is like the above but with a border

```
8399 \newglossarystyle{long3colheaderborder}{%
    Base it on the glostylelong3colborder style:
8400 \setglossarystyle{long3colborder}%
    Set the table's header and add horizontal line at table's foot:
8401 \renewcommand*{\glossaryheader}{%
8402 \hline
8403 \bfseries\entryname&\bfseries\descriptionname&
8404 \bfseries\pagelistname\tabularnewline\hline\endhead
8405 \hline\endfoot}%
8406 }
```

`long4col` The `long4col` style has four columns where the third column contains the value of the associated symbol key.

```
8407 \newglossarystyle{long4col}{%
```

Use a `longtable` with 4 columns:

```
8408 \renewenvironment{theglossary}{%
```

```
8409 {\begin{longtable}{llll}}%
```

```
8410 {\end{longtable}}}%
```

No table header:

```
8411 \renewcommand*{\glossaryheader}{}%
```

No group headings:

```
8412 \renewcommand*{\glsgroupheading}[1]{}%
```

Main (level 0) entries on a single row (name in first column, description in second column, symbol in third column, page list in last column):

```
8413 \renewcommand{\glossentry}[2]{%
```

```
8414 \glstentryitem{##1}\glstarget{##1}{\glossentryname{##1}} &
```

```
8415 \glossentrydesc{##1} &
```

```
8416 \glossentrysymbol{##1} &
```

```
8417 ##2\tabularnewline
```

```
8418 }%
```

Sub entries on a single row with no name (description in second column, symbol in third column, page list in last column):

```
8419 \renewcommand{\subglossentry}[3]{%
```

```
8420 &
```

```
8421 \glssubentryitem{##2}%
```

```
8422 \glstarget{##2}{\strut}\glossentrydesc{##2} &
```

```
8423 \glossentrysymbol{##2} & ##3\tabularnewline
```

```
8424 }%
```

Blank row between groups: The check for `nogroupskip` must occur outside `\glsgroupskip` (<http://www.dickimaw-books.com/cgi-bin/bugtracker.cgi?action=view&key=108>)

```
8425 \ifglsgnogroupskip
```

```
8426 \renewcommand*{\glsgroupskip}{}%
```

```
8427 \else
```

```
8428 \renewcommand*{\glsgroupskip}{ & & & \tabularnewline}%
```

```
8429 \fi
```

```
8430 }
```

`long4colheader` The `long4colheader` style is like `long4col` but with a header row.

```
8431 \newglossarystyle{long4colheader}{%
```

Base it on the `glostylelong4col` style:

```
8432 \setglossarystyle{long4col}%
```

Table has a header:

```
8433 \renewcommand*{\glossaryheader}{%
```

```
8434 \bfseries\entryname&\bfseries\descriptionname&
```

```
8435 \bfseries \symbolname&
```

```

8436     \bfseries\pagelistname\tabularnewline\endhead}%
8437 }

```

long4colborder The long4colborder style is like long4col but with a border.

```

8438 \newglossarystyle{long4colborder}{%
    Base it on the glostylelong4col style:
8439     \setglossarystyle{long4col}%
    Use a longtable with 4 columns surrounded by vertical lines:
8440     \renewenvironment{theglossary}%
8441         {\begin{longtable}{|l|l|l|l|}}%
8442         {\end{longtable}}%
    Add horizontal lines to the head and foot of the table:
8443     \renewcommand*{\glossaryheader}{\hline\endhead\hline\endfoot}%
8444 }

```

colheaderborder The long4colheaderborder style is like the above but with a border.

```

8445 \newglossarystyle{long4colheaderborder}{%
    Base it on the glostylelong4col style:
8446     \setglossarystyle{long4col}%
    Use a longtable with 4 columns surrounded by vertical lines:
8447     \renewenvironment{theglossary}%
8448         {\begin{longtable}{|l|l|l|l|}}%
8449         {\end{longtable}}%
    Add table header and horizontal line at the table's foot:
8450     \renewcommand*{\glossaryheader}{%
8451         \hline\bfseries\entryname&\bfseries\descriptionname&
8452         \bfseries \symbolname&
8453         \bfseries\pagelistname\tabularnewline\hline\endhead
8454         \hline\endfoot}%
8455 }

```

altlong4col The altlong4col style is like the long4col style but can have multiline descriptions and page lists.

```

8456 \newglossarystyle{altlong4col}{%
    Base it on the glostylelong4col style:
8457     \setglossarystyle{long4col}%
    Use a longtable with 4 columns where the second and last columns may have multiple lines
    in each row:
8458     \renewenvironment{theglossary}%
8459         {\begin{longtable}{lp{\glstdescwidth}lp{\glspagelistwidth}}}%
8460         {\end{longtable}}%
8461 }

```


`altlong4colheader` The `altlong4colheader` style is like `altlong4col` but with a header row.

```

8462 \newglossarystyle{altlong4colheader}{%
      Base it on the glostylelong4colheader style:
8463   \setglossarystyle{long4colheader}%
      Use a longtable with 4 columns where the second and last columns may have multiple lines
      in each row:
8464   \renewenvironment{theglossary}%
8465     {\begin{longtable}{\lp{\glsgdescwidth}\lp{\glspagelistwidth}}}%
8466     {\end{longtable}}%
8467 }
```

`altlong4colborder` The `altlong4colborder` style is like `altlong4col` but with a border.

```

8468 \newglossarystyle{altlong4colborder}{%
      Base it on the glostylelong4colborder style:
8469   \setglossarystyle{long4colborder}%
      Use a longtable with 4 columns where the second and last columns may have multiple lines
      in each row:
8470   \renewenvironment{theglossary}%
8471     {\begin{longtable}{\lllp{\glsgdescwidth}\lllp{\glspagelistwidth}}}%
8472     {\end{longtable}}%
8473 }
```

`altlong4colheaderborder` The `altlong4colheaderborder` style is like the above but with a header as well as a border.

```

8474 \newglossarystyle{altlong4colheaderborder}{%
      Base it on the glostylelong4colheaderborder style:
8475   \setglossarystyle{long4colheaderborder}%
      Use a longtable with 4 columns where the second and last columns may have multiple lines
      in each row:
8476   \renewenvironment{theglossary}%
8477     {\begin{longtable}{\lllp{\glsgdescwidth}\lllp{\glspagelistwidth}}}%
8478     {\end{longtable}}%
8479 }
```

3.5 Glossary Styles using longtable and booktabs (the `glossary-longbooktabs`) package

The styles here are based on David Carlisle's patch at <http://tex.stackexchange.com/a/56890>

```

8480 \ProvidesPackage{glossary-longbooktabs}[2017/09/20 v4.33 (NLCT)]
```

Requires `booktabs` package:

```

8481 \RequirePackage{booktabs}
```

and the base packages for long styles:

```
8482 \RequirePackage{glossary-long}
8483 \RequirePackage{glossary-longragged}
```

(longtable and array loaded by those packages).

long-booktabs The long-booktabs style is similar to the longheader style but uses the booktabs rules and patches longtable to check for group skip occurring at a page break.

```
8484 \newglossarystyle{long-booktabs}{%
```

If the style change is scoped, the patch will only have a local effect, which may be useful if it conflicts with other tables in the document.

```
8485 \glspatchLToutput
```

As with the longheader style, use the long style as a base.

```
8486 \setglossarystyle{long}%
```

Add a header with rules.

```
8487 \renewcommand*{\glossaryheader}{%
8488 \toprule \bfseries \entryname & \bfseries
8489 \descriptionname\tabularnewline\midrule\endhead
8490 \bottomrule\endfoot}%
```

Check for the nogroupskip package option. If there should be a gap between groups, insert the penalty and the vertical space. The check for nogroupskip should occur outside \glsgroupskip to be on the safe side.

```
8491 \ifglsgroupskip
8492 \renewcommand*{\glsgroupskip}{}%
8493 \else
8494 \renewcommand*{\glsgroupskip}{\glspenaltygroupskip}%
8495 \fi
8496 }
```

long3col-booktabs The long3col-booktabs style is similar to the long3colheader style but uses the booktabs rules and patches longtable to check for group skip occurring at a page break.

```
8497 \newglossarystyle{long3col-booktabs}{%
```

If the style change is scoped, the patch will only have a local effect, which may be useful if it conflicts with other tables in the document.

```
8498 \glspatchLToutput
```

Use the long3col style as a base.

```
8499 \setglossarystyle{long3col}%
```

Add a header with rules.

```
8500 \renewcommand*{\glossaryheader}{%
8501 \toprule \bfseries \entryname &
8502 \bfseries \descriptionname &
8503 \bfseries \pagelistname
8504 \tabularnewline\midrule\endhead
8505 \bottomrule\endfoot}%
```

Check for the nogroupskip package option. If there should be a gap between groups, insert the penalty and the vertical space. The check for nogroupskip should occur outside \glsgroupskip to be on the safe side.

```
8506 \ifglsnogroupskip
8507 \renewcommand*{\glsgroupskip}{}%
8508 \else
8509 \renewcommand*{\glsgroupskip}{\glspenaltygroupskip}%
8510 \fi
8511 }
```

ng4col-booktabs The long4col-booktabs style is similar to the long4colheader style but uses the booktabs rules and patches longtable to check for group skip occurring at a page break.

```
8512 \newglossarystyle{long4col-booktabs}{%
```

If the style change is scoped, the patch will only have a local effect, which may be useful if it conflicts with other tables in the document.

```
8513 \glspatchLToutput
```

Use the long4col style as a base.

```
8514 \setglossarystyle{long4col}{%
```

Add a header with rules.

```
8515 \renewcommand*{\glossaryheader}{%
8516 \toprule \bfseries \entryname &
8517 \bfseries \descriptionname &
8518 \bfseries \symbolname &
8519 \bfseries \pagelistname
8520 \tabularnewline\midrule\endhead
8521 \bottomrule\endfoot}%
```

Check for the nogroupskip package option. If there should be a gap between groups, insert the penalty and the vertical space. The check for nogroupskip should occur outside \glsgroupskip to be on the safe side.

```
8522 \ifglsnogroupskip
8523 \renewcommand*{\glsgroupskip}{}%
8524 \else
8525 \renewcommand*{\glsgroupskip}{\glspenaltygroupskip}%
8526 \fi
8527 }
```

ng4col-booktabs The altlong4col-booktabs style is similar to the altlong4colheader style but uses the booktabs rules and patches longtable to check for group skip occurring at a page break.

```
8528 \newglossarystyle{altlong4col-booktabs}{%
```

If the style change is scoped, the patch will only have a local effect, which may be useful if it conflicts with other tables in the document.

```
8529 \glspatchLToutput
```

Use the long4col-booktabs style as a base.

```
8530 \setglossarystyle{long4col-booktabs}{%
```

Change the column specifications:

```
8531 \renewenvironment{theglossary}%  
8532   {\begin{longtable}{lp{\glstdescwidth}lp{\glspagelistwidth}}}%  
8533   {\end{longtable}}}%  
8534 }
```

Ragged styles.

ragged-booktabs The longragged-booktabs style is similar to the longragged style but uses the booktabs rules and patches longtable to check for group skip occurring at a page break.

```
8535 \newglossarystyle{longragged-booktabs}{%
```

If the style change is scoped, the patch will only have a local effect, which may be useful if it conflicts with other tables in the document.

```
8536 \glspatchLToutput
```

Use the long-booktabs style as a base.

```
8537 \setglossarystyle{long-booktabs}%
```

Adjust the column specification.

```
8538 \renewenvironment{theglossary}%  
8539   {\begin{longtable}{l>{\raggedright}p{\glstdescwidth}}}%  
8540   {\end{longtable}}}%  
8541 }
```

ed3col-booktabs The longragged3col-booktabs style is similar to the longragged3col style but uses the booktabs rules and patches longtable to check for group skip occurring at a page break.

```
8542 \newglossarystyle{longragged3col-booktabs}{%
```

If the style change is scoped, the patch will only have a local effect, which may be useful if it conflicts with other tables in the document.

```
8543 \glspatchLToutput
```

Use the long3col-booktabs style as a base.

```
8544 \setglossarystyle{long3col-booktabs}%
```

Adjust the column specification.

```
8545 \renewenvironment{theglossary}%  
8546   {\begin{longtable}{l>{\raggedright}p{\glstdescwidth}%  
8547     >{\raggedright}p{\glspagelistwidth}}}%  
8548   {\end{longtable}}}%  
8549 }
```

ed4col-booktabs The altlongragged4col-booktabs style is similar to the altlongragged4col style but uses the booktabs rules and patches longtable to check for group skip occurring at a page break.

```
8550 \newglossarystyle{altlongragged4col-booktabs}{%
```

If the style change is scoped, the patch will only have a local effect, which may be useful if it conflicts with other tables in the document.

```
8551 \glspatchLToutput
```

Use the altlong4col-booktabs style as a base.

```
8552 \setglossarystyle{altlong4col-booktabs}%
```

Adjust the column specification.

```
8553 \renewenvironment{theglossary}%  
8554 {\begin{longtable}{l>{\raggedright}p{\glsgdescwidth}l%  
8555 >{\raggedright}p{\glspagelistwidth}}}%  
8556 {\end{longtable}}%  
8557 }
```

sLTpenaltycheck

```
8558 \newcommand*{\glslTpenaltycheck}{%  
8559 \ifnum\outputpenalty=-50\vskip\normalbaselineskip\relax\fi  
8560 }
```

enaltygroupskip

```
8561 \newcommand{\glspenaltygroupskip}{%  
8562 \noalign{\penalty-50\vskip\normalbaselineskip}}
```

restoreLToutput Provide a way of restoring \LT@output for the user.

```
8563 \let\@gls@org@LT@output\LT@output  
8564 \newcommand*{\glstoreLToutput}{\let\LT@output\@gls@org@LT@output}
```

This is David's patch, but I've replaced the hard-coded values with \glslTpenaltycheck to make it easier to adjust.

lspatchLToutput

```
8565 \newcommand*{\glspatchLToutput}{%  
8566 \renewcommand*{\LT@output}{%  
8567 \ifnum\outputpenalty < -\@Mi  
8568 \ifnum\outputpenalty > -\LT@end@pen  
8569 \LT@err{floats and marginpars not allowed in a longtable}\@ehc  
8570 \else  
8571 \setbox\z@\vbox{\unvbox\@cclv}%  
8572 \ifdim \ht\LT@lastfoot>\ht\LT@foot  
8573 \dimen@pagegoal  
8574 \advance\dimen@-\ht\LT@lastfoot  
8575 \ifdim\dimen@<\ht\z@  
8576 \setbox\@cclv\vbox{\unvbox\z@\copy\LT@foot\vss}%  
8577 \@makecol  
8578 \@outputpage  
8579 \setbox\z@\vbox{\box\LT@head\glslTpenaltycheck}%  
8580 \fi  
8581 \fi  
8582 \global\@colroom\@colht  
8583 \global\vsize\@colht  
8584 {\unvbox\z@\box\ifvoid\LT@lastfoot\LT@foot\else\LT@lastfoot\fi}%  
8585 \fi  
8586 \else
```

```

8587 \setbox\@cclv\vbox{\unvbox\@cclv\copy\LT@foot\vss}%
8588 \@makecol
8589 \@outputpage
8590 \global\ysize\@colroom
8591 \copy\LT@head
8592 \glsLTpenaltycheck
8593 \nobreak
8594 \fi
8595 }%
8596 }

```

3.6 Glossary Styles using longtable (the glossary-longragged package)

The glossary styles defined in the package used the longtable environment in the glossary and use ragged right formatting for the multiline columns.

```
8597 \ProvidesPackage{glossary-longragged}[2017/09/20 v4.33 (NLCT)]
```

Requires the package:

```
8598 \RequirePackage{array}
```

Requires the package:

```
8599 \RequirePackage{longtable}
```

`\glsdescwidth` This is a length that governs the width of the description column. This may have already been defined.

```

8600 \@ifundefined{glsdescwidth}{%
8601 \newlength\glsdescwidth
8602 \setlength{\glsdescwidth}{0.6\hsize}
8603 }{}

```

`glspagelistwidth` This is a length that governs the width of the page list column. This may already have been defined.

```

8604 \@ifundefined{glspagelistwidth}{%
8605 \newlength\glspagelistwidth
8606 \setlength{\glspagelistwidth}{0.1\hsize}
8607 }{}

```

`longragged` The longragged glossary style is like the long but uses ragged right formatting for the description column.

```
8608 \newglossarystyle{longragged}{%
```

Use longtable with two columns:

```

8609 \renewenvironment{theglossary}%
8610 {\begin{longtable}{l>{\raggedright}p{\glsdescwidth}}}%
8611 {\end{longtable}}%

```

Do nothing at the start of the environment:

```
8612 \renewcommand*{\glossaryheader}{}%
```

No heading between groups:

```
8613 \renewcommand*{\glsgroupheading}[1]{}%
```

Main (level 0) entries displayed in a row:

```
8614 \renewcommand{\glossentry}[2]{%
8615   \glentryitem{##1}\glstarget{##1}{\glossentryname{##1}} &
8616   \glossentrydesc{##1}\glspostdescription\space ##2%
8617   \tabularnewline
8618 }%
```

Sub entries displayed on the following row without the name:

```
8619 \renewcommand{\subglossentry}[3]{%
8620   &
8621   \glssubentryitem{##2}%
8622   \glstarget{##2}{\strut}\glossentrydesc{##2}%
8623   \glspostdescription\space ##3%
8624   \tabularnewline
8625 }%
```

Blank row between groups: The check for nogroupskip must occur outside `\glsgroupskip`
(<http://www.dickimaw-books.com/cgi-bin/bugtracker.cgi?action=view&key=108>)

```
8626 \ifglsgroupskip
8627 \renewcommand*{\glsgroupskip}{}%
8628 \else
8629 \renewcommand*{\glsgroupskip}{ & \tabularnewline}%
8630 \fi
8631 }
```

`ongraggedborder` The `longraggedborder` style is like the above, but with horizontal and vertical lines:

```
8632 \newglossarystyle{longraggedborder}{%
```

Base it on the `glostylelongragged` style:

```
8633 \setglossarystyle{longragged}%
```

Use `longtable` with two columns with vertical lines between each column:

```
8634 \renewenvironment{theglossary}{%
8635   \begin{longtable}{|l|>{\raggedright}p{\glsglwdescwidth}|}%
8636   {\end{longtable}}%
```

Place horizontal lines at the head and foot of the table:

```
8637 \renewcommand*{\glossaryheader}{\hline\endhead\hline\endfoot}%
8638 }
```

`ongraggedheader` The `longraggedheader` style is like the `longragged` style but with a header:

```
8639 \newglossarystyle{longraggedheader}{%
```

Base it on the `glostylelongragged` style:

```
8640 \setglossarystyle{longragged}%
```

Set the table's header:

```
8641 \renewcommand*{\glossaryheader}{%
8642   \bfseries \entryname & \bfseries \descriptionname
```

```

8643 \tabularnewline\endhead}%
8644 }

```

longraggedheaderborder The longraggedheaderborder style is like the longragged style but with a header and border:

```

8645 \newglossarystyle{longraggedheaderborder}{%
    Base it on the glostylelongraggedborder style:
8646 \setglossarystyle{longraggedborder}%
    Set the table's header and add horizontal line to table's foot:
8647 \renewcommand*{\glossaryheader}{%
8648 \hline\bfseries \entryname & \bfseries \descriptionname
8649 \tabularnewline\hline
8650 \endhead
8651 \hline\endfoot}%
8652 }

```

longragged3col The longragged3col style is like longragged but with 3 columns

```

8653 \newglossarystyle{longragged3col}{%
    Use a longtable with 3 columns:
8654 \renewenvironment{theglossary}%
8655 {\begin{longtable}{l>{\raggedright}p{\glstdescwidth}%
8656 >{\raggedright}p{\glspagelistwidth}}}%
8657 {\end{longtable}}%

```

No table header:

```

8658 \renewcommand*{\glossaryheader}{}%

```

No headings between groups:

```

8659 \renewcommand*{\glsgroupheading}[1]{}%

```

Main (level 0) entries on a row (name in first column, description in second column, page list in last column):

```

8660 \renewcommand{\glossentry}[2]{%
8661 \glssentryitem{##1}\glstarget{##1}{\glossentryname{##1}} &
8662 \glossentrydesc{##1} & ##2\tabularnewline
8663 }%

```

Sub-entries on a separate row (no name, description in second column, page list in third column):

```

8664 \renewcommand{\subglossentry}[3]{%
8665 &
8666 \glssubentryitem{##2}%
8667 \glstarget{##2}{\strut}\glossentrydesc{##2} &
8668 ##3\tabularnewline
8669 }%

```

Blank row between groups: The check for nogroupskip must occur outside \glsgroupskip (<http://www.dickimaw-books.com/cgi-bin/bugtracker.cgi?action=view&key=108>)

```

8670 \ifglsnogroupskip
8671 \renewcommand*{\glsgroupskip}{}%

```



```

8672 \else
8673   \renewcommand*{\glsgroupskip}{ & & \tabularnewline}%
8674 \fi
8675 }

```

ragged3colborder The longragged3colborder style is like the longragged3col style but with a border:

```

8676 \newglossarystyle{longragged3colborder}{%
  Base it on the glostylelongragged3col style:
8677 \setglossarystyle{longragged3col}%
  Use a longtable with 3 columns with vertical lines around them:
8678 \renewenvironment{theglossary}%
8679   {\begin{longtable}{|l|>{\raggedright}p{\glsgdescwidth}|%
8680    >{\raggedright}p{\glspagelistwidth}|}%
8681   {\end{longtable}}%
  Place horizontal lines at the head and foot of the table:
8682 \renewcommand*{\glossaryheader}{\hline\endhead\hline\endfoot}%
8683 }

```

ragged3colheader The longragged3colheader style is like longragged3col but with a header row:

```

8684 \newglossarystyle{longragged3colheader}{%
  Base it on the glostylelongragged3col style:
8685 \setglossarystyle{longragged3col}%
  Set the table's header:
8686 \renewcommand*{\glossaryheader}{%
8687   \bfseries\entryname&\bfseries\descriptionname&
8688   \bfseries\pagelistname\tabularnewline\endhead}%
8689 }

```

colheaderborder The longragged3colheaderborder style is like the above but with a border

```

8690 \newglossarystyle{longragged3colheaderborder}{%
  Base it on the glostylelongragged3colborder style:
8691 \setglossarystyle{longragged3colborder}%
  Set the table's header and add horizontal line at table's foot:
8692 \renewcommand*{\glossaryheader}{%
8693   \hline
8694   \bfseries\entryname&\bfseries\descriptionname&
8695   \bfseries\pagelistname\tabularnewline\hline\endhead
8696   \hline\endfoot}%
8697 }

```

altlongragged4col The altlongragged4col style is like the altlong4col style defined in the package, except that ragged right formatting is used for the description and page list columns.

```

8698 \newglossarystyle{altlongragged4col}{%

```

Use a longtable with 4 columns where the second and last columns may have multiple lines in each row:

```
8699 \renewenvironment{theglossary}%
8700   {\begin{longtable}{l>{\raggedright}p{\glsgdescwidth}l%
8701     >{\raggedright}p{\glspagelistwidth}}}%
8702   {\end{longtable}}%
```

No table header:

```
8703 \renewcommand*{\glossaryheader}{}%
```

No group headings:

```
8704 \renewcommand*{\glsgroupheading}[1]{}%
```

Main (level 0) entries on a single row (name in first column, description in second column, symbol in third column, page list in last column):

```
8705 \renewcommand{\glossentry}[2]{%
8706   \glstentryitem{##1}\glstarget{##1}{\glossentryname{##1}} &
8707   \glossentrydesc{##1} & \glossentrysymbol{##1} &
8708   ##2\tabularnewline
8709 }%
```

Sub entries on a single row with no name (description in second column, symbol in third column, page list in last column):

```
8710 \renewcommand{\subglossentry}[3]{%
8711   &
8712   \glssubentryitem{##2}%
8713   \glstarget{##2}{\strut}\glossentrydesc{##2} &
8714   \glossentrysymbol{##2} & ##3\tabularnewline
8715 }%
```

Blank row between groups: The check for nogroupskip must occur outside \glsgroupskip (<http://www.dickimaw-books.com/cgi-bin/bugtracker.cgi?action=view&key=108>)

```
8716 \ifglsgroupskip
8717   \renewcommand*{\glsgroupskip}{}%
8718 \else
8719   \renewcommand*{\glsgroupskip}{ & & \tabularnewline}%
8720 \fi
8721 }
```

agged4colheader The altlongragged4colheader style is like altlongragged4col but with a header row.

```
8722 \newglossarystyle{altlongragged4colheader}{%
```

Base it on the glostylealtlongragged4col style:

```
8723 \setglossarystyle{altlongragged4col}%
```

Use a longtable with 4 columns where the second and last columns may have multiple lines in each row:

```
8724 \renewenvironment{theglossary}%
8725   {\begin{longtable}{l>{\raggedright}p{\glsgdescwidth}l%
8726     >{\raggedright}p{\glspagelistwidth}}}%
8727   {\end{longtable}}%
```

Table has a header:

```
8728 \renewcommand*{\glossaryheader}{%
8729 \bfseries\entryname&\bfseries\descriptionname&
8730 \bfseries \symbolname&
8731 \bfseries\pagelistname\tabularnewline\endhead}%
8732 }
```

`ragged4colborder` The `altlongragged4colborder` style is like `altlongragged4col` but with a border.

```
8733 \newglossarystyle{altlongragged4colborder}{%
```

Base it on the `glostylealtlongragged4col` style:

```
8734 \setglossarystyle{altlongragged4col}%
```

Use a `longtable` with 4 columns where the second and last columns may have multiple lines in each row:

```
8735 \renewenvironment{theglossary}%
8736 {\begin{longtable}{|l|>\raggedright}p{\glsgdescwidth}|l|}%
8737 >\raggedright}p{\glspagelistwidth}|}%
8738 {\end{longtable}}%
```

Add horizontal lines to the head and foot of the table:

```
8739 \renewcommand*{\glossaryheader}{\hline\endhead\hline\endfoot}%
8740 }
```

`colheaderborder` The `altlongragged4colheaderborder` style is like the above but with a header as well as a border.

```
8741 \newglossarystyle{altlongragged4colheaderborder}{%
```

Base it on the `glostylealtlongragged4col` style:

```
8742 \setglossarystyle{altlongragged4col}%
```

Use a `longtable` with 4 columns where the second and last columns may have multiple lines in each row:

```
8743 \renewenvironment{theglossary}%
8744 {\begin{longtable}{|l|>\raggedright}p{\glsgdescwidth}|l|}%
8745 >\raggedright}p{\glspagelistwidth}|}%
8746 {\end{longtable}}%
```

Add table header and horizontal line at the table's foot:

```
8747 \renewcommand*{\glossaryheader}{%
8748 \hline\bfseries\entryname&\bfseries\descriptionname&
8749 \bfseries \symbolname&
8750 \bfseries\pagelistname\tabularnewline\hline\endhead
8751 \hline\endfoot}%
8752 }
```

3.7 Glossary Styles using multicol (glossary-mcols.sty)

The style file defines glossary styles that use the `multicol` package. These use the tree-like glossary styles in a `multicol` environment.

```
8753 \ProvidesPackage{glossary-mcols}[2017/09/20 v4.33 (NLCT)]
```

Required packages:

```
8754 \RequirePackage{multicol}
8755 \RequirePackage{glossary-tree}
```

`\indexspace` The are a few classes that don't define `\indexspace`, so provide a definition if it hasn't been defined.

```
8756 \providecommand{\indexspace}{%
8757   \par \vskip 10\p@ \@plus 5\p@ \@minus 3\p@ \relax
8758 }
```

`\glsmcols` Define macro in which to store the number of columns. (Defaults to 2.)

```
8759 \newcommand*{\glsmcols}{2}
```

`mcolindex` Multi-column index style. Same as the index, but puts the glossary in multiple columns. (Ideally the glossary title should go in the optional argument of `multicols`, but the title isn't part of the glossary style.)

```
8760 \newglossarystyle{mcolindex}{%
8761   \setglossarystyle{index}%
8762   \renewenvironment{theglossary}%
8763     {%
8764       \begin{multicols}{\glsmcols}
8765       \setlength{\parindent}{0pt}%
8766       \setlength{\parskip}{0pt plus 0.3pt}%
8767       \let\item\glstreeitem
8768       \let\subitem\glstreesubitem
8769       \let\subsubitem\glstreesubsubitem
8770     }%
8771     {\end{multicols}}}%
8772 }
```

`mcolindexgroup` As `mcolindex` but has headings:

```
8773 \newglossarystyle{mcolindexgroup}{%
8774   \setglossarystyle{mcolindex}%
8775   \renewcommand*{\glsgroupheading}[1]{%
8776     \item\glstreegroupheaderfmt{\glsgrouptitle{##1}}\indexspace}%
8777 }
```

`indexhypergroup` The `mcolindexhypergroup` style is like the `mcolindexgroup` style but has hyper navigation.

```
8778 \newglossarystyle{mcolindexhypergroup}{%
```

Base it on the `glostylemcolindex` style:

```
8779   \setglossarystyle{mcolindex}%
```

Put navigation links to the groups at the start of the glossary:

```
8780   \renewcommand*{\glossaryheader}{%
8781     \item\glstreenavigationfmt{\glsnavigation}\indexspace}%
```

Add a heading for each group (with a target). The group's title is in bold followed by a vertical gap.

```
8782 \renewcommand*{\glsgroupheading}[1]{%
8783   \item\glstreegroupheaderfmt
8784     {\glsnavigationhypertarget{##1}{\glsgrouptitle{##1}}}%
8785   \indexspace}%
8786 }
```

colindexspannav Similar to **colindexhypergroup**, but puts the navigation line in the optional argument of **multicols**.

```
8787 \newglossarystyle{colindexspannav}{%
8788   \setglossarystyle{index}%
8789   \renewenvironment{theglossary}%
8790     {%
8791       \begin{multicols}{\glsmcols}[\noindent\glstreenavigationfmt{\glsnavigation}]
8792       \setlength{\parindent}{0pt}%
8793       \setlength{\parskip}{0pt plus 0.3pt}%
8794       \let\item\glstreeitem}%
8795     {\end{multicols}}%
```

Add a heading for each group (with a target). The group's title is in bold followed by a vertical gap.

```
8796 \renewcommand*{\glsgroupheading}[1]{%
8797   \item\glstreegroupheaderfmt
8798     {\glsnavigationhypertarget{##1}{\glsgrouptitle{##1}}}%
8799   \indexspace}%
8800 }
```

mcoltree Multi-column index style. Same as the tree, but puts the glossary in multiple columns.

```
8801 \newglossarystyle{mcoltree}{%
8802   \setglossarystyle{tree}%
8803   \renewenvironment{theglossary}%
8804     {%
8805       \begin{multicols}{\glsmcols}
8806       \setlength{\parindent}{0pt}%
8807       \setlength{\parskip}{0pt plus 0.3pt}%
8808     }%
8809     {\end{multicols}}%
8810 }
```

mcoltreegroup Like the **mcoltree** style but the glossary groups have headings.

```
8811 \newglossarystyle{mcoltreegroup}{%
  Base it on the glostylemcoltree style:
8812   \setglossarystyle{mcoltree}%

```

Each group has a heading (in bold) followed by a vertical gap):

```
8813 \renewcommand{\glsgroupheading}[1]{\par
8814 \noindent\glstreegroupheaderfmt{\glsgrouptitle{##1}}\par\indexspace}%
8815 }
```

ltreehypergroup The `mcoltreehypergroup` style is like the `treegroup` style, but has a set of links to the groups at the start of the glossary.

```
8816 \newglossarystyle{mcoltreehypergroup}{%
```

Base it on the `glostylemcoltree` style:

```
8817 \setglossarystyle{mcoltree}{%
```

Put navigation links to the groups at the start of the `theglossary` environment:

```
8818 \renewcommand*{\glossaryheader}{%
8819 \par\noindent\glstreenavigationfmt{\glsnavigation}\par\indexspace}%

```

Each group has a heading (in bold with a target) followed by a vertical gap):

```
8820 \renewcommand*{\glsgroupheading}[1]{%
8821 \par\noindent
8822 \glstreegroupheaderfmt{\glsnavigationhypertarget{##1}{\glsgrouptitle{##1}}}\par
8823 \indexspace}%
8824 }
```

mcoltreespannav Similar to the `mcoltreehypergroup` style but the navigation line is put in the optional argument of the `multicols` environment.

```
8825 \newglossarystyle{mcoltreespannav}{%
8826 \setglossarystyle{tree}%
8827 \renewenvironment{theglossary}%
8828 {%
8829 \begin{multicols}{\glsmcols}\noindent\glstreenavigationfmt{\glsnavigation}]
8830 \setlength{\parindent}{0pt}%
8831 \setlength{\parskip}{0pt plus 0.3pt}%
8832 }%
8833 {\end{multicols}}}%

```

Each group has a heading (in bold with a target) followed by a vertical gap):

```
8834 \renewcommand*{\glsgroupheading}[1]{%
8835 \par\noindent
8836 \glstreegroupheaderfmt{\glsnavigationhypertarget{##1}{\glsgrouptitle{##1}}}\par
8837 \indexspace}%
8838 }
```

mcoltreenoname Multi-column index style. Same as the `treenoname`, but puts the glossary in multiple columns.

```
8839 \newglossarystyle{mcoltreenoname}{%
8840 \setglossarystyle{treenoname}%
8841 \renewenvironment{theglossary}%
8842 {%

```

```

8843     \begin{multicols}{\glsmcols}
8844     \setlength{\parindent}{0pt}%
8845     \setlength{\parskip}{0pt plus 0.3pt}%
8846 }%
8847 {\end{multicols}}%
8848 }

```

treenamegroup Like the `mcoltreenoname` style but the glossary groups have headings.

```

8849 \newglossarystyle{mcoltreenonamegroup}{%
    Base it on the glostylemcoltreenoname style:
8850 \setglossarystyle{mcoltreenoname}%
    Give each group a heading:
8851 \renewcommand{\glsgroupheading}[1]{\par
8852 \noindent\glstreegroupheaderfmt{\glsgrouptitle{##1}}\par\indexspace}%
8853 }

```

onamehypergroup The `mcoltreenonamehypergroup` style is like the `mcoltreenonamegroup` style, but has a set of links to the groups at the start of the glossary.

```

8854 \newglossarystyle{mcoltreenonamehypergroup}{%
    Base it on the glostylemcoltreenoname style:
8855 \setglossarystyle{mcoltreenoname}%
    Put navigation links to the groups at the start of the theglossary environment:
8856 \renewcommand*{\glossaryheader}{%
8857 \par\noindent\glstreenavigationfmt{\glsnavigation}\par\indexspace}%
    Each group has a heading (in bold with a target) followed by a vertical gap):
8858 \renewcommand*{\glsgroupheading}[1]{%
8859 \par\noindent
8860 \glstreegroupheaderfmt{\glsnavigationtarget{##1}{\glsgrouptitle{##1}}}\par
8861 \indexspace}%
8862 }

```

eenonamespannav Similar to the `mcoltreenonamehypergroup` style but the navigation line is put in the optional argument of the multicols environment.

```

8863 \newglossarystyle{mcoltreenonamespannav}{%
8864 \setglossarystyle{treename}%
8865 \renewenvironment{theglossary}%
8866 {%
8867 \begin{multicols}{\glsmcols}[\noindent\glstreenavigationfmt{\glsnavigation}]
8868 \setlength{\parindent}{0pt}%
8869 \setlength{\parskip}{0pt plus 0.3pt}%
8870 }%
8871 {\end{multicols}}%
    Each group has a heading (in bold with a target) followed by a vertical gap):
8872 \renewcommand*{\glsgroupheading}[1]{%
8873 \par\noindent

```

```

8874 \glstreegroupheaderfmt{\glsnahypertarget{##1}{\glsgetgrouptitle{##1}}}\par
8875 \indexspace}%
8876 }

```

mcolalttree Multi-column index style. Same as the alttree, but puts the glossary in multiple columns.

```

8877 \newglossarystyle{mcolalttree}{%
8878 \setglossarystyle{alttree}%
8879 \renewenvironment{theglossary}%
8880 {%
8881 \begin{multicols}{\glsmcols}
8882 \def\@gls@prevlevel{-1}%
8883 \mbox{}\par
8884 }%
8885 {\par\end{multicols}}}%
8886 }

```

colalttreegroup Like the mcolalttree style but the glossary groups have headings.

```

8887 \newglossarystyle{colalttreegroup}{%
      Base it on the glostylemcolalttree style:
8888 \setglossarystyle{mcolalttree}%
      Give each group a heading.
8889 \renewcommand{\glsgroupheading}[1]{\par
8890 \def\@gls@prevlevel{-1}%
8891 \hangindent0pt\relax
8892 \parindent0pt\relax
8893 \glstreegroupheaderfmt{\glsgetgrouptitle{##1}}\par\indexspace}%
8894 }

```

treehypergroup The mcolalttreehypergroup style is like the mcolalttreegroup style, but has a set of links to the groups at the start of the glossary.

```

8895 \newglossarystyle{mcolalttreehypergroup}{%
      Base it on the glostylemcolalttree style:
8896 \setglossarystyle{mcolalttree}%
      Put the navigation links in the header
8897 \renewcommand*{\glossaryheader}{%
8898 \par
8899 \def\@gls@prevlevel{-1}%
8900 \hangindent0pt\relax
8901 \parindent0pt\relax
8902 \glstreenavigationfmt{\glsnavigation}\par\indexspace}%
      Put a hypertarget at the start of each group
8903 \renewcommand*{\glsgroupheading}[1]{%
8904 \par
8905 \def\@gls@prevlevel{-1}%
8906 \hangindent0pt\relax

```



```

8907 \parindent0pt\relax
8908 \glstreegroupheaderfmt{\glshnavhypertarget{##1}{\glsggetgrouptitle{##1}}}\par
8909 \indexspace}%
8910 }

```

`lalttreespannav` Similar to the `mcolalttreehypergroup` style but the navigation line is put in the optional argument of the `multicols` environment.

```

8911 \newglossarystyle{mcolalttreespannav}{%
8912 \setglossarystyle{alttree}%
8913 \renewenvironment{theglossary}%
8914 {%
8915 \begin{multicols}{\glsmcols}\noindent\glstreenavigationfmt{\glshnavigation}]
8916 \def\@glsp@prevlevel{-1}%
8917 \mbox{}\par
8918 }%
8919 {\par\end{multicols}}}%

```

Put a hypertarget at the start of each group

```

8920 \renewcommand*{\glsgroupheading}[1]{%
8921 \par
8922 \def\@glsp@prevlevel{-1}%
8923 \hangindent0pt\relax
8924 \parindent0pt\relax
8925 \glstreegroupheaderfmt{\glshnavhypertarget{##1}{\glsggetgrouptitle{##1}}}\par
8926 \indexspace}
8927 }

```

3.8 Glossary Styles using supertabular environment (glossary-super package)

The glossary styles defined in the package use the `supertabular` environment.

```

8928 \ProvidesPackage{glossary-super}[2017/09/20 v4.33 (NLCT)]

```

Requires the package:

```

8929 \RequirePackage{supertabular}

```

`\glsdscwidth` This is a length that governs the width of the description column. This may already have been defined if `has` has been loaded.

```

8930 \@ifundefined{glsdscwidth}{%
8931 \newlength{glsdscwidth}
8932 \setlength{glsdscwidth}{0.6\hsize}
8933 }{}

```

`lspagelistwidth` This is a length that governs the width of the page list column. This may already have been defined if `has` has been loaded.

```

8934 \@ifundefined{glspagelistwidth}{%
8935 \newlength{glspagelistwidth}
8936 \setlength{glspagelistwidth}{0.1\hsize}

```

8937 }{}

super The super glossary style uses the supertabular environment (it uses lengths defined in the package.)

```
8938 \newglossarystyle{super}{%
```

Put the glossary in a supertabular environment with two columns and no head or tail:

```
8939 \renewenvironment{theglossary}%  
8940 {\tablehead{}\tabletail{}}%  
8941 \begin{supertabular}{lp{\glsdescwidth}}%  
8942 {\end{supertabular}}%
```

Do nothing at the start of the table:

```
8943 \renewcommand*{\glossaryheader}{}%
```

No group headings:

```
8944 \renewcommand*{\glsgroupheading}[1]{}%
```

Main (level 0) entries put in a row (name in first column, description and page list in second column):

```
8945 \renewcommand{\glossentry}[2]{%  
8946 \glsentryitem{##1}\glstarget{##1}{\glossentryname{##1}} &  
8947 \glossentrydesc{##1}\glspostdescription\space ##2\tabularnewline  
8948 }%
```

Sub entries put in a row (no name, description and page list in second column):

```
8949 \renewcommand{\subglossentry}[3]{%  
8950 &  
8951 \glssubentryitem{##2}%  
8952 \glstarget{##2}{\strut}\glossentrydesc{##2}\glspostdescription\space  
8953 ##3\tabularnewline  
8954 }%
```

Blank row between groups: The check for nogroupskip must occur outside `\glsgroupskip` (<http://www.dickimaw-books.com/cgi-bin/bugtracker.cgi?action=view&key=108>)

```
8955 \ifglsnogroupskip  
8956 \renewcommand*{\glsgroupskip}{}%  
8957 \else  
8958 \renewcommand*{\glsgroupskip}{& \tabularnewline}%  
8959 \fi  
8960 }
```

superborder The superborder style is like the above, but with horizontal and vertical lines:

```
8961 \newglossarystyle{superborder}{%
```

Base it on the `glostylesuper` style:

```
8962 \setglossarystyle{super}%
```

Put the glossary in a supertabular environment with two columns and a horizontal line in the head and tail:

```
8963 \renewenvironment{theglossary}%  
8964 {\tablehead{\hline}\tabletail{\hline}%
```

```

8965     \begin{supertabular}{|l|p{\glsdescwidth}|}%
8966     {\end{supertabular}}%
8967 }

```

superheader The superheader style is like the super style, but with a header:

```

8968 \newglossarystyle{superheader}{%
      Base it on the glostylesuper style:
8969   \setglossarystyle{super}%
      Put the glossary in a supertabular environment with two columns, a header and no tail:
8970 \renewenvironment{theglossary}%
8971   {\tablehead{\bfseries \entryname &
8972     \bfseries\descriptionname\tabularnewline}%
8973     \tabletail{}}%
8974   \begin{supertabular}{lp{\glsdescwidth}}%
8975   {\end{supertabular}}%
8976 }

```

superheaderborder The superheaderborder style is like the super style but with a header and border:

```

8977 \newglossarystyle{superheaderborder}{%
      Base it on the glostylesuper style:
8978   \setglossarystyle{super}%
      Put the glossary in a supertabular environment with two columns, a header and horizontal
      lines above and below the table:
8979   \renewenvironment{theglossary}%
8980     {\tablehead{\hline\bfseries \entryname &
8981       \bfseries \descriptionname\tabularnewline\hline}%
8982       \tabletail{\hline}}
8983     \begin{supertabular}{|l|p{\glsdescwidth}|}%
8984     {\end{supertabular}}%
8985 }

```

super3col The super3col style is like the super style, but with 3 columns:

```

8986 \newglossarystyle{super3col}{%
      Put the glossary in a supertabular environment with three columns and no head or tail:
8987   \renewenvironment{theglossary}%
8988     {\tablehead{}\tabletail{}}%
8989     \begin{supertabular}{lp{\glsdescwidth}p{\glspagelistwidth}}%
8990     {\end{supertabular}}%
      Do nothing at the start of the table:
8991   \renewcommand*{\glossaryheader}{}%
      No group headings:
8992   \renewcommand*{\glsgroupheading}[1]{}%

```

Main (level 0) entries on a row (name in first column, description in second column, page list in last column):

```

8993 \renewcommand{\glossentry}[2]{%
8994   \glentryitem{##1}\glstarget{##1}{\glossentryname{##1}} &
8995   \glossentrydesc{##1} & ##2\tabularnewline
8996 }%
```

Sub entries on a row (no name, description in second column, page list in last column):

```

8997 \renewcommand{\subglossentry}[3]{%
8998   &
8999   \glssubentryitem{##2}%
9000   \glstarget{##2}{\strut}\glossentrydesc{##2} &
9001   ##3\tabularnewline
9002 }%
```

Blank row between groups: The check for nogroupskip must occur outside \glsgroupskip (<http://www.dickimaw-books.com/cgi-bin/bugtracker.cgi?action=view&key=108>)

```

9003 \ifglsgroupskip
9004   \renewcommand*{\glsgroupskip}{}%
9005 \else
9006   \renewcommand*{\glsgroupskip}{& & \tabularnewline}%
9007 \fi
9008 }
```

super3colborder The super3colborder style is like the super3col style, but with a border:

```

9009 \newglossarystyle{super3colborder}{%
```

Base it on the glostylesuper3col style:

```

9010 \setglossarystyle{super3col}%
```

Put the glossary in a supertabular environment with three columns and a horizontal line in the head and tail:

```

9011 \renewenvironment{theglossary}%
9012   {\tablehead{\hline}\tabletail{\hline}%
9013   \begin{supertabular}{|l|p{\glsgdescwidth}|p{\glspagelistwidth|}}%
9014   {\end{supertabular}}%
9015 }
```

super3colheader The super3colheader style is like the super3col style but with a header row:

```

9016 \newglossarystyle{super3colheader}{%
```

Base it on the glostylesuper3col style:

```

9017 \setglossarystyle{super3col}%
```

Put the glossary in a supertabular environment with three columns, a header and no tail:

```

9018 \renewenvironment{theglossary}%
9019   {\tablehead{\bfseries\entryname&\bfseries\descriptionname&
9020   \bfseries\pagelistname\tabularnewline}\tabletail{}}%
9021   \begin{supertabular}{lp{\glsgdescwidth}p{\glspagelistwidth}}}%
9022   {\end{supertabular}}%
9023 }
```

colheaderborder The super3colheaderborder style is like the super3col style but with a header and border:

```
9024 \newglossarystyle{super3colheaderborder}{%
```

Base it on the glostylesuper3colborder style:

```
9025 \setglossarystyle{super3colborder}{%
```

Put the glossary in a supertabular environment with three columns, a header with horizontal lines and a horizontal line in the tail:

```
9026 \renewenvironment{theglossary}{%
9027   {\tablehead{\hline
9028     \bfseries\entryname&\bfseries\descriptionname&
9029     \bfseries\pagelistname\tabularnewline\hline}%
9030   \tabletail{\hline}%
9031   \begin{supertabular}{|l|p{\glsgdescwidth}|p{\glspagelistwidth}|}%
9032   {\end{supertabular}}}%
9033 }
```

super4col The super4col glossary style has four columns, where the third column contains the value of the corresponding symbol key used when that entry was defined.

```
9034 \newglossarystyle{super4col}{%
```

Put the glossary in a supertabular environment with four columns and no head or tail:

```
9035 \renewenvironment{theglossary}{%
9036   {\tablehead{}\tabletail{}}%
9037   \begin{supertabular}{|l|l|l|l|}%
9038   \end{supertabular}}%
```

Do nothing at the start of the table:

```
9039 \renewcommand*{\glossaryheader}{}%
```

No group headings:

```
9040 \renewcommand*{\glsgroupheading}[1]{}%
```

Main (level 0) entries on a row with the name in the first column, description in second column, symbol in third column and page list in last column:

```
9041 \renewcommand{\glossentry}[2]{%
9042   \glstentryitem{##1}\glstarget{##1}{\glossentryname{##1}} &
9043   \glossentrydesc{##1} &
9044   \glossentrysymbol{##1} & ##2\tabularnewline
9045   }%
```

Sub entries on a row with no name, the description in the second column, symbol in third column and page list in last column:

```
9046 \renewcommand{\subglossentry}[3]{%
9047   &
9048   \glssubentryitem{##2}%
9049   \glstarget{##2}{\strut}\glossentrydesc{##2} &
9050   \glossentrysymbol{##2} & ##3\tabularnewline
9051   }%
```

Blank row between groups: The check for nogroupskip must occur outside \glsgroupskip
(<http://www.dickimaw-books.com/cgi-bin/bugtracker.cgi?action=view&key=108>)

```

9052 \ifglsgroupskip
9053 \renewcommand*\glsgroupskip{}%
9054 \else
9055 \renewcommand*\glsgroupskip{& & \tabularnewline}%
9056 \fi
9057 }

```

super4colheader The super4colheader style is like the super4col but with a header row.

```

9058 \newglossarystyle{super4colheader}{%

```

Base it on the glostylesuper4col style:

```

9059 \setglossarystyle{super4col}%

```

Put the glossary in a supertabular environment with four columns, a header and no tail:

```

9060 \renewenvironment{theglossary}%
9061 {\tablehead{\bfseries\entryname&\bfseries\descriptionname&
9062 \bfseries\symbolname &
9063 \bfseries\pagelistname\tabularnewline}%
9064 \tabletail{}%
9065 \begin{supertabular}{l111}}%
9066 {\end{supertabular}}%
9067 }

```

super4colborder The super4colborder style is like the super4col but with a border.

```

9068 \newglossarystyle{super4colborder}{%

```

Base it on the glostylesuper4col style:

```

9069 \setglossarystyle{super4col}%

```

Put the glossary in a supertabular environment with four columns and a horizontal line in the head and tail:

```

9070 \renewenvironment{theglossary}%
9071 {\tablehead{\hline}\tabletail{\hline}%
9072 \begin{supertabular}{|l111|111}}%
9073 {\end{supertabular}}%
9074 }

```

colheaderborder The super4colheaderborder style is like the super4col but with a header and border.

```

9075 \newglossarystyle{super4colheaderborder}{%

```

Base it on the glostylesuper4col style:

```

9076 \setglossarystyle{super4col}%

```

Put the glossary in a supertabular environment with four columns and a header bordered by horizontal lines and a horizontal line in the tail:

```

9077 \renewenvironment{theglossary}%
9078 {\tablehead{\hline\bfseries\entryname&\bfseries\descriptionname&
9079 \bfseries\symbolname &

```

```

9080      \bfseries\pagelistname\tabularnewline\hline}%
9081      \tabletail{\hline}%
9082      \begin{supertabular}{|l|l|l|l|}%
9083      {\end{supertabular}}%
9084 }

```

altsuper4col The altsuper4col glossary style is like super4col but has provision for multiline descriptions.

```

9085 \newglossarystyle{altsuper4col}{%
      Base it on the glostylesuper4col style:
9086   \setglossarystyle{super4col}%
      Put the glossary in a supertabular environment with four columns and no head or tail:
9087   \renewenvironment{theglossary}%
9088     {\tablehead{}\tabletail{}}%
9089     \begin{supertabular}{lp{\glsgdescwidth}lp{\glspagelistwidth}}%
9090     {\end{supertabular}}%
9091 }

```

super4colheader The altsuper4colheader style is like the altsuper4col but with a header row.

```

9092 \newglossarystyle{altsuper4colheader}{%
      Base it on the glostylesuper4colheader style:
9093   \setglossarystyle{super4colheader}%
      Put the glossary in a supertabular environment with four columns, a header and no tail:
9094   \renewenvironment{theglossary}%
9095     {\tablehead{\bfseries\entryname&\bfseries\descriptionname&
9096       \bfseries\symbolname &
9097       \bfseries\pagelistname\tabularnewline}\tabletail{}}%
9098     \begin{supertabular}{lp{\glsgdescwidth}lp{\glspagelistwidth}}%
9099     {\end{supertabular}}%
9100 }

```

super4colborder The altsuper4colborder style is like the altsuper4col but with a border.

```

9101 \newglossarystyle{altsuper4colborder}{%
      Base it on the glostylesuper4colborder style:
9102   \setglossarystyle{super4colborder}%
      Put the glossary in a supertabular environment with four columns and a horizontal line in the
      head and tail:
9103   \renewenvironment{theglossary}%
9104     {\tablehead{\hline}\tabletail{\hline}%
9105     \begin{supertabular}%
9106       {|l|lp{\glsgdescwidth}|l|lp{\glspagelistwidth}|}%
9107     {\end{supertabular}}%
9108 }

```

colheaderborder The altsuper4colheaderborder style is like the altsuper4col but with a header and border.

```

9109 \newglossarystyle{altsuper4colheaderborder}{%

```

Base it on the `glostylesuper4colheaderborder` style:

```
9110 \setglossarystyle{super4colheaderborder}%
```

Put the glossary in a `supertabular` environment with four columns and a header bordered by horizontal lines and a horizontal line in the tail:

```
9111 \renewenvironment{theglossary}%  
9112   {\tablehead{\hline  
9113     \bfseries\entryname &  
9114     \bfseries\descriptionname &  
9115     \bfseries\symbolname &  
9116     \bfseries\pagelistname\tabularnewline\hline}%  
9117   \tabletail{\hline}%  
9118   \begin{supertabular}%  
9119     {ll|p{\glsdescwidth}ll|p{\glspagelistwidth}|}%  
9120   {\end{supertabular}}%  
9121 }
```

3.9 Glossary Styles using `supertabular` environment (`glossary-superragged` package)

The glossary styles defined in the package use the `supertabular` environment. These styles are like those provided by the package, except that the multiline columns have ragged right justification.

```
9122 \ProvidesPackage{glossary-superragged}[2017/09/20 v4.33 (NLCT)]
```

Requires the package:

```
9123 \RequirePackage{array}
```

Requires the package:

```
9124 \RequirePackage{supertabular}
```

`\glsdescwidth` This is a length that governs the width of the description column. This may already have been defined.

```
9125 \@ifundefined{glsdescwidth}{%  
9126   \newlength\glsdescwidth  
9127   \setlength{\glsdescwidth}{0.6\hsize}  
9128 }{}
```

`\glspagelistwidth` This is a length that governs the width of the page list column. This may already have been defined.

```
9129 \@ifundefined{glspagelistwidth}{%  
9130   \newlength\glspagelistwidth  
9131   \setlength{\glspagelistwidth}{0.1\hsize}  
9132 }{}
```

`superragged` The `superragged` glossary style uses the `supertabular` environment.

```
9133 \newglossarystyle{superragged}{%
```


Put the glossary in a supertabular environment with two columns and no head or tail:

```
9134 \renewenvironment{theglossary}%
9135   {\tablehead{}\tabletail{}}%
9136   \begin{supertabular}{l>{\raggedright}p{\glsgdescwidth}}}%
9137   {\end{supertabular}}%
```

Do nothing at the start of the table:

```
9138 \renewcommand*{\glossaryheader}{}%
```

No group headings:

```
9139 \renewcommand*{\glsgroupheading}[1]{}%
```

Main (level 0) entries put in a row (name in first column, description and page list in second column):

```
9140 \renewcommand{\glossentry}[2]{%
9141   \glssentryitem{##1}\glstarget{##1}{\glossentryname{##1}} &
9142   \glossentrydesc{##1}\glspostdescription\space ##2%
9143   \tabularnewline
9144 }%
```

Sub entries put in a row (no name, description and page list in second column):

```
9145 \renewcommand{\subglossentry}[3]{%
9146   &
9147   \glssubentryitem{##2}%
9148   \glstarget{##2}{\strut}\glossentrydesc{##2}\glspostdescription\space
9149   ##3%
9150   \tabularnewline
9151 }%
```

Blank row between groups: The check for nogroupskip must occur outside \glsgroupskip (<http://www.dickimaw-books.com/cgi-bin/bugtracker.cgi?action=view&key=108>)

```
9152 \ifglsnogroupskip
9153   \renewcommand*{\glsgroupskip}{}%
9154 \else
9155   \renewcommand*{\glsgroupskip}{& \tabularnewline}%
9156 \fi
9157 }
```

`\perraggedborder` The `superraggedborder` style is like the above, but with horizontal and vertical lines:

```
9158 \newglossarystyle{superraggedborder}{}%
```

Base it on the `glostylesuperragged` style:

```
9159 \setglossarystyle{superragged}%
```

Put the glossary in a supertabular environment with two columns and a horizontal line in the head and tail:

```
9160 \renewenvironment{theglossary}%
9161   {\tablehead{\hline}\tabletail{\hline}%
9162   \begin{supertabular}{l|>{\raggedright}p{\glsgdescwidth}|}%
9163   {\end{supertabular}}%
9164 }
```

`superraggedheader` The `superraggedheader` style is like the `super` style, but with a header:

```
9165 \newglossarystyle{superraggedheader}{%
```

Base it on the `glostylesuperragged` style:

```
9166 \setglossarystyle{superragged}%
```

Put the glossary in a `supertabular` environment with two columns, a header and no tail:

```
9167 \renewenvironment{theglossary}%
```

```
9168 {\tablehead{\bfseries \entryname & \bfseries \descriptionname
```

```
9169 \tabularnewline}%
```

```
9170 \tabletail{}}%
```

```
9171 \begin{supertabular}{l>{\raggedright}p{\glsgdescwidth}}%
```

```
9172 {\end{supertabular}}%
```

```
9173 }
```

`superraggedheaderborder` The `superraggedheaderborder` style is like the `superragged` style but with a header and border:

```
9174 \newglossarystyle{superraggedheaderborder}{%
```

Base it on the `glostylesuper` style:

```
9175 \setglossarystyle{superragged}%
```

Put the glossary in a `supertabular` environment with two columns, a header and horizontal lines above and below the table:

```
9176 \renewenvironment{theglossary}%
```

```
9177 {\tablehead{\hline\bfseries \entryname &
```

```
9178 \bfseries \descriptionname\tabularnewline\hline}%
```

```
9179 \tabletail{\hline}
```

```
9180 \begin{supertabular}{ll|>{\raggedright}p{\glsgdescwidth}}}%
```

```
9181 {\end{supertabular}}%
```

```
9182 }
```

`superragged3col` The `superragged3col` style is like the `superragged` style, but with 3 columns:

```
9183 \newglossarystyle{superragged3col}{%
```

Put the glossary in a `supertabular` environment with three columns and no head or tail:

```
9184 \renewenvironment{theglossary}%
```

```
9185 {\tablehead{}\tabletail{}}%
```

```
9186 \begin{supertabular}{l>{\raggedright}p{\glsgdescwidth}%
```

```
9187 >{\raggedright}p{\glspagelistwidth}}}%
```

```
9188 {\end{supertabular}}%
```

Do nothing at the start of the table:

```
9189 \renewcommand*{\glossaryheader}{}%
```

No group headings:

```
9190 \renewcommand*{\glsgroupheading}[1]{}%
```

Main (level 0) entries on a row (name in first column, description in second column, page list in last column):

```
9191 \renewcommand{\glossentry}[2]{%
```

```
9192 \glstentryitem{##1}\glstarget{##1}{\glossentryname{##1}} &
```

```
9193 \glossentrydesc{##1} &
```

```

9194     ##2\tabularnewline
9195 }%

```

Sub entries on a row (no name, description in second column, page list in last column):

```

9196 \renewcommand{\subglossentry}[3]{%
9197     &
9198     \glssubentryitem{##2}%
9199     \glstarget{##2}{\strut}\glossentrydesc{##2} &
9200     ##3\tabularnewline
9201 }%

```

Blank row between groups: The check for nogroupskip must occur outside \glsgroupskip (<http://www.dickimaw-books.com/cgi-bin/bugtracker.cgi?action=view&key=108>)

```

9202 \ifglsnogroupskip
9203 \renewcommand*{\glsgroupskip}{}%
9204 \else
9205 \renewcommand*{\glsgroupskip}{& & \tabularnewline}%
9206 \fi
9207 }

```

agged3colborder The superragged3colborder style is like the superragged3col style, but with a border:

```

9208 \newglossarystyle{superragged3colborder}{%

```

Base it on the glostylessuperragged3col style:

```

9209 \setglossarystyle{superragged3col}%

```

Put the glossary in a supertabular environment with three columns and a horizontal line in the head and tail:

```

9210 \renewenvironment{theglossary}%
9211 {\tablehead{\hline}\tabletail{\hline}%
9212 \begin{supertabular}{|l|>{\raggedright}p{\glsdescwidth}||%
9213 >{\raggedright}p{\glspagerlistwidth}||}%
9214 {\end{supertabular}}%
9215 }

```

agged3colheader The superragged3colheader style is like the superragged3col style but with a header row:

```

9216 \newglossarystyle{superragged3colheader}{%

```

Base it on the glostylessuperragged3col style:

```

9217 \setglossarystyle{superragged3col}%

```

Put the glossary in a supertabular environment with three columns, a header and no tail:

```

9218 \renewenvironment{theglossary}%
9219 {\tablehead{\bfseries\entryname&\bfseries\descriptionname&
9220 \bfseries\pagerlistname\tabularnewline}\tabletail{}%
9221 \begin{supertabular}{l>{\raggedright}p{\glsdescwidth}%
9222 >{\raggedright}p{\glspagerlistwidth}}%
9223 {\end{supertabular}}%
9224 }

```

colheaderborder The superragged3colheaderborder style is like the superragged3col style but with a header and border:

```
9225 \newglossarystyle{superragged3colheaderborder}{%
```

Base it on the glosstylesuperragged3colborder style:

```
9226 \setglossarystyle{superragged3colborder}%
```

Put the glossary in a supertabular environment with three columns, a header with horizontal lines and a horizontal line in the tail:

```
9227 \renewenvironment{theglossary}%
9228 {\tablehead{\hline
9229 \bfseries\entryname&\bfseries\descriptionname&
9230 \bfseries\pagelistname\tabularnewline\hline}%
9231 \tabletail{\hline}%
9232 \begin{supertabular}{|l|>{\raggedright}p{\glsgdescwidth}|%
9233 >{\raggedright}p{\glspagelistwidth}|}%
9234 {\end{supertabular}}%
9235 }
```

superragged4col The altsuperragged4col glossary style is like altsuper4col style in the package but uses ragged right formatting in the description and page list columns.

```
9236 \newglossarystyle{altsuperragged4col}{%
```

Put the glossary in a supertabular environment with four columns and no head or tail:

```
9237 \renewenvironment{theglossary}%
9238 {\tablehead{}\tabletail{}%
9239 \begin{supertabular}{l>{\raggedright}p{\glsgdescwidth}l%
9240 >{\raggedright}p{\glspagelistwidth}}%
9241 {\end{supertabular}}%
```

Do nothing at the start of the table:

```
9242 \renewcommand*{\glossaryheader}{}%
```

No group headings:

```
9243 \renewcommand*{\glsgroupheading}[1]{}%
```

Main (level 0) entries on a row with the name in the first column, description in second column, symbol in third column and page list in last column:

```
9244 \renewcommand{\glossentry}[2]{%
9245 \glstentryitem{##1}\glstarget{##1}{\glossentryname{##1}} &
9246 \glossentrydesc{##1} &
9247 \glossentrysymbol{##1} & ##2\tabularnewline
9248 }%
```

Sub entries on a row with no name, the description in the second column, symbol in third column and page list in last column:

```
9249 \renewcommand{\subglossentry}[3]{%
9250 &
9251 \glssubentryitem{##2}%
9252 \glstarget{##2}{\strut}\glossentrydesc{##2} &
9253 \glossentrysymbol{##2} & ##3\tabularnewline
9254 }%
```

Blank row between groups: The check for nogroupskip must occur outside \glsgroupskip (<http://www.dickimaw-books.com/cgi-bin/bugtracker.cgi?action=view&key=108>)

```

9255 \ifglsgroupskip
9256 \renewcommand*{\glsgroupskip}{}%
9257 \else
9258 \renewcommand*{\glsgroupskip}{& & \tabularnewline}%
9259 \fi
9260 }

```

agged4colheader The altsuperragged4colheader style is like the altsuperragged4col style but with a header row.

```

9261 \newglossarystyle{altsuperragged4colheader}{%

```

Base it on the glostylealtsuperragged4col style:

```

9262 \setglossarystyle{altsuperragged4col}%

```

Put the glossary in a supertabular environment with four columns, a header and no tail:

```

9263 \renewenvironment{theglossary}%
9264 {\tablehead{\bfseries\entryname&\bfseries\descriptionname&
9265 \bfseries\symbolname &
9266 \bfseries\pagelistname\tabularnewline}\tabletail{}}%
9267 \begin{supertabular}{l>{\raggedright}p{\glsdescwidth}l%
9268 >{\raggedright}p{\glspagelistwidth}}}%
9269 {\end{supertabular}}%
9270 }

```

agged4colborder The altsuperragged4colborder style is like the altsuperragged4col style but with a border.

```

9271 \newglossarystyle{altsuperragged4colborder}{%

```

Base it on the glostylealtsuperragged4col style:

```

9272 \setglossarystyle{altsuper4col}%

```

Put the glossary in a supertabular environment with four columns and a horizontal line in the head and tail:

```

9273 \renewenvironment{theglossary}%
9274 {\tablehead{\hline}\tabletail{\hline}%
9275 \begin{supertabular}%
9276 {l|>{\raggedright}p{\glsdescwidth}l|}%
9277 >{\raggedright}p{\glspagelistwidth}l}}%
9278 {\end{supertabular}}%
9279 }

```

colheaderborder The altsuperragged4colheaderborder style is like the altsuperragged4col style but with a header and border.

```

9280 \newglossarystyle{altsuperragged4colheaderborder}{%

```

Base it on the glostylealtsuperragged4col style:

```

9281 \setglossarystyle{altsuperragged4col}%

```

Put the glossary in a supertabular environment with four columns and a header bordered by horizontal lines and a horizontal line in the tail:

```

9282 \renewenvironment{theglossary}%
9283   {\tablehead{\hline
9284     \bfseries\entryname &
9285     \bfseries\descriptionname &
9286     \bfseries\symbolname &
9287     \bfseries\pagelistname\tabularnewline\hline}%
9288   \tabletail{\hline}%
9289   \begin{supertabular}%
9290     {||>{\raggedright}p{\glsdescwidth}|||}%
9291     >{\raggedright}p{\glspagelistwidth}||}%
9292   {\end{supertabular}}%
9293 }

```

3.10 Tree Styles (glossary-tree.sty)

The style file defines glossary styles that have a tree-like structure. These are designed for hierarchical glossaries.

```

9294 \ProvidesPackage{glossary-tree}[2017/09/20 v4.33 (NLCT)]

```

`\indexspace` There are a few classes that don't define `\indexspace`, so provide a definition if it hasn't been defined.

```

9295 \providecommand{\indexspace}{%
9296   \par \vskip 10\p@ \@plus 5\p@ \@minus 3\p@ \relax
9297 }

```

`\glstreenamefmt` Format used to display the name in the tree styles. (This may be counteracted by `\glstnamefont`.) This command was previously also used to format the group headings.

```

9298 \newcommand*{\glstreenamefmt}[1]{\textbf{#1}}

```

`\glstreegroupheaderfmt` Format used to display the group header in the tree styles. Before v4.22, `\glstreenamefmt` was used for the group header, so the default definition uses that to help maintain backward-compatibility, since in previous versions redefining `\glstreenamefmt` would've also affected the group headings.

```

9299 \newcommand*{\glstreegroupheaderfmt}[1]{\glstreenamefmt{#1}}

```

`\glstreenavigationfmt` Format used to display the navigation header in the tree styles.

```

9300 \newcommand*{\glstreenavigationfmt}[1]{\glstreenamefmt{#1}}

```

Allow the user to adjust the index style without disturbing the index.

`\glstreeitem` Top level item used in index style.

```

9301 \ifdef\@idxitem
9302 {\newcommand{\glstreeitem}{\@idxitem}}
9303 {\newcommand{\glstreeitem}{\par\hangindent40\p@}}

```

`\glstreesubitem` Level 1 item used in index style.

```
9304 \ifdef\subitem
9305 {\let\glstreesubitem\subitem}
9306 {\newcommand\glstreesubitem{\glstreeitem\hspace*{20\p@}}}
```

`\glstreesubsubitem` Level 1 item used in index style.

```
9307 \ifdef\subsubitem
9308 {\let\glstreesubsubitem\subsubitem}
9309 {\newcommand\glstreesubsubitem{\glstreeitem\hspace*{30\p@}}}
```

`\glstreepredesc` Allow the user to adjust the space before the description (except for the `alttree` style).

```
9310 \newcommand{\glstreepredesc}{\space}
```

`\glstreechildpredesc` Allow the user to adjust the space before the description for sub-entries (except for the `treenoname` and `alttree` style).

```
9311 \newcommand{\glstreechildpredesc}{\space}
```

`index` The index glossary style is similar in style to the way indices are usually typeset using `\item`, `\subitem` and `\subsubitem`. The entry name is set in bold. If an entry has a symbol, it is placed in brackets after the name. Then the description is displayed, followed by the number list. This style allows up to three levels.

```
9312 \newglossarystyle{index}{%
```

Set the paragraph indentation and skip and define `\item` to be the same as that used by `theindex`:

```
9313 \renewenvironment{theglossary}%
9314 {\setlength{\parindent}{0pt}}%
9315 {\setlength{\parskip}{0pt plus 0.3pt}}%
9316 \let\item\glstreeitem
9317 \let\subitem\glstreesubitem
9318 \let\subsubitem\glstreesubsubitem
9319 }%
```

```
9320 {\par}}%
```

Do nothing at the start of the environment:

```
9321 \renewcommand*{\glossaryheader}{}%
```

No group headers:

```
9322 \renewcommand*{\glsgroupheading}[1]{}%
```

Main (level 0) entry starts a new item with the name in bold followed by the symbol in brackets (if it exists), the description and the page list.

```
9323 \renewcommand*{\glossentry}[2]{%
9324 \item\glstentryitem{##1}\glstreenamefmt{\glstarget{##1}{\glossentryname{##1}}}%
9325 \ifglshassymbol{##1}{\space(\glossentrysymbol{##1})}{}%
9326 \glstreepredesc \glossentrydesc{##1}\glspostdescription\space ##2%
9327 }%
```

Sub entries: level 1 entries use `\subitem`, levels greater than 1 use `\subsubitem`. The level (`##1`) shouldn't be 0, as that's catered by `\glossentry`, but for completeness, if the level is 0, `\item` is used. The name is put in bold, followed by the symbol in brackets (if it exists), the description and the page list.

```

9328 \renewcommand{\subglossentry}[3]{%
9329     \ifcase##1\relax
9330         % level 0
9331         \item
9332     \or
9333         % level 1
9334         \subitem
9335         \glssubentryitem{##2}%
9336     \else
9337         % all other levels
9338         \subsubitem
9339     \fi
9340     \glstreenamfmt{\glstarget{##2}{\glossentryname{##2}}}%
9341     \ifglshassymbol{##2}{\space(\glossentrysymbol{##2})}{}%
9342     \glstreechildpredesc\glossentrydesc{##2}\glspostdescription\space ##3%
9343 }%
```

Vertical gap between groups is the same as that used by indices:

```

9344 \renewcommand*{\glsgroupskip}{\ifglsnogroupskip\else\indexspace\fi}}
```

indexgroup The `indexgroup` style is like the `index` style but has headings.

```

9345 \newglossarystyle{indexgroup}{%
```

Base it on the `glostyleindex` style:

```

9346 \setglossarystyle{index}%
```

Add a heading for each group. This puts the group's title in bold followed by a vertical gap.

```

9347 \renewcommand*{\glsgroupheading}[1]{%
9348     \item\glstreegroupheaderfmt{\glsgrouptitle{##1}}%
9349     \indexspace
9350 }%
9351 }
```

indexhypergroup The `indexhypergroup` style is like the `indexgroup` style but has hyper navigation.

```

9352 \newglossarystyle{indexhypergroup}{%
```

Base it on the `glostyleindex` style:

```

9353 \setglossarystyle{index}%
```

Put navigation links to the groups at the start of the glossary:

```

9354 \renewcommand*{\glossaryheader}{%
9355     \item\glstreenavigationfmt{\glsnavigation}\indexspace}%

```

Add a heading for each group (with a target). The group's title is in bold followed by a vertical gap.

```

9356 \renewcommand*{\glsgroupheading}[1]{%
9357     \item\glstreegroupheaderfmt

```



```

9358      {\glsnavhypertarget{##1}{\glsgetgrouptitle{##1}}}%
9359      \indexspace}%
9360 }

```

tree The tree glossary style is similar in style to the index style, but can have arbitrary levels.

```

9361 \newglossarystyle{tree}{%

```

Set the paragraph indentation and skip:

```

9362 \renewenvironment{theglossary}%
9363 {\setlength{\parindent}{0pt}%
9364 \setlength{\parskip}{0pt plus 0.3pt}}%
9365 {}%

```

Do nothing at the start of the theglossary environment:

```

9366 \renewcommand*{\glossaryheader}{}%

```

No group headings:

```

9367 \renewcommand*{\glsgroupheading}[1]{}%

```

Main (level 0) entries: name in bold, followed by symbol in brackets (if it exists), the description and the page list:

```

9368 \renewcommand{\glossentry}[2]{%
9369 \hangindent0pt\relax
9370 \parindent0pt\relax
9371 \glsentryitem{##1}\glstreenamefmt{\glstarget{##1}{\glossentryname{##1}}}%
9372 \ifglshassymbol{##1}{\space(\glossentrysymbol{##1})}{}%
9373 \glstreepredesc\glossentrydesc{##1}\glspostdescription\space##2\par
9374 }%

```

Sub entries: level $\langle n \rangle$ is indented by $\langle n \rangle$ times `\glstreeindent`. The name is in bold, followed by the symbol in brackets (if it exists), the description and the page list.

```

9375 \renewcommand{\subglossentry}[3]{%
9376 \hangindent##1\glstreeindent\relax
9377 \parindent##1\glstreeindent\relax
9378 \ifnum##1=1\relax
9379 \glssubentryitem{##2}%
9380 \fi
9381 \glstreenamefmt{\glstarget{##2}{\glossentryname{##2}}}%
9382 \ifglshassymbol{##2}{\space(\glossentrysymbol{##2})}{}%
9383 \glstreechildpredesc\glossentrydesc{##2}\glspostdescription\space ##3\par
9384 }%

```

Vertical gap between groups is the same as that used by indices:

```

9385 \renewcommand*{\glsgroupskip}{\ifglsnogroupskip\else\indexspace\fi}

```

treegroup Like the tree style but the glossary groups have headings.

```

9386 \newglossarystyle{treegroup}{%

```

Base it on the glostyletree style:

```

9387 \setglossarystyle{tree}%

```

Each group has a heading (in bold) followed by a vertical gap):

```
9388 \renewcommand{\glsgroupheading}[1]{\par
9389 \noindent\glstreegroupheaderfmt{\glsgetgrouptitle{##1}}\par
9390 \indexspace}%
9391 }
```

treehypergroup The **treehypergroup** style is like the **treegroup** style, but has a set of links to the groups at the start of the glossary.

```
9392 \newglossarystyle{treehypergroup}{%
```

Base it on the **glostyletree** style:

```
9393 \setglossarystyle{tree}%
```

Put navigation links to the groups at the start of the **theglossary** environment:

```
9394 \renewcommand*{\glossaryheader}{%
9395 \par\noindent\glstreenavigationfmt{\glsnavigation}\par\indexspace}%
```

Each group has a heading (in bold with a target) followed by a vertical gap):

```
9396 \renewcommand*{\glsgroupheading}[1]{%
9397 \par\noindent
9398 \glstreegroupheaderfmt
9399 {\glsnavhypertarget{##1}{\glsgetgrouptitle{##1}}}\par
9400 \indexspace}%
9401 }
```

\glstreeindent Length governing left indent for each level of the tree style.

```
9402 \newlength\glstreeindent
9403 \setlength{\glstreeindent}{10pt}
```

treenoname The **treenoname** glossary style is like the **tree** style, but doesn't print the name or symbol for sub-levels.

```
9404 \newglossarystyle{treenoname}{%
```

Set the paragraph indentation and skip:

```
9405 \renewenvironment{theglossary}%
9406 {\setlength{\parindent}{0pt}%
9407 \setlength{\parskip}{0pt plus 0.3pt}}%
9408 {}%
```

No header:

```
9409 \renewcommand*{\glossaryheader}{}%
```

No group headings:

```
9410 \renewcommand*{\glsgroupheading}[1]{}%
```

Main (level 0) entries: the name is in bold, followed by the symbol in brackets (if it exists), the description and the page list.

```
9411 \renewcommand{\glossentry}[2]{%
9412 \hangindent0pt\relax
9413 \parindent0pt\relax
9414 \glstryitem{##1}\glstreenamefmt{\glstarget{##1}{\glossentryname{##1}}}%
```

```

9415 \ifglshassymbol{##1}{\space(\glossentrysymbol{##1})}{}%
9416 \glstreepredesc\glossentrydesc{##1}\glspostdescription\space##2\par
9417 }%

```

Sub entries: level $\langle n \rangle$ is indented by $\langle n \rangle$ times `\glstreeindent`. The name and symbol are omitted. The description followed by the page list are displayed.

```

9418 \renewcommand{\subglossentry}[3]{%
9419 \hangindent##1\glstreeindent\relax
9420 \parindent##1\glstreeindent\relax
9421 \ifnum##1=1\relax
9422 \glssubentryitem{##2}%
9423 \fi
9424 \glstarget{##2}{\strut}%
9425 \glossentrydesc{##2}\glspostdescription\space##3\par
9426 }%

```

Vertical gap between groups is the same as that used by indices:

```

9427 \renewcommand*{\glsgroupskip}{\ifglsnogroupskip\else\indexspace\fi}%
9428 }

```

`treenonamegroup` Like the `treenoname` style but the glossary groups have headings.

```

9429 \newglossarystyle{treenonamegroup}{%
  Base it on the glostyletreenoname style:
9430 \setglossarystyle{treenoname}%
  Give each group a heading:
9431 \renewcommand{\glsgroupheading}[1]{\par
9432 \noindent\glstreegroupheaderfmt
9433 {\glsgrouptitle{##1}}\par\indexspace}%
9434 }

```

`onamehypergroup` The `treenonamehypergroup` style is like the `treenonamegroup` style, but has a set of links to the groups at the start of the glossary.

```

9435 \newglossarystyle{treenonamehypergroup}{%
  Base it on the glostyletreenoname style:
9436 \setglossarystyle{treenoname}%
  Put navigation links to the groups at the start of the theglossary environment:
9437 \renewcommand*{\glossaryheader}{%
9438 \par\noindent\glstreenavigationfmt{\glsnavigation}\par\indexspace}%
  Each group has a heading (in bold with a target) followed by a vertical gap):
9439 \renewcommand*{\glsgroupheading}[1]{%
9440 \par\noindent
9441 \glstreegroupheaderfmt
9442 {\glsnavhypertarget{##1}{\glsgrouptitle{##1}}}\par
9443 \indexspace}%
9444 }

```

`esttoplevelname` Find the widest name over all parentless entries in the given glossary or glossaries.

```

9445 \newrobustcmd*{\glsfindwidesttoplevelname}[1][\@glo@types]{%
9446   \dimen@=0pt\relax
9447   \gls@tmplen=0pt\relax
9448   \forallglossaries[#1]{\@gls@type}%
9449   {%
9450     \forallglsentries[\@gls@type]{\@glo@label}%
9451     {%
9452       \ifglsahasparent{\@glo@label}%
9453       }%
9454       {%
9455         \settowidth{\dimen@}%
9456           {\glstreenamefmt{\glsentryname{\@glo@label}}}%
9457         \ifdim\dimen@>\gls@tmplen
9458           \gls@tmplen=\dimen@
9459           \letcs{\@glswidestname}{glo@glsdetoklabel{\@glo@label}@name}%
9460         \fi
9461       }%
9462     }%
9463   }%
9464 }
```

`\glssetwidest` `\glssetwidest[⟨level⟩]{⟨text⟩}` sets the widest text for the given level. It is used by the alt-tree glossary styles to determine the indentation of each level.

```

9465 \newcommand*{\glssetwidest}[2][0]{%
9466   \expandafter\def\csname @glswidestname\romannumeral#1\endcsname{%
9467     #2}%
9468 }
```

`\@glswidestname` Initialise `\@glswidestname`.

```

9469 \newcommand*{\@glswidestname}{}
```

`\glstreenamebox` Used by the alttree style to create the box for the name and associated information.

```

9470 \newcommand*{\glstreenamebox}[2]{%
9471   \makebox[#1][l]{#2}%
9472 }
```

`alttree` The alttree glossary style is similar in style to the tree style, but the indentation is obtained from the width of `\@glswidestname` which is set using `\glssetwidest`.

```

9473 \newglossarystyle{alttree}{%
```

Redefine theglossary environment.

```

9474   \renewenvironment{theglossary}%
9475     {\def\@gls@prevlevel{-1}%
9476     \mbox{}\par}%
9477     {\par}%

```

Set the header and group headers to nothing.

```

9478   \renewcommand*{\glossaryheader}{}%
9479   \renewcommand*{\glsgroupheading}[1]{}%
```

Redefine the way that the level 0 entries are displayed.

```
9480 \renewcommand{\glossentry}[2]{%
9481   \ifnum\@gls@prevlevel=0\relax
9482   \else
```

Find out how big the indentation should be by measuring the widest entry.

```
9483     \settowidth{\glstreeindent}{\glstreenamfmt{\@glswidestname\space}}%
9484   \fi
```

Set the hangindent and paragraph indent.

```
9485   \hangindent\glstreeindent
9486   \parindent\glstreeindent
```

Put the name to the left of the paragraph block.

```
9487   \makebox[0pt][r]{\glstreenambox{\glstreeindent}{%
9488     \glstryitem{##1}\glstreenamfmt{\glstarget{##1}{\glossentryname{##1}}}}}%
```

If the symbol is missing, ignore it, otherwise put it in brackets.

```
9489   \ifglshassymbol{##1}{(\glossentrysymbol{##1})\space}{}%
```

Do the description followed by the description terminator and location list.

```
9490   \glossentrydesc{##1}\glspostdescription \space ##2\par
```

Set the previous level to 0.

```
9491   \def\@gls@prevlevel{0}%
9492 }%
```

Redefine the way sub-entries are displayed.

```
9493 \renewcommand{\subglossentry}[3]{%
```

Increment and display the sub-entry counter if this is a level 1 entry and the sub-entry counter is in use.

```
9494   \ifnum##1=1\relax
9495     \glssubentryitem{##2}%
9496   \fi
```

If the level hasn't changed, keep the same settings, otherwise adjust `\glstreeindent` accordingly.

```
9497   \ifnum\@gls@prevlevel=##1\relax
9498   \else
```

Compute the widest entry for this level, or for level 0 if not defined for this level. Store in `\gls@tmplen`

```
9499     \@ifundefined{@glswidestname\romannumeral##1}{%
9500       \settowidth{\gls@tmplen}{\glstreenamfmt{\@glswidestname\space}}{%
9501       \settowidth{\gls@tmplen}{\glstreenamfmt{%
9502         \csname @glswidestname\romannumeral##1\endcsname\space}}}%
```

Determine if going up or down a level

```
9503   \ifnum\@gls@prevlevel<##1\relax
```

Depth has increased, so add the width of the widest entry to `\glstreeindent`.

```
9504      \setlength\glstreeindent\gls@tmplen
9505      \addtolength\glstreeindent\parindent
9506      \parindent\glstreeindent
9507      \else
```

Depth has decreased, so subtract width of the widest entry from the previous level to `\glstreeindent`. First determine the width of the widest entry for the previous level and store in `\glstreeindent`.

```
9508      \ifundefined{@glswidestname\romannumeral\@gls@prevlevel}{%
9509      \settowidth{\glstreeindent}{\glstreenamfmt{%
9510      \@glswidestname\space}}}{%
9511      \settowidth{\glstreeindent}{\glstreenamfmt{%
9512      \csname @glswidestname\romannumeral\@gls@prevlevel
9513      \endcsname\space}}}{%
```

Subtract this length from the previous level's paragraph indent and set to `\glstreeindent`.

```
9514      \addtolength\parindent{-\glstreeindent}%
9515      \setlength\glstreeindent\parindent
9516      \fi
9517      \fi
```

Set the hanging indentation.

```
9518      \hangindent\glstreeindent
```

Put the name to the left of the paragraph block

```
9519      \makebox[0pt][r]{\glstreenambox{\gls@tmplen}{%
9520      \glstreenamfmt{\glstarget{##2}{\glossentryname{##2}}}}}%
```

If the symbol is missing, ignore it, otherwise put it in brackets.

```
9521      \ifglshassymbol{##2}{(\glossentrysymbol{##2})\space}{}%
```

Do the description followed by the description terminator and location list.

```
9522      \glossentrydesc{##2}\glspostdescription\space ##3\par
```

Set the previous level macro to the current level.

```
9523      \def\@gls@prevlevel{##1}%
9524      }%
```

Vertical gap between groups is the same as that used by indices:

```
9525      \renewcommand*{\glsgroupskip}{\ifglsnogroupskip\else\indexspace\fi}%
9526 }
```

almtreegroup Like the `almtree` style but the glossary groups have headings.

```
9527 \newglossarystyle{almtreegroup}{%
```

Base it on the `glostylealmtree` style:

```
9528      \setglossarystyle{almtree}%
```

Give each group a heading.

```
9529      \renewcommand{\glsgroupheading}[1]{\par
9530      \def\@gls@prevlevel{-1}%
9531      \hangindent0pt\relax
```

```

9532     \parindent0pt\relax
9533     \glstreegroupheaderfmt{\glsgetgrouptitle{##1}}}%
9534     \par\indexspace}%
9535 }

```

alttreehypergroup The alttreehypergroup style is like the alttreegroup style, but has a set of links to the groups at the start of the glossary.

```

9536 \newglossarystyle{alttreehypergroup}{%
    Base it on the glostylealttree style:
9537   \setglossarystyle{alttree}%
    Put the navigation links in the header
9538   \renewcommand*{\glossaryheader}{%
9539     \par
9540     \def\@gls@prevlevel{-1}%
9541     \hangindent0pt\relax
9542     \parindent0pt\relax
9543     \glstreenavigationfmt{\glsnavigation}\par\indexspace}%
    Put a hypertarget at the start of each group
9544   \renewcommand*{\glsgroupheading}[1]{%
9545     \par
9546     \def\@gls@prevlevel{-1}%
9547     \hangindent0pt\relax
9548     \parindent0pt\relax
9549     \glstreegroupheaderfmt
9550     {\glsnavhypertarget{##1}{\glsgetgrouptitle{##1}}}\par
9551     \indexspace}}

```

4 Backwards Compatibility

4.1 glossaries-compatible-207

Provides compatibility with version 2.07 and below. This uses original glossaries xindy and makeindex formatting, so can be used with old documents that had customized style files, but hyperlinks may not work properly.

```
9552 \NeedsTeXFormat{LaTeX2e}
9553 \ProvidesPackage{glossaries-compatible-207}[2017/09/20 v4.33 (NLCT)]
```

AddXdyAttribute Adds an attribute in old format.

```
9554 \ifglsxindy
9555   \renewcommand*\GlsAddXdyAttribute[1]{%
9556     \edef\@xdyattributes{\@xdyattributes ^^J \string"#1\string"}%
9557     \expandafter\toks@\expandafter{\@xdylocref}%
9558     \edef\@xdylocref{\the\toks@ ^^J}%
9559     (markup-locref
9560 :open \string"\string~n\string\setentrycounter
9561   {\noexpand\glscounter}%
9562   \expandafter\string\csname#1\endcsname
9563   \expandafter\@gobble\string\{\string" ^^J
9564 :close \string"\expandafter\@gobble\string\}\string" ^^J
9565 :attr \string"#1\string"))}}
```

Only has an effect before `\writeist`:

```
9566 \fi
```

sAddXdyCounters

```
9567 \renewcommand*\GlsAddXdyCounters[1]{%
9568   \GlossariesWarning{\string\GlsAddXdyCounters\space not available
9569     in compatibility mode.}%
9570 }
```

Add predefined attributes

```
9571 \GlsAddXdyAttribute{glsnumberformat}
9572 \GlsAddXdyAttribute{textrm}
9573 \GlsAddXdyAttribute{textsf}
9574 \GlsAddXdyAttribute{texttt}
9575 \GlsAddXdyAttribute{textbf}
9576 \GlsAddXdyAttribute{textmd}
9577 \GlsAddXdyAttribute{textit}
9578 \GlsAddXdyAttribute{textup}
9579 \GlsAddXdyAttribute{textsl}
```



```

9580 \GlsAddXdyAttribute{textsc}
9581 \GlsAddXdyAttribute{emph}
9582 \GlsAddXdyAttribute{glshypernumber}
9583 \GlsAddXdyAttribute{hyperrm}
9584 \GlsAddXdyAttribute{hypersf}
9585 \GlsAddXdyAttribute{hypertt}
9586 \GlsAddXdyAttribute{hyperbf}
9587 \GlsAddXdyAttribute{hypermd}
9588 \GlsAddXdyAttribute{hyperit}
9589 \GlsAddXdyAttribute{hyperup}
9590 \GlsAddXdyAttribute{hypersl}
9591 \GlsAddXdyAttribute{hypersc}
9592 \GlsAddXdyAttribute{hyperemph}

```

sAddXdyLocation Restore v2.07 definition:

```

9593 \ifglxindy
9594 \renewcommand*{\GlsAddXdyLocation}[2]{%
9595   \edef\@xdyuserlocationdefs{%
9596     \@xdyuserlocationdefs ^^J%
9597     (define-location-class \string"#1\string"^^J\space\space
9598     \space(#2))
9599   }%
9600   \edef\@xdyuserlocationnames{%
9601     \@xdyuserlocationnames^^J\space\space\space
9602     \string"#1\string"}%
9603   }
9604 \fi

```

\@do@wrglossary

```

9605 \renewcommand{\@do@wrglossary}[1]{%
  Determine whether to use xindy or makeindex syntax
9606 \ifglxindy
  Need to determine if the formatting information starts with a ( or ) indicating a range.
9607 \expandafter\@glo@check@mkidxrangechar\@glsnumberformat\@nil
9608 \def\@glo@range{}%
9609 \expandafter\if\@glo@prefix(\relax
9610 \def\@glo@range{:open-range}%
9611 \else
9612 \expandafter\if\@glo@prefix)\relax
9613 \def\@glo@range{:close-range}%
9614 \fi
9615 \fi

  Get the location and escape any special characters
9616 \protected@edef\@glslocref{\theglentrycounter}%
9617 \@gls@checkmkidxchars\@glslocref

  Write to the glossary file using xindy syntax.
9618 \glossary[\csname glo@#1@type\endcsname]{%

```

```

9619 (indexentry :tkey (\csname glo@#1@index\endcsname)
9620 :locoref \string"\@glslocoref\string" %
9621 :attr \string"\@glo@suffix\string" \@glo@range
9622 )
9623 }%
9624 \else

Convert the format information into the format required for makeindex
9625 \@set@glo@numformat\@glo@numfmt\@gls@counter\@glsnumberformat

Write to the glossary file using makeindex syntax.
9626 \glossary[\csname glo@#1@type\endcsname]{%
9627 \string\glossaryentry{\csname glo@#1@index\endcsname
9628 \@gls@encapchar\@glo@numfmt}{\theglsentrycounter}}%
9629 \fi
9630 }

```

t@glo@numformat Only had 3 arguments in v2.07

```

9631 \def\@set@glo@numformat#1#2#3{%
9632 \expandafter\@glo@check@mkidxrangechar#3\@nil
9633 \protected@edef#1{%
9634 \@glo@prefix setentrycounter[]{#2}%
9635 \expandafter\string\csname\@glo@suffix\endcsname
9636 }%
9637 \@gls@checkmkidxchars#1%
9638 }

```

\writeist Redefine \writeist back to the way it was in v2.07, but change \istfile to \glswrite.

```

9639 \ifglxindy
9640 \def\writeist{%
9641 \openout\glswrite=\istfilename
9642 \write\glswrite{;; xindy style file created by the glossaries
9643 package in compatible-2.07 mode}%
9644 \write\glswrite{;; for document '\jobname' on
9645 \the\year-\the\month-\the\day}%
9646 \write\glswrite{^^J; required styles^^J}
9647 \@for\@xdystyle:=\@xdyrequiredstyles\do{%
9648 \ifx\@xdystyle\@empty
9649 \else
9650 \protected@write\glswrite{{(require
9651 \string"\@xdystyle.xdy\string")}}%
9652 \fi
9653 }%
9654 \write\glswrite{^^J%
9655 ; list of allowed attributes (number formats)^^J}%
9656 \write\glswrite{(define-attributes ((\@xdyattributes)))}%
9657 \write\glswrite{^^J; user defined alphabets^^J}%
9658 \write\glswrite{\@xdyuseralphabets}%
9659 \write\glswrite{^^J; location class definitions^^J}%
9660 \protected@edef\@gls@roman{\@roman{0}\string"

```

```

9661     \string"roman-numbers-lowercase\string" :sep \string"}}%
9662 \@onelevel@sanitize\@gls@roman
9663 \edef\@tmp{\string" \string"roman-numbers-lowercase\string"
9664     :sep \string"}}%
9665 \@onelevel@sanitize\@tmp
9666 \ifx\@tmp\@gls@roman
9667     \write\glswrite{(define-location-class
9668         \string"roman-page-numbers\string"^^J\space\space\space
9669         (\string"roman-numbers-lowercase\string")
9670         :min-range-length \@glsminrange)}}%
9671 \else
9672     \write\glswrite{(define-location-class
9673         \string"roman-page-numbers\string"^^J\space\space\space
9674         (:sep "\@gls@roman")
9675         :min-range-length \@glsminrange)}}%
9676 \fi
9677 \write\glswrite{(define-location-class
9678     \string"Roman-page-numbers\string"^^J\space\space\space
9679     (\string"roman-numbers-uppercase\string")
9680     :min-range-length \@glsminrange)}}%
9681 \write\glswrite{(define-location-class
9682     \string"arabic-page-numbers\string"^^J\space\space\space
9683     (\string"arabic-numbers\string")
9684     :min-range-length \@glsminrange)}}%
9685 \write\glswrite{(define-location-class
9686     \string"alpha-page-numbers\string"^^J\space\space\space
9687     (\string"alpha\string")
9688     :min-range-length \@glsminrange)}}%
9689 \write\glswrite{(define-location-class
9690     \string"Alpha-page-numbers\string"^^J\space\space\space
9691     (\string"ALPHA\string")
9692     :min-range-length \@glsminrange)}}%
9693 \write\glswrite{(define-location-class
9694     \string"Appendix-page-numbers\string"^^J\space\space\space
9695     (\string"ALPHA\string"
9696     :sep \string"\@glsAlphacompositor\string"
9697     \string"arabic-numbers\string")
9698     :min-range-length \@glsminrange)}}%
9699 \write\glswrite{(define-location-class
9700     \string"arabic-section-numbers\string"^^J\space\space\space
9701     (\string"arabic-numbers\string"
9702     :sep \string"\glscompositor\string"
9703     \string"arabic-numbers\string")
9704     :min-range-length \@glsminrange)}}%
9705 \write\glswrite{^^J; user defined location classes}%
9706 \write\glswrite{\@xdyuserlocationdefs}%
9707 \write\glswrite{^^J; define cross-reference class^^J}%
9708 \write\glswrite{(define-crossref-class \string"see\string"
9709     :unverified )}%

```

```

9710 \write\glswrite{(markup-crossref-list
9711 :class \string"see\string"^^J\space\space\space
9712 :open \string"\string\glssseeformat\string"
9713 :close \string"{}\string")}%
9714 \write\glswrite{^^J; define the order of the location classes}%
9715 \write\glswrite{(define-location-class-order
9716 (\@xdylocationclassorder))}%
9717 \write\glswrite{^^J; define the glossary markup^^J}%
9718 \write\glswrite{(markup-index^^J\space\space\space
9719 :open \string"\string
9720 \glossarysection[\string\glossarytoctitle]{\string
9721 \glossarytitle}\string\glossarypreamble\string~n\string\begin
9722 {theglossary}\string\glossaryheader\string~n\string" ^^J\space
9723 \space\space:close \string"\expandafter\@gobble
9724 \string%\string~n\string
9725 \end{theglossary}\string\glossarypostamble
9726 \string~n\string" ^^J\space\space\space
9727 :tree)}}%
9728 \write\glswrite{(markup-letter-group-list
9729 :sep \string"\string\glsgroupskip\string~n\string")}%
9730 \write\glswrite{(markup-indexentry
9731 :open \string"\string\relax \string\glssresetentrylist
9732 \string~n\string")}%
9733 \write\glswrite{(markup-locclass-list :open
9734 \string"\glsoopenbrace\string\glossaryentrynumbers
9735 \glsoopenbrace\string\relax\space \string"^^J\space\space\space
9736 :sep \string", \string"
9737 :close \string"\glsclosebrace\glsclosebrace\string")}%
9738 \write\glswrite{(markup-locref-list
9739 :sep \string"\string\delimN\space\string")}%
9740 \write\glswrite{(markup-range
9741 :sep \string"\string\delimR\space\string")}%
9742 \@onelevel@sanitize\gls@suffixF
9743 \@onelevel@sanitize\gls@suffixFF
9744 \ifx\gls@suffixF\@empty
9745 \else
9746 \write\glswrite{(markup-range
9747 :close "\gls@suffixF" :length 1 :ignore-end)}%
9748 \fi
9749 \ifx\gls@suffixFF\@empty
9750 \else
9751 \write\glswrite{(markup-range
9752 :close "\gls@suffixFF" :length 2 :ignore-end)}%
9753 \fi
9754 \write\glswrite{^^J; define format to use for locations^^J}%
9755 \write\glswrite{\@xdylocref}%
9756 \write\glswrite{^^J; define letter group list format^^J}%
9757 \write\glswrite{(markup-letter-group-list
9758 :sep \string"\string\glsgroupskip\string~n\string")}%

```

```

9759 \write\glswrite{^^J; letter group headings^^J}%
9760 \write\glswrite{(markup-letter-group
9761   :open-head \string"\string\glsgroupheading
9762   \glsoopenbrace\string"^^J\space\space\space
9763   :close-head \string"\glsclosebrace\string")}%
9764 \write\glswrite{^^J; additional letter groups^^J}%
9765 \write\glswrite{\@xdylettergroups}%
9766 \write\glswrite{^^J; additional sort rules^^J}
9767 \write\glswrite{\@xdysortrules}%
9768 \noist}
9769 \else
9770 \edef\@gls@actualchar{\string?}
9771 \edef\@gls@encapchar{\string|}
9772 \edef\@gls@levelchar{\string!}
9773 \edef\@gls@quotechar{\string"}
9774 \def\writeist{\relax
9775   \openout\glswrite=\istfilename
9776   \write\glswrite{\expandafter\@gobble\string\% makeindex style file
9777     created by the glossaries package}
9778   \write\glswrite{\expandafter\@gobble\string\% for document
9779     '\jobname' on \the\year-\the\month-\the\day}
9780   \write\glswrite{actual '\@gls@actualchar'}
9781   \write\glswrite{encap '\@gls@encapchar'}
9782   \write\glswrite{level '\@gls@levelchar'}
9783   \write\glswrite{quote '\@gls@quotechar'}
9784   \write\glswrite{keyword \string"\string\glossaryentry\string"}
9785   \write\glswrite{preamble \string"\string\glossarysection[\string
9786     \glossarytoctitle]{\string\glossarytitle}\string
9787     \glossarypreamble\string\n\string\begin{theglossary}\string
9788     \glossaryheader\string\n\string"}
9789   \write\glswrite{postamble \string"\string%\string\n\string
9790     \end{theglossary}\string\glossarypostamble\string\n
9791     \string"}
9792   \write\glswrite{group_skip \string"\string\glsgroupskip\string\n
9793     \string"}
9794   \write\glswrite{item_0 \string"\string%\string\n\string"}
9795   \write\glswrite{item_1 \string"\string%\string\n\string"}
9796   \write\glswrite{item_2 \string"\string%\string\n\string"}
9797   \write\glswrite{item_01 \string"\string%\string\n\string"}
9798   \write\glswrite{item_x1
9799     \string"\string\relax \string\glsresetentrylist\string\n
9800     \string"}
9801   \write\glswrite{item_12 \string"\string%\string\n\string"}
9802   \write\glswrite{item_x2
9803     \string"\string\relax \string\glsresetentrylist\string\n
9804     \string"}
9805   \write\glswrite{delim_0 \string"\string\{\string
9806     \glossaryentrynumbers\string\{\string\relax \string"}
9807   \write\glswrite{delim_1 \string"\string\{\string

```

```

9808     \glossaryentrynumbers\string\{\string\relax \string}
9809     \write\glswrite{delim_2 \string"\string\{\string
9810     \glossaryentrynumbers\string\{\string\relax \string}
9811     \write\glswrite{delim_t \string"\string\}\string\}\string}
9812     \write\glswrite{delim_n \string"\string\delimN \string}
9813     \write\glswrite{delim_r \string"\string\delimR \string}
9814     \write\glswrite{headings_flag 1}
9815     \write\glswrite{heading_prefix
9816         \string"\string\glsgroupheading\string\{\string}
9817     \write\glswrite{heading_suffix
9818         \string"\string\}\string\relax
9819         \string\glsgroupresetentrylist \string}
9820     \write\glswrite{symhead_positive \string"glssymbols\string}
9821     \write\glswrite{numhead_positive \string"glsglnumbers\string}
9822     \write\glswrite{page_compositor \string"glsglcompositor\string}
9823     \@glsgl@escbsdq\glsgl@suffixF
9824     \@glsgl@escbsdq\glsgl@suffixFF
9825     \ifx\glsgl@suffixF\@empty
9826     \else
9827         \write\glswrite{suffix_2p \string"\glsgl@suffixF\string}
9828     \fi
9829     \ifx\glsgl@suffixFF\@empty
9830     \else
9831         \write\glswrite{suffix_3p \string"\glsgl@suffixFF\string}
9832     \fi
9833     \noist
9834 }
9835 \fi

```

\noist

```

9836 \renewcommand*{\noist}{\let\writeist\relax}

```

4.2 glossaries-compatible-307

```

9837 \NeedsTeXFormat{LaTeX2e}
9838 \ProvidesPackage{glossaries-compatible-307}[2017/09/20 v4.33 (NLCT)]

```

Compatibility macros for predefined glossary styles:

`\atglossarystyle` Defines a compatibility glossary style.

```

9839 \newcommand{\compatglossarystyle}[2]{%
9840   \ifcsundef{@glsglcompstyle@#1}%
9841   {%
9842     \csdef{@glsglcompstyle@#1}{#2}%
9843   }%
9844   {%
9845     \PackageError{glossaries}{Glossary compatibility style ‘#1’ is already defined}{}%
9846   }%
9847 }

```

Backward compatible inline style.

```
9848 \compatglossarystyle{inline}{%
9849   \renewcommand{\glossaryentryfield}[5]{%
9850     \glsinlinedopostchild
9851     \gls@inlinesep
9852     \def\glo@desc{##3}%
9853     \def\@no@post@desc{\nopostdesc}%
9854     \glstentryitem{##1}\glsinlinenameformat{##1}{##2}%
9855     \ifx\glo@desc\@no@post@desc
9856       \glsinlineemptydescformat{##4}{##5}%
9857     \else
9858       \ifstrempy{##3}%
9859         {\glsinlineemptydescformat{##4}{##5}}%
9860         {\glsinlinedescformat{##3}{##4}{##5}}%
9861     \fi
9862     \ifglshaschildren{##1}%
9863     {%
9864       \glsresetsubentrycounter
9865       \glsinlineparentchildseparator
9866       \def\gls@inlinesubsep{}%
9867       \def\gls@inlinepostchild{\glsinlinepostchild}%
9868     }%
9869   }%
9870   \def\gls@inlinesep{\glsinlineseparator}%
9871 }%
```

Sub-entries display description:

```
9872 \renewcommand{\glossarysubentryfield}[6]{%
9873   \gls@inlinesubsep%
9874   \glsinlinesubnameformat{##2}{##3}%
9875   \glssubentryitem{##2}\glsinlinesubdescformat{##4}{##5}{##6}%
9876   \def\gls@inlinesubsep{\glsinlinesubseparator}%
9877 }%
9878 }
```

Backward compatible list style.

```
9879 \compatglossarystyle{list}{%
9880   \renewcommand*{\glossaryentryfield}[5]{%
9881     \item[\glstentryitem{##1}\glstarget{##1}{##2}]
9882     ##3\glspostdescription\space ##5}%
9883 }
```

Sub-entries continue on the same line:

```
9883 \renewcommand*{\glossarysubentryfield}[6]{%
9884   \glssubentryitem{##2}%
9885   \glstarget{##2}{\strut}##4\glspostdescription\space ##6.}%
9886 }
```

Backward compatible listgroup style.

```
9887 \compatglossarystyle{listgroup}{%
9888   \csuse{@glscompstyle@list}%
9889 }%
```

Backward compatible listhypergroup style.

```
9890 \compatglossarystyle{listhypergroup}{%
9891   \csuse{@glscompstyle@list}%
9892 }%
```

Backward compatible altlist style.

```
9893 \compatglossarystyle{altlist}{%
9894   \renewcommand*{\glossaryentryfield}[5]{%
9895     \item[\glsentryitem{##1}\glstarget{##1}{##2}]%
9896     \mbox{}\par\nobreak\@afterheading
9897     ##3\glspostdescription\space ##5}%
9898   \renewcommand{\glossarysubentryfield}[6]{%
9899     \par
9900     \glssubentryitem{##2}%
9901     \glstarget{##2}{\strut}##4\glspostdescription\space ##6}%
9902 }%
```

Backward compatible altlistgroup style.

```
9903 \compatglossarystyle{altlistgroup}{%
9904   \csuse{@glscompstyle@altlist}%
9905 }%
```

Backward compatible altlisthypergroup style.

```
9906 \compatglossarystyle{altlisthypergroup}{%
9907   \csuse{@glscompstyle@altlist}%
9908 }%
```

Backward compatible listdotted style.

```
9909 \compatglossarystyle{listdotted}{%
9910   \renewcommand*{\glossaryentryfield}[5]{%
9911     \item[\makebox[\glslistdottedwidth][l]{%
9912       \glsentryitem{##1}\glstarget{##1}{##2}%
9913       \unskip\leaders\hbox to 2.9mm{\hss.}\hfill\strut}##3}%
9914   \renewcommand*{\glossarysubentryfield}[6]{%
9915     \item[\makebox[\glslistdottedwidth][l]{%
9916       \glssubentryitem{##2}%
9917       \glstarget{##2}{##3}%
9918       \unskip\leaders\hbox to 2.9mm{\hss.}\hfill\strut}##4}%
9919 }%
```

Backward compatible sublistdotted style.

```
9920 \compatglossarystyle{sublistdotted}{%
9921   \csuse{@glscompstyle@listdotted}%
9922   \renewcommand*{\glossaryentryfield}[5]{%
9923     \item[\glsentryitem{##1}\glstarget{##1}{##2}]}%
9924 }%
```

Backward compatible long style.

```
9925 \compatglossarystyle{long}{%
9926   \renewcommand*{\glossaryentryfield}[5]{%
9927     \glsentryitem{##1}\glstarget{##1}{##2} & ##3\glspostdescription\space ##5\\}%
9928   \renewcommand*{\glossarysubentryfield}[6]{%
9929     \glssubentryitem{##2}\glstarget{##2}{##3} & ##4\glspostdescription\space ##5\\}%
9930 }%
```



```

9929      &
9930      \glssubentryitem{##2}%
9931      \glstarget{##2}{\strut}##4\glspostdescription\space ##6\\}%
9932 }%

```

Backward compatible longborder style.

```

9933 \compatglossarystyle{longborder}{%
9934 \csuse{@glscmpstyle@long}%
9935 }%

```

Backward compatible longheader style.

```

9936 \compatglossarystyle{longheader}{%
9937 \csuse{@glscmpstyle@long}%
9938 }%

```

Backward compatible longheaderborder style.

```

9939 \compatglossarystyle{longheaderborder}{%
9940 \csuse{@glscmpstyle@long}%
9941 }%

```

Backward compatible long3col style.

```

9942 \compatglossarystyle{long3col}{%
9943 \renewcommand*{\glossaryentryfield}[5]{%
9944 \glstarget{##1}{\glstarget{##1}{##2} & ##3 & ##5\\}%
9945 \renewcommand*{\glossarysubentryfield}[6]{%
9946 &
9947 \glssubentryitem{##2}%
9948 \glstarget{##2}{\strut}##4 & ##6\\}%
9949 }%

```

Backward compatible long3colborder style.

```

9950 \compatglossarystyle{long3colborder}{%
9951 \csuse{@glscmpstyle@long3col}%
9952 }%

```

Backward compatible long3colheader style.

```

9953 \compatglossarystyle{long3colheader}{%
9954 \csuse{@glscmpstyle@long3col}%
9955 }%

```

Backward compatible long3colheaderborder style.

```

9956 \compatglossarystyle{long3colheaderborder}{%
9957 \csuse{@glscmpstyle@long3col}%
9958 }%

```

Backward compatible long4col style.

```

9959 \compatglossarystyle{long4col}{%
9960 \renewcommand*{\glossaryentryfield}[5]{%
9961 \glstarget{##1}{\glstarget{##1}{##2} & ##3 & ##4 & ##5\\}%
9962 \renewcommand*{\glossarysubentryfield}[6]{%
9963 &
9964 \glssubentryitem{##2}%

```

9965 \glstarget{##2}{\strut}##4 & ##5 & ##6\\}%
9966 }%

Backward compatible long4colheader style.

9967 \compatglossarystyle{long4colheader}{%
9968 \csuse{@glscompstyle@long4col}%
9969 }%

Backward compatible long4colborder style.

9970 \compatglossarystyle{long4colborder}{%
9971 \csuse{@glscompstyle@long4col}%
9972 }%

Backward compatible long4colheaderborder style.

9973 \compatglossarystyle{long4colheaderborder}{%
9974 \csuse{@glscompstyle@long4col}%
9975 }%

Backward compatible altlong4col style.

9976 \compatglossarystyle{altlong4col}{%
9977 \csuse{@glscompstyle@long4col}%
9978 }%

Backward compatible altlong4colheader style.

9979 \compatglossarystyle{altlong4colheader}{%
9980 \csuse{@glscompstyle@long4col}%
9981 }%

Backward compatible altlong4colborder style.

9982 \compatglossarystyle{altlong4colborder}{%
9983 \csuse{@glscompstyle@long4col}%
9984 }%

Backward compatible altlong4colheaderborder style.

9985 \compatglossarystyle{altlong4colheaderborder}{%
9986 \csuse{@glscompstyle@long4col}%
9987 }%

Backward compatible long style.

9988 \compatglossarystyle{longragged}{%
9989 \renewcommand*{\glossaryentryfield}[5]{%
9990 \glssentryitem{##1}\glstarget{##1}{##2} & ##3\glspostdescription\space ##5%
9991 \tabularnewline}%
9992 \renewcommand*{\glossarysubentryfield}[6]{%
9993 &
9994 \glssubentryitem{##2}%
9995 \glstarget{##2}{\strut}##4\glspostdescription\space ##6%
9996 \tabularnewline}%
9997 }%

Backward compatible longraggedborder style.

9998 \compatglossarystyle{longraggedborder}{%
9999 \csuse{@glscompstyle@longragged}%
10000 }%

Backward compatible longraggedheader style.

```
10001 \compatglossarystyle{longraggedheader}{%
10002 \csuse{@glscompstyle@longragged}%
10003 }%
```

Backward compatible longraggedheaderborder style.

```
10004 \compatglossarystyle{longraggedheaderborder}{%
10005 \csuse{@glscompstyle@longragged}%
10006 }%
```

Backward compatible longragged3col style.

```
10007 \compatglossarystyle{longragged3col}{%
10008 \renewcommand*{\glossaryentryfield}[5]{%
10009 \glentryitem{##1}\glstarget{##1}{##2} & ##3 & ##5\tabularnewline}%
10010 \renewcommand*{\glossarysubentryfield}[6]{%
10011 &
10012 \glssubentryitem{##2}%
10013 \glstarget{##2}{\strut}##4 & ##6\tabularnewline}%
10014 }%
```

Backward compatible longragged3colborder style.

```
10015 \compatglossarystyle{longragged3colborder}{%
10016 \csuse{@glscompstyle@longragged3col}%
10017 }%
```

Backward compatible longragged3colheader style.

```
10018 \compatglossarystyle{longragged3colheader}{%
10019 \csuse{@glscompstyle@longragged3col}%
10020 }%
```

Backward compatible longragged3colheaderborder style.

```
10021 \compatglossarystyle{longragged3colheaderborder}{%
10022 \csuse{@glscompstyle@longragged3col}%
10023 }%
```

Backward compatible altlongragged4col style.

```
10024 \compatglossarystyle{altlongragged4col}{%
10025 \renewcommand*{\glossaryentryfield}[5]{%
10026 \glentryitem{##1}\glstarget{##1}{##2} & ##3 & ##4 & ##5\tabularnewline}%
10027 \renewcommand*{\glossarysubentryfield}[6]{%
10028 &
10029 \glssubentryitem{##2}%
10030 \glstarget{##2}{\strut}##4 & ##5 & ##6\tabularnewline}%
10031 }%
```

Backward compatible altlongragged4colheader style.

```
10032 \compatglossarystyle{altlongragged4colheader}{%
10033 \csuse{@glscompstyle@altlong4col}%
10034 }%
```

Backward compatible altlongragged4colborder style.

```
10035 \compatglossarystyle{altlongragged4colborder}{%
```

```
10036 \csuse{@glscompstyle@altlong4col}%
10037 }%
```

Backward compatible altlongragged4colheaderborder style.

```
10038 \compatglossarystyle{altlongragged4colheaderborder}{%
10039 \csuse{@glscompstyle@altlong4col}%
10040 }%
```

Backward compatible index style.

```
10041 \compatglossarystyle{index}{%
10042 \renewcommand*{\glossaryentryfield}[5]{%
10043 \item\glsentryitem{##1}\textbf{\glstarget{##1}{##2}}%
10044 \ifx\relax##4\relax
10045 \else
10046 \space{##4}%
10047 \fi
10048 \space ##3\glspostdescription \space ##5}%
10049 \renewcommand*{\glossarysubentryfield}[6]{%
10050 \ifcase##1\relax
10051 % level 0
10052 \item
10053 \or
10054 % level 1
10055 \subitem
10056 \glssubentryitem{##2}%
10057 \else
10058 % all other levels
10059 \subsubitem
10060 \fi
10061 \textbf{\glstarget{##2}{##3}}%
10062 \ifx\relax##5\relax
10063 \else
10064 \space{##5}%
10065 \fi
10066 \space##4\glspostdescription\space ##6}%
10067 }%
```

Backward compatible indexgroup style.

```
10068 \compatglossarystyle{indexgroup}{%
10069 \csuse{@glscompstyle@index}%
10070 }%
```

Backward compatible indexhypergroup style.

```
10071 \compatglossarystyle{indexhypergroup}{%
10072 \csuse{@glscompstyle@index}%
10073 }%
```

Backward compatible tree style.

```
10074 \compatglossarystyle{tree}{%
10075 \renewcommand{\glossaryentryfield}[5]{%
10076 \hangindent0pt\relax
```

```

10077 \parindent0pt\relax
10078 \glstentryitem{##1}\textbf{\glstarget{##1}{##2}}%
10079 \ifx\relax##4\relax
10080 \else
10081 \space(##4)%
10082 \fi
10083 \space ##3\glspostdescription \space ##5\par}%
10084 \renewcommand{\glossarysubentryfield}[6]{%
10085 \hangindent##1\glstreeindent\relax
10086 \parindent##1\glstreeindent\relax
10087 \ifnum##1=1\relax
10088 \glssubentryitem{##2}%
10089 \fi
10090 \textbf{\glstarget{##2}{##3}}%
10091 \ifx\relax##5\relax
10092 \else
10093 \space(##5)%
10094 \fi
10095 \space##4\glspostdescription\space ##6\par}%
10096 }%

```

Backward compatible treegroup style.

```

10097 \compatglossarystyle{treegroup}{%
10098 \csuse{@glscmpstyle@tree}%
10099 }%

```

Backward compatible treehypergroup style.

```

10100 \compatglossarystyle{treehypergroup}{%
10101 \csuse{@glscmpstyle@tree}%
10102 }%

```

Backward compatible treenoname style.

```

10103 \compatglossarystyle{treenoname}{%
10104 \renewcommand{\glossaryentryfield}[5]{%
10105 \hangindent0pt\relax
10106 \parindent0pt\relax
10107 \glstentryitem{##1}\textbf{\glstarget{##1}{##2}}%
10108 \ifx\relax##4\relax
10109 \else
10110 \space(##4)%
10111 \fi
10112 \space ##3\glspostdescription \space ##5\par}%
10113 \renewcommand{\glossarysubentryfield}[6]{%
10114 \hangindent##1\glstreeindent\relax
10115 \parindent##1\glstreeindent\relax
10116 \ifnum##1=1\relax
10117 \glssubentryitem{##2}%
10118 \fi
10119 \glstarget{##2}{\strut}%
10120 ##4\glspostdescription\space ##6\par}%
10121 }%

```

Backward compatible treenonamegroup style.

```
10122 \compatglossarystyle{treenonamegroup}{%
10123   \csuse{@glscompstyle@treenoname}%
10124 }%
```

Backward compatible treenonamehypergroup style.

```
10125 \compatglossarystyle{treenonamehypergroup}{%
10126   \csuse{@glscompstyle@treenoname}%
10127 }%
```

Backward compatible alttree style.

```
10128 \compatglossarystyle{alttree}{%
10129   \renewcommand{\glossaryentryfield}[5]{%
10130     \ifnum\@gls@prevlevel=0\relax
10131     \else
10132       \settowidth{\glstreeindent}{\textbf{\@glswidestname\space}}%
10133       \hangindent\glstreeindent
10134       \parindent\glstreeindent
10135     \fi
10136     \makebox[0pt][r]{\makebox[\glstreeindent][l]{%
10137       \glssentryitem{##1}\textbf{\glstarget{##1}{##2}}}%
10138     \ifx\relax##4\relax
10139     \else
10140       (##4)\space
10141     \fi
10142     ##3\glspostdescription \space ##5\par
10143     \def\@gls@prevlevel{0}%
10144   }%
10145   \renewcommand{\glossarysubentryfield}[6]{%
10146     \ifnum##1=1\relax
10147       \glssubentryitem{##2}%
10148     \fi
10149     \ifnum\@gls@prevlevel=##1\relax
10150     \else
10151       \@ifundefined{@glswidestname\romannumeral##1}{%
10152         \settowidth{\gls@tmplen}{\textbf{\@glswidestname\space}}{%
10153         \settowidth{\gls@tmplen}{\textbf{%
10154           \csname @glswidestname\romannumeral##1\endcsname\space}}}%
10155       \ifnum\@gls@prevlevel<##1\relax
10156         \setlength\glstreeindent\gls@tmplen
10157         \addtolength\glstreeindent\parindent
10158         \parindent\glstreeindent
10159       \else
10160         \@ifundefined{@glswidestname\romannumeral\@gls@prevlevel}{%
10161           \settowidth{\glstreeindent}{\textbf{%
10162             \@glswidestname\space}}{%
10163           \settowidth{\glstreeindent}{\textbf{%
10164             \csname @glswidestname\romannumeral\@gls@prevlevel
10165             \endcsname\space}}}%
10166           \addtolength\parindent{-\glstreeindent}%

```

```

10167         \setlength\glstreeindent\parindent
10168     \fi
10169 \fi
10170 \hangindent\glstreeindent
10171 \makebox[0pt][r]{\makebox[\glstemplen][l]{%
10172     \textbf{\glstarget{##2}{##3}}}%
10173 \ifx##5\relax\relax
10174 \else
10175     (##5)\space
10176 \fi
10177 ##4\glspostdescription\space ##6\par
10178 \def\@gls@prevlevel{##1}%
10179 }%
10180 }%

```

Backward compatible alttreegroup style.

```

10181 \compatglossarystyle{alttreegroup}{%
10182 \csuse{@glscompstyle@almtree}%
10183 }%

```

Backward compatible almtreehypergroup style.

```

10184 \compatglossarystyle{almtreehypergroup}{%
10185 \csuse{@glscompstyle@almtree}%
10186 }%

```

Backward compatible mcolindex style.

```

10187 \compatglossarystyle{mcolindex}{%
10188 \csuse{@glscompstyle@index}%
10189 }%

```

Backward compatible mcolindexgroup style.

```

10190 \compatglossarystyle{mcolindexgroup}{%
10191 \csuse{@glscompstyle@index}%
10192 }%

```

Backward compatible mcolindexhypergroup style.

```

10193 \compatglossarystyle{mcolindexhypergroup}{%
10194 \csuse{@glscompstyle@index}%
10195 }%

```

Backward compatible mcoltree style.

```

10196 \compatglossarystyle{mcoltree}{%
10197 \csuse{@glscompstyle@tree}%
10198 }%

```

Backward compatible mcoltreegroup style.

```

10199 \compatglossarystyle{mcolindextreegroup}{%
10200 \csuse{@glscompstyle@tree}%
10201 }%

```

Backward compatible mcoltreehypergroup style.

```

10202 \compatglossarystyle{mcolindextreehypergroup}{%

```

```

10203 \csuse{@glscompstyle@tree}%
10204 }%

    Backward compatible mcoltreenoname style.
10205 \compatglossarystyle{mcoltreenoname}{%
10206 \csuse{@glscompstyle@tree}%
10207 }%

    Backward compatible mcoltreenonamegroup style.
10208 \compatglossarystyle{mcoltreenonamegroup}{%
10209 \csuse{@glscompstyle@tree}%
10210 }%

    Backward compatible mcoltreenonamehypergroup style.
10211 \compatglossarystyle{mcoltreenonamehypergroup}{%
10212 \csuse{@glscompstyle@tree}%
10213 }%

    Backward compatible mcolalmtree style.
10214 \compatglossarystyle{mcolalmtree}{%
10215 \csuse{@glscompstyle@almtree}%
10216 }%

    Backward compatible mcolalmtreegroup style.
10217 \compatglossarystyle{mcolalmtreegroup}{%
10218 \csuse{@glscompstyle@almtree}%
10219 }%

    Backward compatible mcolalmtreehypergroup style.
10220 \compatglossarystyle{mcolalmtreehypergroup}{%
10221 \csuse{@glscompstyle@almtree}%
10222 }%

    Backward compatible superragged style.
10223 \compatglossarystyle{superragged}{%
10224 \renewcommand*{\glossaryentryfield}[5]{%
10225 \glsentryitem{##1}\glstarget{##1}{##2} & ##3\glspostdescription\space ##5%
10226 \tabularnewline}%
10227 \renewcommand*{\glossarysubentryfield}[6]{%
10228 &
10229 \glssubentryitem{##2}%
10230 \glstarget{##2}{\strut}##4\glspostdescription\space ##6%
10231 \tabularnewline}%
10232 }%

    Backward compatible superraggedborder style.
10233 \compatglossarystyle{superraggedborder}{%
10234 \csuse{@glscompstyle@superragged}%
10235 }%

    Backward compatible superraggedheader style.
10236 \compatglossarystyle{superraggedheader}{%
10237 \csuse{@glscompstyle@superragged}%
10238 }%

```


Backward compatible superraggedheaderborder style.

```
10239 \compatglossarystyle{superraggedheaderborder}{%
10240   \csuse{@glscompstyle@superragged}%
10241 }%
```

Backward compatible superragged3col style.

```
10242 \compatglossarystyle{superragged3col}{%
10243   \renewcommand*{\glossaryentryfield}[5]{%
10244     \glentryitem{##1}\glstarget{##1}{##2} & ##3 & ##5\tabularnewline}%
10245   \renewcommand*{\glossarysubentryfield}[6]{%
10246     &
10247     \glssubentryitem{##2}%
10248     \glstarget{##2}{\strut}##4 & ##6\tabularnewline}%
10249 }%
```

Backward compatible superragged3colborder style.

```
10250 \compatglossarystyle{superragged3colborder}{%
10251   \csuse{@glscompstyle@superragged3col}%
10252 }%
```

Backward compatible superragged3colheader style.

```
10253 \compatglossarystyle{superragged3colheader}{%
10254   \csuse{@glscompstyle@superragged3col}%
10255 }%
```

Backward compatible superragged3colheaderborder style.

```
10256 \compatglossarystyle{superragged3colheaderborder}{%
10257   \csuse{@glscompstyle@superragged3col}%
10258 }%
```

Backward compatible altsuperragged4col style.

```
10259 \compatglossarystyle{altsuperragged4col}{%
10260   \renewcommand*{\glossaryentryfield}[5]{%
10261     \glentryitem{##1}\glstarget{##1}{##2} & ##3 & ##4 & ##5\tabularnewline}%
10262   \renewcommand*{\glossarysubentryfield}[6]{%
10263     &
10264     \glssubentryitem{##2}%
10265     \glstarget{##2}{\strut}##4 & ##5 & ##6\tabularnewline}%
10266 }%
```

Backward compatible altsuperragged4colheader style.

```
10267 \compatglossarystyle{altsuperragged4colheader}{%
10268   \csuse{@glscompstyle@altsuperragged4col}%
10269 }%
```

Backward compatible altsuperragged4colborder style.

```
10270 \compatglossarystyle{altsuperragged4colborder}{%
10271   \csuse{@glscompstyle@altsuperragged4col}%
10272 }%
```

Backward compatible altsuperragged4colheaderborder style.

```
10273 \compatglossarystyle{altsuperragged4colheaderborder}{%
```

```
10274 \csuse{@glscompstyle@altsuperragged4col}%
10275 }%
```

Backward compatible super style.

```
10276 \compatglossarystyle{super}{%
10277   \renewcommand*{\glossaryentryfield}[5]{%
10278     \glentryitem{##1}\glstarget{##1}{##2} & ##3\glspostdescription\space ##5\\}%
10279   \renewcommand*{\glossarysubentryfield}[6]{%
10280     &
10281     \glssubentryitem{##2}%
10282     \glstarget{##2}{\strut}##4\glspostdescription\space ##6\\}%
10283 }%
```

Backward compatible superborder style.

```
10284 \compatglossarystyle{superborder}{%
10285   \csuse{@glscompstyle@super}%
10286 }%
```

Backward compatible superheader style.

```
10287 \compatglossarystyle{superheader}{%
10288   \csuse{@glscompstyle@super}%
10289 }%
```

Backward compatible superheaderborder style.

```
10290 \compatglossarystyle{superheaderborder}{%
10291   \csuse{@glscompstyle@super}%
10292 }%
```

Backward compatible super3col style.

```
10293 \compatglossarystyle{super3col}{%
10294   \renewcommand*{\glossaryentryfield}[5]{%
10295     \glentryitem{##1}\glstarget{##1}{##2} & ##3 & ##5\\}%
10296   \renewcommand*{\glossarysubentryfield}[6]{%
10297     &
10298     \glssubentryitem{##2}%
10299     \glstarget{##2}{\strut}##4 & ##6\\}%
10300 }%
```

Backward compatible super3colborder style.

```
10301 \compatglossarystyle{super3colborder}{%
10302   \csuse{@glscompstyle@super3col}%
10303 }%
```

Backward compatible super3colheader style.

```
10304 \compatglossarystyle{super3colheader}{%
10305   \csuse{@glscompstyle@super3col}%
10306 }%
```

Backward compatible super3colheaderborder style.

```
10307 \compatglossarystyle{super3colheaderborder}{%
10308   \csuse{@glscompstyle@super3col}%
10309 }%
```

Backward compatible super4col style.

```
10310 \compatglossarystyle{super4col}{%
10311   \renewcommand*{\glossaryentryfield}[5]{%
10312     \glentryitem{##1}\glstarget{##1}{##2} & ##3 & ##4 & ##5\\}%
10313   \renewcommand*{\glossarysubentryfield}[6]{%
10314     &
10315     \glssubentryitem{##2}%
10316     \glstarget{##2}{\strut}##4 & ##5 & ##6\\}%
10317 }%
```

Backward compatible super4colheader style.

```
10318 \compatglossarystyle{super4colheader}{%
10319   \csuse{@glscompstyle@super4col}%
10320 }%
```

Backward compatible super4colborder style.

```
10321 \compatglossarystyle{super4colborder}{%
10322   \csuse{@glscompstyle@super4col}%
10323 }%
```

Backward compatible super4colheaderborder style.

```
10324 \compatglossarystyle{super4colheaderborder}{%
10325   \csuse{@glscompstyle@super4col}%
10326 }%
```

Backward compatible altsuper4col style.

```
10327 \compatglossarystyle{altsuper4col}{%
10328   \csuse{@glscompstyle@super4col}%
10329 }%
```

Backward compatible altsuper4colheader style.

```
10330 \compatglossarystyle{altsuper4colheader}{%
10331   \csuse{@glscompstyle@super4col}%
10332 }%
```

Backward compatible altsuper4colborder style.

```
10333 \compatglossarystyle{altsuper4colborder}{%
10334   \csuse{@glscompstyle@super4col}%
10335 }%
```

Backward compatible altsuper4colheaderborder style.

```
10336 \compatglossarystyle{altsuper4colheaderborder}{%
10337   \csuse{@glscompstyle@super4col}%
10338 }%
```

5 Accessibility Support (glossaries-accsupp Code)

The package is experimental. It is intended to provide a means of using the PDF accessibility support in glossary entries. See the documentation for further details about accessibility support.

```
10339 \NeedsTeXFormat{LaTeX2e}
```

Package version number now in line with main glossaries package number.

```
10340 \ProvidesPackage{glossaries-accsupp}[2017/09/20 v4.33 (NLCT)]
```

```
10341 Experimental glossaries accessibility]
```

Pass all options to glossaries:

```
10342 \DeclareOption*{\PassOptionsToPackage{\CurrentOption}{glossaries}}
```

Process options:

```
10343 \ProcessOptions
```

This package should be loaded before glossaries-extra, so complain if that has already been loaded.

```
10344 \@ifpackageloaded{glossaries-extra}
```

```
10345 {%
```

If the accsupp option was used, `\@glsxtr@doaccsupp` will have been set, otherwise it will be empty.

```
10346 \ifx\@glsxtr@doaccsupp\empty
```

```
10347 \GlossariesWarning{The ‘glossaries-accsupp’
```

```
10348 package has been loaded\MessageBreak
```

```
10349 after the ‘glossaries-extra’ package. This\MessageBreak
```

```
10350 can cause a failure to integrate both packages. \MessageBreak
```

```
10351 Either use the ‘accsupp’ option when you load\MessageBreak
```

```
10352 ‘glossaries-extra’ or load ‘glossaries-accsupp’\MessageBreak
```

```
10353 before loading ‘glossaries-extra’}%
```

```
10354 \fi
```

```
10355 }
```

```
10356 {}
```

`\tibleglossentry` Override style compatibility macros:

```
10357 \def\compatibleglossentry#1#2{%
```

```
10358 \toks0{#2}%
```

```
10359 \protected@edef\@do@glossentry{%
```

```
10360 \noexpand\accsuppglossaryentryfield{#1}%
```

```
10361 {\noexpand\glsnamefont
```

```
10362 {\expandafter\expandonce\csname glo@\glsdetoklabel{#1}@name\endcsname}}%
```

```

10363     {\expandafter\expandonce\csname glo@glstetoklabel{#1}@desc\endcsname}%
10364     {\expandafter\expandonce\csname glo@glstetoklabel{#1}@symbol\endcsname}%
10365     {\the\toks@}%
10366   }%
10367   \@do@glossentry
10368 }

```

lesubglossentry

```

10369 \def\compatiblesubglossentry#1#2#3{%
10370   \toks@{#3}%
10371   \protected@edef\@do@subglossentry{%
10372     \noexpand\accsuppglossarysubentryfield{\number#1}%
10373     {#2}%
10374     {\noexpand\glsnamefont
10375       {\expandafter\expandonce\csname glo@glstetoklabel{#2}@name\endcsname}}}%
10376     {\expandafter\expandonce\csname glo@glstetoklabel{#2}@desc\endcsname}%
10377     {\expandafter\expandonce\csname glo@glstetoklabel{#2}@symbol\endcsname}%
10378     {\the\toks@}%
10379   }%
10380   \@do@subglossentry
10381 }

```

Required packages:

```

10382 \RequirePackage{glossaries}
10383 \RequirePackage{accsupp}

```

5.1 Defining Replacement Text

The version 0.1 stored the replacement text in the symbol key. This has been changed to use the new keys defined here. Example of use:

```
\newglossaryentry{dr}{name=Dr,description={},access={Doctor}}
```

access The replacement text corresponding to the name key:

```

10384 \define@key{glossentry}{access}{%
10385   \def\@glo@access{#1}%
10386 }

```

textaccess The replacement text corresponding to the text key:

```

10387 \define@key{glossentry}{textaccess}{%
10388   \def\@glo@textaccess{#1}%
10389 }

```

firstaccess The replacement text corresponding to the first key:

```

10390 \define@key{glossentry}{firstaccess}{%
10391   \def\@glo@firstaccess{#1}%
10392 }

```

pluralaccess The replacement text corresponding to the plural key:

```

10393 \define@key{glossentry}{pluralaccess}{%
10394   \def\@glo@pluralaccess{#1}%
10395 }
```

firstpluralaccess The replacement text corresponding to the firstplural key:

```

10396 \define@key{glossentry}{firstpluralaccess}{%
10397   \def\@glo@firstpluralaccess{#1}%
10398 }
```

symbolaccess The replacement text corresponding to the symbol key:

```

10399 \define@key{glossentry}{symbolaccess}{%
10400   \def\@glo@symbolaccess{#1}%
10401 }
```

symbolpluralaccess The replacement text corresponding to the symbolplural key:

```

10402 \define@key{glossentry}{symbolpluralaccess}{%
10403   \def\@glo@symbolpluralaccess{#1}%
10404 }
```

descriptionaccess The replacement text corresponding to the description key:

```

10405 \define@key{glossentry}{descriptionaccess}{%
10406   \def\@glo@descaccess{#1}%
10407 }
```

descriptionpluralaccess The replacement text corresponding to the descriptionplural key:

```

10408 \define@key{glossentry}{descriptionpluralaccess}{%
10409   \def\@glo@descpluralaccess{#1}%
10410 }
```

shortaccess The replacement text corresponding to the short key:

```

10411 \define@key{glossentry}{shortaccess}{%
10412   \def\@glo@shortaccess{#1}%
10413 }
```

shortpluralaccess The replacement text corresponding to the shortplural key:

```

10414 \define@key{glossentry}{shortpluralaccess}{%
10415   \def\@glo@shortpluralaccess{#1}%
10416 }
```

longaccess The replacement text corresponding to the long key:

```

10417 \define@key{glossentry}{longaccess}{%
10418   \def\@glo@longaccess{#1}%
10419 }
```

longpluralaccess The replacement text corresponding to the longplural key:

```

10420 \define@key{glossentry}{longpluralaccess}{%
10421   \def\@glo@longpluralaccess{#1}%
10422 }
```

There are no equivalent keys for the user1...user6 keys. The replacement text would have to be explicitly put in the value, e.g., user1={\glsacccsup{inches}{in}}.

Append these new keys to \@gls@keymap:

```

10423 \appto\@gls@keymap{,%
10424   {access}{access},%
10425   {textaccess}{textaccess},%
10426   {firstaccess}{firstaccess},%
10427   {pluralaccess}{pluralaccess},%
10428   {firstpluralaccess}{firstpluralaccess},%
10429   {symbolaccess}{symbolaccess},%
10430   {symbolpluralaccess}{symbolpluralaccess},%
10431   {descaccess}{descaccess},%
10432   {descpluralaccess}{descpluralaccess},%
10433   {shortaccess}{shortaccess},%
10434   {shortpluralaccess}{shortpluralaccess},%
10435   {longaccess}{longaccess},%
10436   {longpluralaccess}{longpluralaccess}%
10437 }
```

\@gls@noaccess Indicates that no replacement text has been provided.

```

10438 \def\@gls@noaccess{\relax}
```

Add to the start hook (the access key is initialised to the value of the symbol key at the start for backwards compatibility):

```

10439 \let\@gls@oldnewglossaryentryprehook\@newglossaryentryprehook
10440 \renewcommand*{\@newglossaryentryprehook}{%
10441   \@gls@oldnewglossaryentryprehook
10442   \def\@glo@access{\@glo@symbol}%
```

Initialise the other keys:

```

10443   \def\@glo@textaccess{\@glo@access}%
10444   \def\@glo@firstaccess{\@glo@access}%
10445   \def\@glo@pluralaccess{\@glo@textaccess}%
10446   \def\@glo@firstpluralaccess{\@glo@pluralaccess}%
10447   \def\@glo@symbolaccess{\relax}%
10448   \def\@glo@symbolpluralaccess{\@glo@symbolaccess}%
10449   \def\@glo@descaccess{\relax}%
10450   \def\@glo@descpluralaccess{\@glo@descaccess}%
10451   \def\@glo@shortaccess{\relax}%
10452   \def\@glo@shortpluralaccess{\@glo@shortaccess}%
10453   \def\@glo@longaccess{\relax}%
10454   \def\@glo@longpluralaccess{\@glo@longaccess}%
10455 }
```

Add to the end hook:

```

10456 \let\@gls@oldnewglossaryentryposthook\@newglossaryentryposthook
10457 \renewcommand*{\@newglossaryentryposthook}{%
10458   \@gls@oldnewglossaryentryposthook
```

Store the access information:

```

10459 \expandafter
10460   \protected@xdef\csname glo@\@glo@label @access\endcsname{%
10461     \@glo@access}%
10462 \expandafter
10463   \protected@xdef\csname glo@\@glo@label @textaccess\endcsname{%
10464     \@glo@textaccess}%
10465 \expandafter
10466   \protected@xdef\csname glo@\@glo@label @firstaccess\endcsname{%
10467     \@glo@firstaccess}%
10468 \expandafter
10469   \protected@xdef\csname glo@\@glo@label @pluralaccess\endcsname{%
10470     \@glo@pluralaccess}%
10471 \expandafter
10472   \protected@xdef\csname glo@\@glo@label @firstpluralaccess\endcsname{%
10473     \@glo@firstpluralaccess}%
10474 \expandafter
10475   \protected@xdef\csname glo@\@glo@label @symbolaccess\endcsname{%
10476     \@glo@symbolaccess}%
10477 \expandafter
10478   \protected@xdef\csname glo@\@glo@label @symbolpluralaccess\endcsname{%
10479     \@glo@symbolpluralaccess}%
10480 \expandafter
10481   \protected@xdef\csname glo@\@glo@label @descaccess\endcsname{%
10482     \@glo@descaccess}%
10483 \expandafter
10484   \protected@xdef\csname glo@\@glo@label @descpluralaccess\endcsname{%
10485     \@glo@descpluralaccess}%
10486 \expandafter
10487   \protected@xdef\csname glo@\@glo@label @shortaccess\endcsname{%
10488     \@glo@shortaccess}%
10489 \expandafter
10490   \protected@xdef\csname glo@\@glo@label @shortpluralaccess\endcsname{%
10491     \@glo@shortpluralaccess}%
10492 \expandafter
10493   \protected@xdef\csname glo@\@glo@label @longaccess\endcsname{%
10494     \@glo@longaccess}%
10495 \expandafter
10496   \protected@xdef\csname glo@\@glo@label @longpluralaccess\endcsname{%
10497     \@glo@longpluralaccess}%
10498 }

```

5.2 Accessing Replacement Text

`\glsentryaccess` Get the value of the access key for the entry with the given label:

```

10499 \newcommand*{\glsentryaccess}[1]{%
10500   \@gls@entry@field{#1}{access}%
10501 }

```


entrytextaccess Get the value of the textaccess key for the entry with the given label:

```

10502 \newcommand*{\glsentrytextaccess}[1]{%
10503   \@gls@entry@field{#1}{textaccess}%
10504 }

```

entryfirstaccess Get the value of the firstaccess key for the entry with the given label:

```

10505 \newcommand*{\glsentryfirstaccess}[1]{%
10506   \@gls@entry@field{#1}{firstaccess}%
10507 }

```

entrypluralaccess Get the value of the pluralaccess key for the entry with the given label:

```

10508 \newcommand*{\glsentrypluralaccess}[1]{%
10509   \@gls@entry@field{#1}{pluralaccess}%
10510 }

```

entryfirstpluralaccess Get the value of the firstpluralaccess key for the entry with the given label:

```

10511 \newcommand*{\glsentryfirstpluralaccess}[1]{%
10512   \csname glo@#1@firstpluralaccess\endcsname
10513 }

```

entrysymbolaccess Get the value of the symbolaccess key for the entry with the given label:

```

10514 \newcommand*{\glsentrysymbolaccess}[1]{%
10515   \@gls@entry@field{#1}{symbolaccess}%
10516 }

```

entrysymbolpluralaccess Get the value of the symbolpluralaccess key for the entry with the given label:

```

10517 \newcommand*{\glsentrysymbolpluralaccess}[1]{%
10518   \@gls@entry@field{#1}{symbolpluralaccess}%
10519 }

```

entrydescaccess Get the value of the descriptionaccess key for the entry with the given label:

```

10520 \newcommand*{\glsentrydescaccess}[1]{%
10521   \@gls@entry@field{#1}{descaccess}%
10522 }

```

entrydescpluralaccess Get the value of the descriptionpluralaccess key for the entry with the given label:

```

10523 \newcommand*{\glsentrydescpluralaccess}[1]{%
10524   \@gls@entry@field{#1}{descaccess}%
10525 }

```

entryshortaccess Get the value of the shortaccess key for the entry with the given label:

```

10526 \newcommand*{\glsentryshortaccess}[1]{%
10527   \@gls@entry@field{#1}{shortaccess}%
10528 }

```

entryshortpluralaccess Get the value of the shortpluralaccess key for the entry with the given label:

```

10529 \newcommand*{\glsentryshortpluralaccess}[1]{%
10530   \@gls@entry@field{#1}{shortpluralaccess}%
10531 }

```

entrylongaccess Get the value of the longaccess key for the entry with the given label:

```
10532 \newcommand*{\glsentrylongaccess}[1]{%
10533   \@gls@entry@field{#1}{longaccess}%
10534 }
```

ongpluralaccess Get the value of the longpluralaccess key for the entry with the given label:

```
10535 \newcommand*{\glsentrylongpluralaccess}[1]{%
10536   \@gls@entry@field{#1}{longpluralaccess}%
10537 }
```

\glsaccsupp \glsaccsupp{<replacement text>}{<text>}

This can be redefined to use E or Alt instead of ActualText. (I don't have the software to test the E or Alt options.)

```
10538 \newcommand*{\glsaccsupp}[2]{%
10539   \BeginAccSupp{ActualText=#1}#2\EndAccSupp{}%
10540 }
```

\xglsaccsupp Fully expands replacement text before calling \glsaccsupp

```
10541 \newcommand*{\xglsaccsupp}[2]{%
10542   \protected@edef\@gls@replacementtext{#1}%
10543   \expandafter\glsaccsupp\expandafter{\@gls@replacementtext}{#2}%
10544 }
```

@access@display

```
10545 \newcommand*{\@gls@access@display}[2]{%
10546   \protected@edef\@glo@access{#2}%
10547   \ifx\@glo@access\@gls@noaccess
10548     #1%
10549   \else
10550     \xglsaccsupp{\@glo@access}{#1}%
10551   \fi
10552 }
```

meaccessdisplay Displays the first argument with the accessibility text for the entry with the label given by the second argument (if set).

```
10553 \DeclareRobustCommand*{\glsnameaccessdisplay}[2]{%
10554   \@gls@access@display{#1}{\glsentryaccess{#2}}%
10555 }
```

xtaccessdisplay As above but for the textaccess replacement text.

```
10556 \DeclareRobustCommand*{\glsstextaccessdisplay}[2]{%
10557   \@gls@access@display{#1}{\glsentrytextaccess{#2}}%
10558 }
```

alaccessdisplay As above but for the pluralaccess replacement text.

```
10559 \DeclareRobustCommand*{\glspluralaccessdisplay}[2]{%
10560   \@gls@access@display{#1}{\glsentrypluralaccess{#2}}%
10561 }
```

staccessdisplay As above but for the firstaccess replacement text.

```

10562 \DeclareRobustCommand*\glfirstaccessdisplay}[2]{%
10563   \@gls@access@display{#1}{\glentryfirstaccess{#2}}%
10564 }

```

alaccessdisplay As above but for the firstpluralaccess replacement text.

```

10565 \DeclareRobustCommand*\glfirstpluralaccessdisplay}[2]{%
10566   \@gls@access@display{#1}{\glentryfirstpluralaccess{#2}}%
10567 }

```

olaccessdisplay As above but for the symbolaccess replacement text.

```

10568 \DeclareRobustCommand*\glssymbolaccessdisplay}[2]{%
10569   \@gls@access@display{#1}{\glentrysymbolaccess{#2}}%
10570 }

```

alaccessdisplay As above but for the symbolpluralaccess replacement text.

```

10571 \DeclareRobustCommand*\glssymbolpluralaccessdisplay}[2]{%
10572   \@gls@access@display{#1}{\glentrysymbolpluralaccess{#2}}%
10573 }

```

onaccessdisplay As above but for the descriptionaccess replacement text.

```

10574 \DeclareRobustCommand*\glsdescriptionaccessdisplay}[2]{%
10575   \@gls@access@display{#1}{\glentrydescaccess{#2}}%
10576 }

```

alaccessdisplay As above but for the descriptionpluralaccess replacement text.

```

10577 \DeclareRobustCommand*\glsdescriptionpluralaccessdisplay}[2]{%
10578   \@gls@access@display{#1}{\glentrydescpluralaccess{#2}}%
10579 }

```

rtaccessdisplay As above but for the shortaccess replacement text.

```

10580 \DeclareRobustCommand*\glsshortaccessdisplay}[2]{%
10581   \@gls@access@display{#1}{\glentryshortaccess{#2}}%
10582 }

```

alaccessdisplay As above but for the shortpluralaccess replacement text.

```

10583 \DeclareRobustCommand*\glsshortpluralaccessdisplay}[2]{%
10584   \@gls@access@display{#1}{\glentryshortpluralaccess{#2}}%
10585 }

```

ngaccessdisplay As above but for the longaccess replacement text.

```

10586 \DeclareRobustCommand*\glslongaccessdisplay}[2]{%
10587   \@gls@access@display{#1}{\glentrylongaccess{#2}}%
10588 }

```

alaccessdisplay As above but for the longpluralaccess replacement text.

```

10589 \DeclareRobustCommand*\glslongpluralaccessdisplay}[2]{%
10590   \@gls@access@display{#1}{\glentrylongpluralaccess{#2}}%
10591 }

```

`\glsaccessdisplay` Gets the replacement text corresponding to the named key given by the first argument and calls the appropriate command defined above.

```

10592 \DeclareRobustCommand*\glsaccessdisplay}[3]{%
10593   \@ifundefined{gls#1accessdisplay}%
10594   {%
10595     \PackageError{glossaries-accsupp}{No accessibility support
10596       for key ‘#1’}{}%
10597   }%
10598   {%
10599     \csname gls#1accessdisplay\endcsname{#2}{#3}%
10600   }%
10601 }

```

`\default@entryfmt` Redefine the default entry format to use accessibility information

```

10602 \renewcommand*\@@gls@default@entryfmt}[2]{%
10603   \ifdefempty\glscustomtext
10604   {%
10605     \glsifplural
10606     {%

```

Plural form

```

10607     \glscapscase
10608     {%

```

Don't adjust case

```

10609     \ifglsused\glslabel
10610     {%

```

Subsequent use

```

10611         #2{\glspluralaccessdisplay
10612           {\glsentryplural{\glslabel}}{\glslabel}}%
10613         {\glsdescriptionpluralaccessdisplay
10614           {\glsentrydescplural{\glslabel}}{\glslabel}}%
10615         {\glsymbolpluralaccessdisplay
10616           {\glsentrysymbolplural{\glslabel}}{\glslabel}}
10617         {\glsinsert}%
10618       }%
10619     {%

```

First use

```

10620         #1{\glsfirstpluralaccessdisplay
10621           {\glsentryfirstplural{\glslabel}}{\glslabel}}%
10622         {\glsdescriptionpluralaccessdisplay
10623           {\glsentrydescplural{\glslabel}}{\glslabel}}%
10624         {\glsymbolpluralaccessdisplay
10625           {\glsentrysymbolplural{\glslabel}}{\glslabel}}%
10626         {\glsinsert}%
10627       }%
10628     }%
10629   }%

```

Make first letter upper case

```
10630      \ifglsused\glslabel
10631      {%
```

Subsequent use.

```
10632      #2{\glspluralaccessdisplay
10633          {\Glsentryplural{\glslabel}}{\glslabel}}%
10634          {\glsdescriptionpluralaccessdisplay
10635              {\glsentrydescplural{\glslabel}}{\glslabel}}%
10636          {\glsymbolpluralaccessdisplay
10637              {\glsentrysymbolplural{\glslabel}}{\glslabel}}%
10638          {\glsinsert}}%
10639      }%
10640      {%
```

First use

```
10641      #1{\glsfirstpluralaccessdisplay
10642          {\Glsentryfirstplural{\glslabel}}{\glslabel}}%
10643          {\glsdescriptionpluralaccessdisplay
10644              {\glsentrydescplural{\glslabel}}{\glslabel}}%
10645          {\glsymbolpluralaccessdisplay
10646              {\glsentrysymbolplural{\glslabel}}{\glslabel}}%
10647          {\glsinsert}}%
10648      }%
10649      }%
10650      {%
```

Make all upper case

```
10651      \ifglsused\glslabel
10652      {%
```

Subsequent use

```
10653      \MakeUppercase{%
10654      #2{\glspluralaccessdisplay
10655          {\glsentryplural{\glslabel}}{\glslabel}}%
10656          {\glsdescriptionpluralaccessdisplay
10657              {\glsentrydescplural{\glslabel}}{\glslabel}}%
10658          {\glsymbolpluralaccessdisplay
10659              {\glsentrysymbolplural{\glslabel}}{\glslabel}}%
10660          {\glsinsert}}%
10661      }%
10662      {%
```

First use

```
10663      \MakeUppercase{%
10664      #1{\glsfirstpluralaccessdisplay
10665          {\glsentryfirstplural{\glslabel}}{\glslabel}}%
10666          {\glsdescriptionpluralaccessdisplay
10667              {\glsentrydescplural{\glslabel}}{\glslabel}}%
10668          {\glsymbolpluralaccessdisplay
10669              {\glsentrysymbolplural{\glslabel}}{\glslabel}}%
```

```

10670          {\glsinsert}}}%
10671      }%
10672  }%
10673  }%
10674  {%

```

Singular form

```

10675      \glscapscase
10676      {%

```

Don't adjust case

```

10677      \ifglsused\glslabel
10678      {%

```

Subsequent use

```

10679      #2{\glstextaccessdisplay
10680          {\glsentrytext{\glslabel}}{\glslabel}}%
10681          {\glsdescriptionaccessdisplay
10682              {\glsentrydesc{\glslabel}}{\glslabel}}%
10683              {\glssymbolaccessdisplay
10684                  {\glsentrysymbol{\glslabel}}{\glslabel}}}%
10685          {\glsinsert}}%
10686      }%
10687      {%

```

First use

```

10688      #1{\glsfirstaccessdisplay
10689          {\glsentryfirst{\glslabel}}{\glslabel}}%
10690          {\glsdescriptionaccessdisplay
10691              {\glsentrydesc{\glslabel}}{\glslabel}}%
10692              {\glssymbolaccessdisplay
10693                  {\glsentrysymbol{\glslabel}}{\glslabel}}}%
10694          {\glsinsert}}%
10695      }%
10696      }%
10697      {%

```

Make first letter upper case

```

10698      \ifglsused\glslabel
10699      {%

```

Subsequent use

```

10700      #2{\glstextaccessdisplay
10701          {\Glsentrytext{\glslabel}}{\glslabel}}%
10702          {\glsdescriptionaccessdisplay
10703              {\glsentrydesc{\glslabel}}{\glslabel}}%
10704              {\glssymbolaccessdisplay
10705                  {\glsentrysymbol{\glslabel}}{\glslabel}}}%
10706          {\glsinsert}}%
10707      }%
10708      {%

```

First use

```

10709      #1{\glsfirstaccessdisplay
10710          {\Glsentryfirst{\glslabel}}{\glslabel}}%
10711          {\glsdescriptionaccessdisplay
10712              {\glsentrydesc{\glslabel}}{\glslabel}}%
10713          {\glsymbolaccessdisplay
10714              {\glsentrysymbol{\glslabel}}{\glslabel}}%
10715          {\glsinsert}}%
10716      }%
10717  }%
10718  {%

```

Make all upper case

```

10719      \ifglsused\glslabel
10720      {%

```

Subsequent use

```

10721      \MakeUppercase{%
10722          #2{\glstextaccessdisplay
10723              {\glsentrytext{\glslabel}}{\glslabel}}%
10724              {\glsdescriptionaccessdisplay
10725                  {\glsentrydesc{\glslabel}}{\glslabel}}%
10726                  {\glsymbolaccessdisplay
10727                      {\glsentrysymbol{\glslabel}}{\glslabel}}%
10728                      {\glsinsert}}}%
10729      }%
10730      {%

```

First use

```

10731      \MakeUppercase{%
10732          #1{\glsfirstaccessdisplay
10733              {\glsentryfirst{\glslabel}}{\glslabel}}%
10734              {\glsdescriptionaccessdisplay
10735                  {\glsentrydesc{\glslabel}}{\glslabel}}%
10736                  {\glsymbolaccessdisplay
10737                      {\glsentrysymbol{\glslabel}}{\glslabel}}%
10738                      {\glsinsert}}}%
10739      }%
10740  }%
10741  }%
10742  }%
10743  {%

```

Custom text provided in \glsdisp

```

10744      \ifglsused{\glslabel}%
10745      {%

```

Subsequent use

```

10746      #2{\glscustomtext}%
10747      {\glsdescriptionaccessdisplay
10748          {\glsentrydesc{\glslabel}}{\glslabel}}%

```

```

10749      {\glssymbolaccessdisplay
10750        {\glentrysymbol{\glslabel}}{\glslabel}}%
10751      {\glsinsert}%
10752    }%
10753    {%

```

First use

```

10754      #1{\glscustomtext}%
10755      {\glsdescriptionaccessdisplay
10756        {\glentrydesc{\glslabel}}{\glslabel}}%
10757      {\glssymbolaccessdisplay
10758        {\glentrysymbol{\glslabel}}{\glslabel}}%
10759      {\glsinsert}%
10760    }%
10761  }%
10762 }

```

`\glsgenentryfmt` Redefine to use accessibility information.

```

10763 \renewcommand*{\glsgenentryfmt}{%
10764   \ifdefempty\glscustomtext
10765     {%
10766       \glsifplural
10767       {%

```

Plural form

```

10768       \glscapscase
10769       {%

```

Don't adjust case

```

10770       \ifglused\glslabel
10771       {%

```

Subsequent use

```

10772       \glspluralaccessdisplay
10773         {\glentryplural{\glslabel}}{\glslabel}%
10774       \glsinsert
10775     }%
10776     {%

```

First use

```

10777       \glsfirstpluralaccessdisplay
10778         {\glentryfirstplural{\glslabel}}{\glslabel}%
10779       \glsinsert
10780     }%
10781   }%
10782   {%

```

Make first letter upper case

```

10783       \ifglused\glslabel
10784       {%

```


Subsequent use.

```
10785      \glspluralaccessdisplay
10786      {\Glsentryplural{\glslabel}}{\glslabel}%
10787      \glsinsert
10788      }%
10789      {%
```

First use

```
10790      \glsfirstpluralaccessdisplay
10791      {\Glsentryfirstplural{\glslabel}}{\glslabel}%
10792      \glsinsert
10793      }%
10794      }%
10795      {%
```

Make all upper case

```
10796      \ifglused\glslabel
10797      {%
```

Subsequent use

```
10798      \glspluralaccessdisplay
10799      {\mfirstucMakeUppercase{\glsentryplural{\glslabel}}}%
10800      {\glslabel}%
10801      \mfirstucMakeUppercase{\glsinsert}%
10802      }%
10803      {%
```

First use

```
10804      \glsfirstpluralaccessdisplay
10805      {\mfirstucMakeUppercase{\glsentryfirstplural{\glslabel}}}%
10806      {\glslabel}%
10807      \mfirstucMakeUppercase{\glsinsert}%
10808      }%
10809      }%
10810      }%
10811      {%
```

Singular form

```
10812      \glscapscase
10813      {%
```

Don't adjust case

```
10814      \ifglused\glslabel
10815      {%
```

Subsequent use

```
10816      \glstextaccessdisplay{\glsentrytext{\glslabel}}{\glslabel}%
10817      \glsinsert
10818      }%
10819      {%
```

First use

```
10820      \glsfirstaccessdisplay{\glsentryfirst{\glslabel}}{\glslabel}%
10821      \glsinsert
10822      }%
10823      }%
10824      {%
```

Make first letter upper case

```
10825      \ifglsused\glslabel
10826      {%
```

Subsequent use

```
10827      \glstextaccessdisplay{\Glsentrytext{\glslabel}}{\glslabel}%
10828      \glsinsert
10829      }%
10830      {%
```

First use

```
10831      \glsfirstaccessdisplay{\Glsentryfirst{\glslabel}}{\glslabel}%
10832      \glsinsert
10833      }%
10834      }%
10835      {%
```

Make all upper case

```
10836      \ifglsused\glslabel
10837      {%
```

Subsequent use

```
10838      \glstextaccessdisplay
10839      {\mfirstucMakeUppercase{\glsentrytext{\glslabel}}}{\glslabel}%
10840      \mfirstucMakeUppercase{\glsinsert}%
10841      }%
10842      {%
```

First use

```
10843      \glsfirstaccessdisplay
10844      {\mfirstucMakeUppercase{\glsentryfirst{\glslabel}}}{\glslabel}%
10845      \mfirstucMakeUppercase{\glsinsert}%
10846      }%
10847      }%
10848      }%
10849      }%
10850      {%
```

Custom text provided in `\glsdisp`. (The insert should be empty at this point.) The accessibility information, if required, will have to be explicitly included in the custom text.

```
10851      \glscustomtext\glsinsert
10852      }%
10853 }
```

`\glsgenacfmt` Redefine to include accessibility information.

```
10854 \renewcommand*{\glsgenacfmt}{%
10855   \ifdefempty\glscustomtext
10856   {%
10857     \ifglused\glslabel
10858     {%
```

Subsequent use:

```
10859     \glsifplural
10860     {%
```

Subsequent plural form:

```
10861     \glscapscase
10862     {%
```

Subsequent plural form, don't adjust case:

```
10863     \acronymfont
10864     {\glsshortpluralaccessdisplay
10865      {\glentryshortpl{\glslabel}}{\glslabel}}%
10866     \glsinsert
10867   }%
10868   {%
```

Subsequent plural form, make first letter upper case:

```
10869     \acronymfont
10870     {\glsshortpluralaccessdisplay
10871      {\Glsentryshortpl{\glslabel}}{\glslabel}}%
10872     \glsinsert
10873   }%
10874   {%
```

Subsequent plural form, all caps:

```
10875     \mfirstucMakeUppercase
10876     {\acronymfont
10877      {\glsshortpluralaccessdisplay
10878       {\glentryshortpl{\glslabel}}{\glslabel}}%
10879      \glsinsert}%
10880   }%
10881   }%
10882   {%
```

Subsequent singular form

```
10883     \glscapscase
10884     {%
```

Subsequent singular form, don't adjust case:

```
10885     \acronymfont
10886     {\glsshortaccessdisplay{\glentryshort{\glslabel}}{\glslabel}}%
10887     \glsinsert
10888   }%
10889   {%
```

Subsequent singular form, make first letter upper case:

```
10890      \acronymfont
10891      {\glsshortaccessdisplay{\Glsentryshort{\glslabel}}{\glslabel}}%
10892      \glsinsert
10893      }%
10894      {%
```

Subsequent singular form, all caps:

```
10895      \mfirstucMakeUppercase
10896      {\acronymfont{%
10897      \glsshortaccessdisplay{\Glsentryshort{\glslabel}}{\glslabel}}%
10898      \glsinsert}%
10899      }%
10900      }%
10901      }%
10902      {%
```

First use:

```
10903      \glsifplural
10904      {%
```

First use plural form:

```
10905      \glscapscase
10906      {%
```

First use plural form, don't adjust case:

```
10907      \genplacrfullformat{\glslabel}{\glsinsert}%
10908      }%
10909      {%
```

First use plural form, make first letter upper case:

```
10910      \Genplacrfullformat{\glslabel}{\glsinsert}%
10911      }%
10912      {%
```

First use plural form, all caps:

```
10913      \mfirstucMakeUppercase
10914      {\genplacrfullformat{\glslabel}{\glsinsert}}%
10915      }%
10916      }%
10917      {%
```

First use singular form

```
10918      \glscapscase
10919      {%
```

First use singular form, don't adjust case:

```
10920      \genacrfullformat{\glslabel}{\glsinsert}%
10921      }%
10922      {%
```

First use singular form, make first letter upper case:

```
10923      \Genacrfullformat{\glslabel}{\glsinsert}%
10924      }%
10925      {%
```

First use singular form, all caps:

```
10926      \mfirstucMakeUppercase
10927      {\genacrfullformat{\glslabel}{\glsinsert}}%
10928      }%
10929      }%
10930      }%
10931      }%
10932      {%
```

User supplied text. (The insert should be empty at this point.) The accessibility information, if required, will have to be explicitly included in the custom text.

```
10933      \glscustomtext
10934      }%
10935 }
```

enacrfullformat Redefine to include accessibility information.

```
10936 \renewcommand*{\genacrfullformat}[2]{%
10937   \glslongaccessdisplay{\glsentrylong{#1}}{#1}#2\space
10938   (\glsshortaccessdisplay{\protect\firstacronymfont{\glsentryshort{#1}}}{#1}}%
10939 }
```

enacrfullformat Redefine to include accessibility information.

```
10940 \renewcommand*{\Genacrfullformat}[2]{%
10941   \glslongaccessdisplay{\Glsentrylong{#1}}{#1}#2\space
10942   (\glsshortaccessdisplay{\protect\firstacronymfont{\Glsentryshort{#1}}}{#1}}%
10943 }
```

placrfullformat Redefine to include accessibility information.

```
10944 \renewcommand*{\genplacrfullformat}[2]{%
10945   \glslongpluralaccessdisplay{\glsentrylongpl{#1}}{#1}#2\space
10946   (\glsshortpluralaccessdisplay
10947     {\protect\firstacronymfont{\glsentryshortpl{#1}}}{#1}}%
10948 }
```

placrfullformat Redefine to include accessibility information.

```
10949 \renewcommand*{\Genplacrfullformat}[2]{%
10950   \glslongpluralaccessdisplay{\Glsentrylongpl{#1}}{#1}#2\space
10951   (\glsshortpluralaccessdisplay
10952     {\protect\firstacronymfont{\Glsentryshortpl{#1}}}{#1}}%
10953 }
```

\@acrshort

```
10954 \def\@acrshort#1#2[#3]{%
10955   \glsdoifexists{#2}%
```

```

10956 {%
10957   \let\do@gl@link@checkfirsthyper\relax

10958   \let\gl@sifplural\@secondoftwo
10959   \let\gl@scapscase\@firstofthree
10960   \let\gl@insert\@empty
10961   \def\glscustomtext{%
10962     \acronymfont{\glsshortaccessdisplay{\gl@entryshort{#2}}{#2}}#3%
10963   }%

   Call \@gl@link
10964   \@gl@link[#1]{#2}{\csname gls@\glstype @entryfmt\endcsname}%
10965 }%

10966 \glspostlinkhook
10967 }

```

\@Acrshort

```

10968 \def\@Acrshort#1#2[#3]{%
10969   \gl@doifexists{#2}%
10970   {%
10971     \let\do@gl@link@checkfirsthyper\relax

10972     \let\gl@sifplural\@secondoftwo
10973     \let\gl@scapscase\@secondofthree
10974     \let\gl@insert\@empty
10975     \def\glscustomtext{%
10976       \acronymfont{\glsshortaccessdisplay{\gl@entryshort{#2}}{#2}}#3%
10977     }%

     Call \@gl@link
10978     \@gl@link[#1]{#2}{\csname gls@\glstype @entryfmt\endcsname}%
10979   }%

10980   \glspostlinkhook
10981 }

```

\@ACRshort

```

10982 \def\@ACRshort#1#2[#3]{%
10983   \gl@doifexists{#2}%
10984   {%
10985     \let\do@gl@link@checkfirsthyper\relax

10986     \let\gl@sifplural\@secondoftwo
10987     \let\gl@scapscase\@thirdofthree
10988     \let\gl@insert\@empty
10989     \def\glscustomtext{%
10990       \acronymfont{\glsshortaccessdisplay
10991         {\MakeUppercase{\gl@entryshort{#2}}}{#2}}#3%
10992     }%

```

```

Call \@gls@link
10993   \@gls@link[#1]{#2}{\csname gls@\glstype @entryfmt\endcsname}%
10994   }%

10995   \glspostlinkhook
10996 }

```

\@acrlong

```

10997 \def\@acrlong#1#2[#3]{%
10998   \glsdoifexists{#2}%
10999   {%
11000     \let\do@gls@link@checkfirsthyper\relax

11001     \let\glsifplural\@secondoftwo
11002     \let\glscapscase\@firstofthree
11003     \let\glsinsert\@empty
11004     \def\glscustomtext{%
11005       \acronymfont{\glslongaccessdisplay{\glsentrylong{#2}}{#2}}#3%
11006     }%

```

```

Call \@gls@link
11007   \@gls@link[#1]{#2}{\csname gls@\glstype @entryfmt\endcsname}%
11008   }%

11009   \glspostlinkhook
11010 }

```

\@Acrlong

```

11011 \def\@Acrlong#1#2[#3]{%
11012   \glsdoifexists{#2}%
11013   {%
11014     \let\do@gls@link@checkfirsthyper\relax

11015     \let\glsifplural\@secondoftwo
11016     \let\glscapscase\@firstofthree
11017     \let\glsinsert\@empty
11018     \def\glscustomtext{%
11019       \acronymfont{\glslongaccessdisplay{\Glsentrylong{#2}}{#2}}#3%
11020     }%

```

```

Call \@gls@link
11021   \@gls@link[#1]{#2}{\csname gls@\glstype @entryfmt\endcsname}%
11022   }%

11023   \glspostlinkhook
11024 }

```

\@ACRlong

```

11025 \def\@ACRlong#1#2[#3]{%
11026   \glsdoifexists{#2}%
11027   {%
11028     \let\do@gls@link@checkfirsthyper\relax

```

```

11029 \let\glsifplural\@secondoftwo
11030 \let\glsifscapscase\@firstofthree
11031 \let\glsinsert\@empty
11032 \def\glscustomtext{%
11033     \acronymfont{\glslongaccessdisplay{%
11034         \MakeUppercase{\glsentrylong{#2}}}{#2}#3}%
11035     }%

    Call \@gls@link
11036     \@gls@link[#1]{#2}{\csname gls@\glstype @entryfmt\endcsname}%
11037 }%

11038 \glspostlinkhook
11039 }

```

5.3 Displaying the Glossary

We need to redefine the way the glossary entries are formatted to include the accessibility support. The predefined glossary styles use `\glossentryname`, `\glossentrydesc` and `\glossentrysymbol`, but we need to provide compatibility with earlier versions in case users have defined their own styles using `\accsuppglossaryentryfield` and `\accsuppglossarysubentryfield`.

Now redefine `\glossentryname`, `\glossentrydesc` and `\glossentrysymbol` etc so they use the accessibility stuff.

```

11040 \renewcommand*{\glossentryname}[1]{%
11041     \glsdoifexists{#1}%
11042     {%
11043         \glsnamefont{\glsnameaccessdisplay{\glsentryname{#1}}{#1}}%
11044     }%
11045 }

11046 \renewcommand*{\glossentryname}[1]{%
11047     \glsdoifexists{#1}%
11048     {%
11049         \glsnamefont{\glsnameaccessdisplay{\Glsentryname{#1}}{#1}}%
11050     }%
11051 }

11052 \renewcommand*{\glossentrydesc}[1]{%
11053     \glsdoifexists{#1}%
11054     {%
11055         \glsdescriptionaccessdisplay{\glsentrydesc{#1}}{#1}%
11056     }%
11057 }

11058 \renewcommand*{\Glossentrydesc}[1]{%
11059     \glsdoifexists{#1}%
11060     {%
11061         \glsdescriptionaccessdisplay{\Glsentrydesc{#1}}{#1}%
11062     }%
11063 }

```



```

11064 \renewcommand*{\glossentrysymbol}[1]{%
11065   \glsdoifexists{#1}%
11066   {%
11067     \glssymbolaccessdisplay{\glentrysymbol{#1}}{#1}%
11068   }%
11069 }

11070 \renewcommand*{\Glossentrysymbol}[1]{%
11071   \glsdoifexists{#1}%
11072   {%
11073     \glssymbolaccessdisplay{\Glentrysymbol{#1}}{#1}%
11074   }%
11075 }

```

ssaryentryfield

```

11076 \newcommand*{\accsuppglossaryentryfield}[5]{%
11077   \glossaryentryfield{#1}%
11078   {\glsnameaccessdisplay{#2}{#1}}%
11079   {\glsdescriptionaccessdisplay{#3}{#1}}%
11080   {\glssymbolaccessdisplay{#4}{#1}}{#5}%
11081 }

```

rysubentryfield

```

11082 \newcommand*{\accsuppglossarysubentryfield}[6]{%
11083   \glossarysubentryfield{#1}{#2}%
11084   {\glsnameaccessdisplay{#3}{#2}}%
11085   {\glsdescriptionaccessdisplay{#4}{#2}}%
11086   {\glssymbolaccessdisplay{#5}{#2}}{#6}%
11087 }

```

5.4 Acronyms

Redefine acronym styles provided by glossaries:

long-short *<long>* (*<short>*) acronym style.

```

11088 \renewacronymstyle{long-short}%
11089 {%

```

Check for long form in case this is a mixed glossary.

```

11090   \ifglshaslong{\glslabel}{\glsgenacfmt}{\glsgenentryfmt}%
11091 }%
11092 {%
11093   \renewcommand*{\GenericAcronymFields}{description={\the\glslongtok}}%
11094   \renewcommand*{\genacrfullformat}[2]{%
11095     \glslongaccessdisplay{\glentrylong{##1}}{##1}##2\space
11096     (\glsshortaccessdisplay
11097       {\protect\firstacronymfont{\glentryshort{##1}}}{##1})%
11098   }%
11099   \renewcommand*{\Genacrfullformat}[2]{%

```

```

11100 \glslongaccessdisplay{\Glsentrylong{##1}}{##1}##2\space
11101 (\glsshortaccessdisplay
11102   {\protect\firstacronymfont{\glsentryshort{##1}}}{##1})%
11103 }%
11104 \renewcommand*{\genplacrfullformat}[2]{%
11105   \glslongpluralaccessdisplay{\glsentrylongpl{##1}}{##1}##2\space
11106   (\glsshortpluralaccessdisplay
11107     {\protect\firstacronymfont{\glsentryshortpl{##1}}}{##1})%
11108   }%
11109 \renewcommand*{\Genplacrfullformat}[2]{%
11110   \glslongpluralaccessdisplay{\Glsentrylongpl{##1}}{##1}##2\space
11111   (\glsshortpluralaccessdisplay
11112     {\protect\firstacronymfont{\glsentryshortpl{##1}}}{##1})%
11113   }%
11114 \renewcommand*{\acronymentry}[1]{%
11115   \glsshortaccessdisplay{\acronymfont{\glsentryshort{##1}}}{##1}}
11116 \renewcommand*{\acronymsort}[2]{##1}%
11117 \renewcommand*{\acronymfont}[1]{##1}%
11118 \renewcommand*{\firstacronymfont}[1]{\acronymfont{##1}}%
11119 \renewcommand*{\acrpluralsuffix}{\glspluralsuffix}%
11120 }

```

short-long (*short*) (*long*) acronym style.

```

11121 \renewacronymstyle{short-long}%
11122 {%

```

Check for long form in case this is a mixed glossary.

```

11123 \ifglshaslong{\glslabel}{\glsgenacfmt}{\glsgenentryfmt}%
11124 }%
11125 {%
11126 \renewcommand*{\GenericAcronymFields}{description={\the\glslongtok}}%
11127 \renewcommand*{\genacrfullformat}[2]{%
11128   \glsshortaccessdisplay
11129     {\protect\firstacronymfont{\glsentryshort{##1}}}{##1}##2\space
11130   (\glslongaccessdisplay{\glsentrylong{##1}}{##1})%
11131   }%
11132 \renewcommand*{\Genacrfullformat}[2]{%
11133   \glsshortaccessdisplay
11134     {\protect\firstacronymfont{\Glsentryshort{##1}}}{##1}##2\space
11135   (\glslongaccessdisplay{\glsentrylong{##1}}{##1})%
11136   }%
11137 \renewcommand*{\genplacrfullformat}[2]{%
11138   \glsshortpluralaccessdisplay
11139     {\protect\firstacronymfont{\glsentryshortpl{##1}}}{##1}##2\space
11140   (\glslongpluralaccessdisplay
11141     {\glsentrylongpl{##1}}{##1})%
11142   }%
11143 \renewcommand*{\Genplacrfullformat}[2]{%
11144   \glsshortpluralaccessdisplay
11145     {\protect\firstacronymfont{\Glsentryshortpl{##1}}}{##1}##2\space

```

```

11146 (\glslongpluralaccessdisplay{\glsentrylongpl{##1}}{##1})%
11147 }%
11148 \renewcommand*{\acronymentry}[1]{%
11149 \glsshortaccessdisplay{\acronymfont{\glsentryshort{##1}}}{##1}}%
11150 \renewcommand*{\acronymsort}[2]{##1}%
11151 \renewcommand*{\acronymfont}[1]{##1}%
11152 \renewcommand*{\firstacronymfont}[1]{\acronymfont{##1}}%
11153 \renewcommand*{\acrpluralsuffix}{\glspluralsuffix}%
11154 }

```

long-short-desc *<long>* (*<short>*) acronym style that has an accompanying description (which the user needs to supply).

```

11155 \renewacronymstyle{long-short-desc}%
11156 {%
11157 \GlsUseAcrEntryDispStyle{long-short}%
11158 }%
11159 {%
11160 \GlsUseAcrStyleDefs{long-short}%
11161 \renewcommand*{\GenericAcronymFields}{}%
11162 \renewcommand*{\acronymsort}[2]{##2}%
11163 \renewcommand*{\acronymentry}[1]{%
11164 \glslongaccessdisplay{\glsentrylong{##1}}{##1}\space
11165 (\glsshortaccessdisplay{\acronymfont{\glsentryshort{##1}}}{##1})}%
11166 }

```

g-sc-short-desc *<long>* (\textsc{<short>}) acronym style that has an accompanying description (which the user needs to supply).

```

11167 \renewacronymstyle{long-sc-short-desc}%
11168 {%
11169 \GlsUseAcrEntryDispStyle{long-sc-short}%
11170 }%
11171 {%
11172 \GlsUseAcrStyleDefs{long-sc-short}%
11173 \renewcommand*{\GenericAcronymFields}{}%
11174 \renewcommand*{\acronymsort}[2]{##2}%
11175 \renewcommand*{\acronymentry}[1]{%
11176 \glslongaccessdisplay{\glsentrylong{##1}}{##1}\space
11177 (\glsshortaccessdisplay{\acronymfont{\glsentryshort{##1}}}{##1})}%
11178 }

```

g-sm-short-desc *<long>* (\textsmaller{<short>}) acronym style that has an accompanying description (which the user needs to supply).

```

11179 \renewacronymstyle{long-sm-short-desc}%
11180 {%
11181 \GlsUseAcrEntryDispStyle{long-sm-short}%
11182 }%
11183 {%
11184 \GlsUseAcrStyleDefs{long-sm-short}%
11185 \renewcommand*{\GenericAcronymFields}{}%

```

```

11186 \renewcommand*{\acronymsort}[2]{##2}%
11187 \renewcommand*{\acronymentry}[1]{%
11188   \glslongaccessdisplay{\glsentrylong{##1}}{##1}\space
11189   (\glsshortaccessdisplay{\acronymfont{\glsentryshort{##1}}}{##1})}%
11190 }

```

short-long-desc *<short>* (*<long>*) acronym style that has an accompanying description (which the user needs to supply).

```

11191 \renewacronymstyle{short-long-desc}%
11192 {%
11193   \GlsUseAcrEntryDispStyle{short-long}%
11194 }%
11195 {%
11196   \GlsUseAcrStyleDefs{short-long}%
11197   \renewcommand*{\GenericAcronymFields}{}%
11198   \renewcommand*{\acronymsort}[2]{##2}%
11199   \renewcommand*{\acronymentry}[1]{%
11200     \glslongaccessdisplay{\glsentrylong{##1}}{##1}\space
11201     (\glsshortaccessdisplay{\acronymfont{\glsentryshort{##1}}}{##1})}%
11202 }

```

short-long-desc *<long>* (*\textsc{<short>}*) acronym style that has an accompanying description (which the user needs to supply).

```

11203 \renewacronymstyle{sc-short-long-desc}%
11204 {%
11205   \GlsUseAcrEntryDispStyle{sc-short-long}%
11206 }%
11207 {%
11208   \GlsUseAcrStyleDefs{sc-short-long}%
11209   \renewcommand*{\GenericAcronymFields}{}%
11210   \renewcommand*{\acronymsort}[2]{##2}%
11211   \renewcommand*{\acronymentry}[1]{%
11212     \glslongaccessdisplay{\glsentrylong{##1}}{##1}\space
11213     (\glsshortaccessdisplay{\acronymfont{\glsentryshort{##1}}}{##1})}%
11214 }

```

short-long-desc *<long>* (*\textsmaller{<short>}*) acronym style that has an accompanying description (which the user needs to supply).

```

11215 \renewacronymstyle{sm-short-long-desc}%
11216 {%
11217   \GlsUseAcrEntryDispStyle{sm-short-long}%
11218 }%
11219 {%
11220   \GlsUseAcrStyleDefs{sm-short-long}%
11221   \renewcommand*{\GenericAcronymFields}{}%
11222   \renewcommand*{\acronymsort}[2]{##2}%
11223   \renewcommand*{\acronymentry}[1]{%
11224     \glslongaccessdisplay{\glsentrylong{##1}}{##1}\space
11225     (\glsshortaccessdisplay{\acronymfont{\glsentryshort{##1}}}{##1})}%

```

11226 }

dua *<long>* only acronym style.

11227 \renewacronymstyle{dua}%

11228 {%

Check for long form in case this is a mixed glossary.

11229 \ifdefempty\glscustomtext

11230 {%

11231 \ifglshaslong{\glslabel}%

11232 {%

11233 \glsifplural

11234 {%

Plural form:

11235 \glscapscase

11236 {%

Plural form, don't adjust case:

11237 \gslongpluralaccessdisplay{\glentrylongpl{\glslabel}}{\glslabel}%

11238 \glsinsert

11239 }%

11240 {%

Plural form, make first letter upper case:

11241 \gslongpluralaccessdisplay{\Glentrylongpl{\glslabel}}{\glslabel}%

11242 \glsinsert

11243 }%

11244 {%

Plural form, all caps:

11245 \gslongpluralaccessdisplay

11246 {\mfirstucMakeUppercase{\glentrylongpl{\glslabel}}}{\glslabel}%

11247 \mfirstucMakeUppercase{\glsinsert}%

11248 }%

11249 }%

11250 {%

Singular form

11251 \glscapscase

11252 {%

Singular form, don't adjust case:

11253 \gslongaccessdisplay{\glentrylong{\glslabel}}{\glslabel}\glsinsert

11254 }%

11255 {%

Subsequent singular form, make first letter upper case:

11256 \gslongaccessdisplay{\Glentrylong{\glslabel}}{\glslabel}\glsinsert

11257 }%

11258 {%

Subsequent singular form, all caps:

```

11259      \glslongaccessdisplay
11260      {\mfirstucMakeUppercase
11261       {\glsentrylong{\glslabel}\glsinsert}}{\glslabel}%
11262      \mfirstucMakeUppercase{\glsinsert}%
11263      }%
11264      }%
11265      }%
11266      {%

```

Not an acronym:

```

11267      \glsgenentryfmt
11268      }%
11269      }%
11270      {\glscustomtext\glsinsert}%
11271      }%
11272      {%
11273      \renewcommand*{\GenericAcronymFields}{description={\the\glslongtok}}%
11274      \renewcommand*{\acrfullfmt}[3]{%
11275        \glslink[##1]{##2}{%
11276          \glslongaccessdisplay{\glsentrylong{##2}}{##2}##3\space
11277          (\glsshortaccessdisplay{\acronymfont{\glsentryshort{##2}}}{##2}})%
11278      \renewcommand*{\Acrfullfmt}[3]{%
11279        \glslink[##1]{##2}{%
11280          \glslongaccessdisplay{\Glsentrylong{##2}}{##2}##3\space
11281          (\glsshortaccessdisplay{\acronymfont{\glsentryshort{##2}}}{##2}})%
11282      \renewcommand*{\ACRfullfmt}[3]{%
11283        \glslink[##1]{##2}{%
11284          \glslongaccessdisplay
11285          {\mfirstucMakeUppercase{\glsentrylong{##2}}{##2}##3\space
11286          (\glsshortaccessdisplay{\acronymfont{\glsentryshort{##2}}}{##2}})%
11287      \renewcommand*{\acrfullplfmt}[3]{%
11288        \glslink[##1]{##2}{%
11289          \glslongpluralaccessdisplay
11290          {\glsentrylongpl{##2}}{##2}##3\space
11291          (\glsshortpluralaccessdisplay
11292          {\acronymfont{\glsentryshortpl{##2}}}{##2}})%
11293      \renewcommand*{\Acrfullplfmt}[3]{%
11294        \glslink[##1]{##2}{%
11295          \glslongpluralaccessdisplay
11296          {\Glsentrylongpl{##2}}{##2}##3\space
11297          (\glsshortpluralaccessdisplay
11298          {\acronymfont{\glsentryshortpl{##2}}}{##2}})%
11299      \renewcommand*{\ACRfullplfmt}[3]{%
11300        \glslink[##1]{##2}{%
11301          \glslongpluralaccessdisplay
11302          {\mfirstucMakeUppercase{\glsentrylongpl{##2}}{##2}##3\space
11303          (\glsshortpluralaccessdisplay
11304          {\acronymfont{\glsentryshortpl{##2}}}{##2}})%
11305      \renewcommand*{\glsentryfull}[1]{%

```

```

11306 \glslongaccessdisplay{\glsentrylong{##1}}\space
11307 (\glsshortaccessdisplay{\acronymfont{\glsentryshort{##1}}}{##1})%
11308 }%
11309 \renewcommand*{\Glsentryfull}[1]{%
11310 \glslongaccessdisplay{\Glsentrylong{##1}}{##1}\space
11311 (\glsshortaccessdisplay{\acronymfont{\glsentryshort{##1}}}{##1})%
11312 }%
11313 \renewcommand*{\Glsentryfullpl}[1]{%
11314 \glslongpluralaccessdisplay{\Glsentrylongpl{##1}}{##1}\space
11315 (\glsshortpluralaccessdisplay{\acronymfont{\glsentryshortpl{##1}}}{##1})%
11316 }%
11317 \renewcommand*{\Glsentryfullpl}[1]{%
11318 \glslongpluralaccessdisplay{\Glsentrylongpl{##1}}{##1}\space
11319 (\glsshortpluralaccessdisplay{\acronymfont{\glsentryshortpl{##1}}}{##1})%
11320 }%
11321 \renewcommand*{\acronymentry}[1]{%
11322 \glsshortaccessdisplay{\acronymfont{\glsentryshort{##1}}}{##1}}%
11323 \renewcommand*{\acronymsort}[2]{##1}%
11324 \renewcommand*{\acronymfont}[1]{##1}%
11325 \renewcommand*{\acrpluralsuffix}{\glspluralsuffix}%
11326 }

```

dua-desc *<long>* only acronym style with user-supplied description.

```

11327 \renewacronymstyle{dua-desc}%
11328 {%
11329 \GlsUseAcrEntryDispStyle{dua}%
11330 }%
11331 {%
11332 \GlsUseAcrStyleDefs{dua}%
11333 \renewcommand*{\GenericAcronymFields}{}%
11334 \renewcommand*{\acronymentry}[1]{%
11335 \glslongaccessdisplay{\acronymfont{\glsentrylong{##1}}}{##1}}%
11336 \renewcommand*{\acronymsort}[2]{##2}%
11337 }%

```

footnote *<short>*\footnote{*<long>*} acronym style.

```

11338 \renewacronymstyle{footnote}%
11339 {%
11340 \ifglshaslong{\glslabel}{\glsacronymfont}{\glsacronymentryfmt}%
11341 }%
11342 {%
11343 \renewcommand*{\GenericAcronymFields}{description={\the\glslongtok}}%

```

Need to ensure hyperlinks are switched off on first use:

```

11344 \glshyperfirstfalse
11345 \renewcommand*{\genacrfullformat}[2]{%
11346 \glsshortaccessdisplay
11347 {\protect\firstacronymfont{\glsentryshort{##1}}}{##1}##2%

```

```

11348 \protect\footnote{\glslongaccessdisplay{\glsentrylong{##1}}{##1}}%
11349 }%
11350 \renewcommand*{\Genacrfullformat}[2]{%
11351 \glsshortaccessdisplay
11352   {\firstacronymfont{\Glsentryshort{##1}}{##1}##2%
11353 \protect\footnote{\glslongaccessdisplay{\glsentrylong{##1}}{##1}}%
11354 }%
11355 \renewcommand*{\genplacrfullformat}[2]{%
11356 \glsshortpluralaccessdisplay
11357   {\protect\firstacronymfont{\glsentryshortpl{##1}}{##1}##2%
11358 \protect\footnote{\glslongpluralaccessdisplay{\glsentrylongpl{##1}}{##1}}%
11359 }%
11360 \renewcommand*{\Genplacrfullformat}[2]{%
11361 \glsshortpluralaccessdisplay
11362   {\protect\firstacronymfont{\Glsentryshortpl{##1}}{##1}##2%
11363 \protect\footnote{\glslongpluralaccessdisplay{\glsentrylongpl{##1}}{##1}}%
11364 }%
11365 \renewcommand*{\acronymentry}[1]{%
11366 \glsshortaccessdisplay{\acronymfont{\glsentryshort{##1}}{##1}}%
11367 \renewcommand*{\acronymsort}[2]{##1}%
11368 \renewcommand*{\acronymfont}[1]{##1}%
11369 \renewcommand*{\acrpluralsuffix}{\glspluralsuffix}%

```

Don't use footnotes for \acrfull:

```

11370 \renewcommand*{\acrfullfmt}[3]{%
11371 \glslink{##1}{##2}{%
11372 \glsshortaccessdisplay{\acronymfont{\glsentryshort{##2}}{##2}##3\space
11373 (\glslongaccessdisplay{\glsentrylong{##2}}{##2})}}}%
11374 \renewcommand*{\Acrfullfmt}[3]{%
11375 \glslink{##1}{##2}{%
11376 \glsshortaccessdisplay{\acronymfont{\Glsentryshort{##2}}{##2}##3\space
11377 (\glslongaccessdisplay{\glsentrylong{##2}}{##2})}}}%
11378 \renewcommand*{\ACRfullfmt}[3]{%
11379 \glslink{##1}{##2}{%
11380 \glsshortaccessdisplay
11381   {\mfirstucMakeUppercase
11382   {\acronymfont{\glsentryshort{##2}}{##2}##3\space
11383   (\glslongaccessdisplay{\glsentrylong{##2}}{##2})}}}%
11384 \renewcommand*{\acrfullplfmt}[3]{%
11385 \glslink{##1}{##2}{%
11386 \glsshortpluralaccessdisplay
11387   {\acronymfont{\glsentryshortpl{##2}}{##2}##3\space
11388   (\glslongpluralaccessdisplay{\glsentrylongpl{##2}}{##2})}}}%
11389 \renewcommand*{\Acrfullplfmt}[3]{%
11390 \glslink{##1}{##2}{%
11391 \glsshortpluralaccessdisplay
11392   {\acronymfont{\Glsentryshortpl{##2}}{##2}##3\space
11393   (\glslongpluralaccessdisplay{\glsentrylongpl{##2}}{##2})}}}%
11394 \renewcommand*{\ACRfullplfmt}[3]{%
11395 \glslink{##1}{##2}{%

```



```

11396 \glsshortpluralaccessdisplay
11397 {\mfirstucMakeUppercase
11398 {\acronymfont{\glentryshortpl{##2}}{##2}##3\space
11399 (\glslongpluralaccessdisplay{\glentrylongpl{##2}}{##2}}}%

```

Similarly for \glentryfull etc:

```

11400 \renewcommand*{\glentryfull}[1]{%
11401 \glsshortaccessdisplay{\acronymfont{\glentryshort{##1}}{##1}\space
11402 (\glslongaccessdisplay{\glentrylong{##1}}{##1}}}%
11403 \renewcommand*{\Glsentryfull}[1]{%
11404 \glsshortaccessdisplay{\acronymfont{\Glsentryshort{##1}}{##1}\space
11405 (\glslongaccessdisplay{\glentrylong{##1}}{##1}}}%
11406 \renewcommand*{\glentryfullpl}[1]{%
11407 \glsshortpluralaccessdisplay
11408 {\acronymfont{\glentryshortpl{##1}}{##1}\space
11409 (\glslongpluralaccessdisplay{\glentrylongpl{##1}}{##1}}}%
11410 \renewcommand*{\Glsentryfullpl}[1]{%
11411 \glsshortpluralaccessdisplay
11412 {\acronymfont{\Glsentryshortpl{##1}}{##1}\space
11413 (\glslongpluralaccessdisplay{\glentrylongpl{##1}}{##1}}}%
11414 }

```

footnote-sc \textsc{<short>}\footnote{<long>} acronym style.

```

11415 \renewacronymstyle{footnote-sc}%
11416 {%
11417 \GlsUseAcrEntryDispStyle{footnote}%
11418 }%
11419 {%
11420 \GlsUseAcrStyleDefs{footnote}%
11421 \renewcommand{\acronymentry}[1]{%
11422 \glsshortaccessdisplay{\acronymfont{\glentryshort{##1}}{##1}}
11423 \renewcommand{\acronymfont}[1]{\textsc{##1}}%
11424 \renewcommand*{\acrpluralsuffix}{\glstextup{\glspluralsuffix}}%
11425 }%

```

footnote-sm \textsmaller{<short>}\footnote{<long>} acronym style.

```

11426 \renewacronymstyle{footnote-sm}%
11427 {%
11428 \GlsUseAcrEntryDispStyle{footnote}%
11429 }%
11430 {%
11431 \GlsUseAcrStyleDefs{footnote}%
11432 \renewcommand{\acronymentry}[1]{%
11433 \glsshortaccessdisplay{\acronymfont{\glentryshort{##1}}{##1}}
11434 \renewcommand{\acronymfont}[1]{\textsmaller{##1}}%
11435 \renewcommand*{\acrpluralsuffix}{\glspluralsuffix}%
11436 }%

```

footnote-desc <short>\footnote{<long>} acronym style that has an accompanying description (which the user needs to supply).

```

11437 \renewacronymstyle{footnote-desc}%
11438 {%
11439   \GlsUseAcrEntryDisplayStyle{footnote}%
11440 }%
11441 {%
11442   \GlsUseAcrStyleDefs{footnote}%
11443   \renewcommand*{\GenericAcronymFields}{}%
11444   \renewcommand*{\acronymsort}[2]{##2}%
11445   \renewcommand*{\acronymentry}[1]{%
11446     \glslongaccessdisplay{\glsentrylong{##1}}{##1}\space
11447     (\glsshortaccessdisplay{\acronymfont{\glsentryshort{##1}}}{##1})}%
11448 }

```

ootnote-sc-desc \textsc{<short>}\footnote{<long>} acronym style that has an accompanying description (which the user needs to supply).

```

11449 \renewacronymstyle{footnote-sc-desc}%
11450 {%
11451   \GlsUseAcrEntryDisplayStyle{footnote-sc}%
11452 }%
11453 {%
11454   \GlsUseAcrStyleDefs{footnote-sc}%
11455   \renewcommand*{\GenericAcronymFields}{}%
11456   \renewcommand*{\acronymsort}[2]{##2}%
11457   \renewcommand*{\acronymentry}[1]{%
11458     \glslongaccessdisplay{\glsentrylong{##1}}{##1}\space
11459     (\glsshortaccessdisplay{\acronymfont{\glsentryshort{##1}}}{##1})}%
11460 }

```

ootnote-sm-desc \textsmaller{<short>}\footnote{<long>} acronym style that has an accompanying description (which the user needs to supply).

```

11461 \renewacronymstyle{footnote-sm-desc}%
11462 {%
11463   \GlsUseAcrEntryDisplayStyle{footnote-sm}%
11464 }%
11465 {%
11466   \GlsUseAcrStyleDefs{footnote-sm}%
11467   \renewcommand*{\GenericAcronymFields}{}%
11468   \renewcommand*{\acronymsort}[2]{##2}%
11469   \renewcommand*{\acronymentry}[1]{%
11470     \glslongaccessdisplay{\glsentrylong{##1}}{##1}\space
11471     (\glsshortaccessdisplay{\acronymfont{\glsentryshort{##1}}}{##1})}%
11472 }

```

Use \newacronymhook to modify the key list to set the access text to the long version by default.

```

11473 \renewcommand*{\newacronymhook}{%
11474   \edef\@gls@keylist{shortaccess=\the\glslongtok,%
11475     \the\glskeylisttok}%
11476   \expandafter\glskeylisttok\expandafter{\@gls@keylist}%

```

11477 }

1tNewAcronymDef Modify default style to use access text:

```
11478 \renewcommand*{\DefaultNewAcronymDef}{%
11479   \edef\@do@newglossaryentry{%
11480     \noexpand\newglossaryentry{\the\glslabeltok}%
11481     {%
11482       type=\acronymtype,%
11483       name={\the\glsshorttok},%
11484       description={\the\glslongtok},%
11485       descriptionaccess=\relax,%
11486       text={\the\glsshorttok},%
11487       access={\noexpand\@glo@textaccess},%
11488       sort={\the\glsshorttok},%
11489       short={\the\glsshorttok},%
11490       shortplural={\the\glsshorttok\noexpand\acrpluralsuffix},%
11491       shortaccess={\the\glslongtok},%
11492       long={\the\glslongtok},%
11493       longplural={\the\glslongtok\noexpand\acrpluralsuffix},%
11494       descriptionplural={\the\glslongtok\noexpand\acrpluralsuffix},%
11495       first={\noexpand\glslongaccessdisplay
11496         {\the\glslongtok}{\the\glslabeltok}\space
11497         (\noexpand\glsshortaccessdisplay
11498           {\the\glsshorttok}{\the\glslabeltok})},%
11499       plural={\the\glsshorttok\acrpluralsuffix},%
11500       firstplural={\noexpand\glslongpluralaccessdisplay
11501         {\noexpand\@glo@longpl}{\the\glslabeltok}\space
11502         (\noexpand\glsshortpluralaccessdisplay
11503           {\noexpand\@glo@shortpl}{\the\glslabeltok})},%
11504       firstaccess=\relax,%
11505       firstpluralaccess=\relax,%
11506       textaccess={\noexpand\@glo@shortaccess},%
11507       \the\glskeylisttok
11508     }%
11509   }%
11510   \let\@org@gls@assign@firstpl\gls@assign@firstpl
11511   \let\@org@gls@assign@plural\gls@assign@plural
11512   \let\@org@gls@assign@descplural\gls@assign@descplural
11513   \def\gls@assign@firstpl##1##2{%
11514     \@gls@expand@field{##1}{firstpl}{##2}%
11515   }%
11516   \def\gls@assign@plural##1##2{%
11517     \@gls@expand@field{##1}{plural}{##2}%
11518   }%
11519   \def\gls@assign@descplural##1##2{%
11520     \@gls@expand@field{##1}{descplural}{##2}%
11521   }%
11522   \@do@newglossaryentry
11523   \let\gls@assign@firstpl\@org@gls@assign@firstpl
```

```

11524 \let\gls@assign@plural\@org@gls@assign@plural
11525 \let\gls@assign@symbolplural\@org@gls@assign@symbolplural
11526 }

```

teNewAcronymDef

```

11527 \renewcommand*{\DescriptionFootnoteNewAcronymDef}{%
11528   \edef\@do@newglossaryentry{%
11529     \noexpand\newglossaryentry{\the\glslabeltok}%
11530     {%
11531       type=\acronymtype,%
11532       name={\noexpand\acronymfont{\the\glsshorttok}},%
11533       sort={\the\glsshorttok},%
11534       text={\the\glsshorttok},%
11535       short={\the\glsshorttok},%
11536       shortplural={\the\glsshorttok\noexpand\acrpluralsuffix},%
11537       shortaccess={\the\glslongtok},%
11538       long={\the\glslongtok},%
11539       longplural={\the\glslongtok\noexpand\acrpluralsuffix},%
11540       access={\noexpand\@glo@textaccess},%
11541       plural={\the\glsshorttok\noexpand\acrpluralsuffix},%
11542       symbol={\the\glslongtok},%
11543       symbolplural={\the\glslongtok\noexpand\acrpluralsuffix},%
11544       firstpluralaccess=\relax,
11545       textaccess={\noexpand\@glo@shortaccess},%
11546       \the\glskeylisttok
11547     }%
11548   }%
11549   \let\@org@gls@assign@firstpl\gls@assign@firstpl
11550   \let\@org@gls@assign@plural\gls@assign@plural
11551   \let\@org@gls@assign@symbolplural\gls@assign@symbolplural
11552   \def\gls@assign@firstpl##1##2{%
11553     \@@gls@expand@field{##1}{firstpl}{##2}%
11554   }%
11555   \def\gls@assign@plural##1##2{%
11556     \@@gls@expand@field{##1}{plural}{##2}%
11557   }%
11558   \def\gls@assign@symbolplural##1##2{%
11559     \@@gls@expand@field{##1}{symbolplural}{##2}%
11560   }%
11561   \@do@newglossaryentry
11562   \let\gls@assign@plural\@org@gls@assign@plural
11563   \let\gls@assign@firstpl\@org@gls@assign@firstpl
11564   \let\gls@assign@symbolplural\@org@gls@assign@symbolplural
11565 }

```

onNewAcronymDef

```

11566 \renewcommand*{\DescriptionNewAcronymDef}{%
11567   \edef\@do@newglossaryentry{%
11568     \noexpand\newglossaryentry{\the\glslabeltok}%

```

```

11569 {%
11570     type=\acronymtype,%
11571     name={\noexpand
11572         \acrnameformat{\the\glsshorttok}{\the\glslongtok}},%
11573     access={\noexpand\@glo@textaccess},%
11574     sort={\the\glsshorttok},%
11575     short={\the\glsshorttok},%
11576     shortplural={\the\glsshorttok\noexpand\acrpluralsuffix},%
11577     shortaccess={\the\glslongtok},%
11578     long={\the\glslongtok},%
11579     longplural={\the\glslongtok\noexpand\acrpluralsuffix},%
11580     first={\the\glslongtok},%
11581     firstaccess=\relax,
11582     firstplural={\the\glslongtok\noexpand\acrpluralsuffix},%
11583     text={\the\glsshorttok},%
11584     textaccess={\the\glslongtok},%
11585     plural={\the\glsshorttok\noexpand\acrpluralsuffix},%
11586     symbol={\noexpand\@glo@text},%
11587     symbolaccess={\noexpand\@glo@textaccess},%
11588     symbolplural={\noexpand\@glo@plural},%
11589     firstpluralaccess=\relax,
11590     textaccess={\noexpand\@glo@shortaccess},%
11591     \the\glskeylisttok}%
11592 }%
11593 \let\@org@gls@assign@firstpl\gls@assign@firstpl
11594 \let\@org@gls@assign@plural\gls@assign@plural
11595 \let\@org@gls@assign@symbolplural\gls@assign@symbolplural
11596 \def\gls@assign@firstpl##1##2{%
11597     \@gls@expand@field{##1}{firstpl}{##2}%
11598 }%
11599 \def\gls@assign@plural##1##2{%
11600     \@gls@expand@field{##1}{plural}{##2}%
11601 }%
11602 \def\gls@assign@symbolplural##1##2{%
11603     \@gls@expand@field{##1}{symbolplural}{##2}%
11604 }%
11605 \do@newglossaryentry
11606 \let\gls@assign@firstpl\@org@gls@assign@firstpl
11607 \let\gls@assign@plural\@org@gls@assign@plural
11608 \let\gls@assign@symbolplural\@org@gls@assign@symbolplural
11609 }

```

teNewAcronymDef

```

11610 \renewcommand*{\FootnoteNewAcronymDef}{%
11611     \edef\@do@newglossaryentry{%
11612         \noexpand\newglossaryentry{\the\glslabeltok}%
11613         {%
11614             type=\acronymtype,%
11615             name={\noexpand\acronymfont{\the\glsshorttok}},%

```

```

11616 sort={\the\glssshorttok},%
11617 text={\the\glssshorttok},%
11618 textaccess={\the\glslongtok},%
11619 access={\noexpand\@glo@textaccess},%
11620 plural={\the\glssshorttok\noexpand\acrpluralsuffix},%
11621 short={\the\glssshorttok},%
11622 shortplural={\the\glssshorttok\noexpand\acrpluralsuffix},%
11623 long={\the\glslongtok},%
11624 longplural={\the\glslongtok\noexpand\acrpluralsuffix},%
11625 description={\the\glslongtok},%
11626 descriptionplural={\the\glslongtok\noexpand\acrpluralsuffix},%
11627 \the\glskeylisttok
11628 }%
11629 }%
11630 \let\@org@gls@assign@plural\gls@assign@plural
11631 \let\@org@gls@assign@firstpl\gls@assign@firstpl
11632 \let\@org@gls@assign@descplural\gls@assign@descplural
11633 \def\gls@assign@firstpl##1##2{%
11634   \@@gls@expand@field{##1}{firstpl}{##2}%
11635 }%
11636 \def\gls@assign@plural##1##2{%
11637   \@@gls@expand@field{##1}{plural}{##2}%
11638 }%
11639 \def\gls@assign@descplural##1##2{%
11640   \@@gls@expand@field{##1}{descplural}{##2}%
11641 }%
11642 \do@newglossaryentry
11643 \let\gls@assign@plural\@org@gls@assign@plural
11644 \let\gls@assign@firstpl\@org@gls@assign@firstpl
11645 \let\gls@assign@descplural\@org@gls@assign@descplural
11646 }

```

11NewAcronymDef

```

11647 \renewcommand*{\SmallNewAcronymDef}{%
11648   \edef\@do@newglossaryentry{%
11649     \noexpand\newglossaryentry{\the\glslabeltok}%
11650     {%
11651       type=\acronymtype,%
11652       name={\noexpand\acronymfont{\the\glssshorttok}},%
11653       access={\noexpand\@glo@symbolaccess},%
11654       sort={\the\glssshorttok},%
11655       short={\the\glssshorttok},%
11656       shortplural={\the\glssshorttok\noexpand\acrpluralsuffix},%
11657       shortaccess={\the\glslongtok},%
11658       long={\the\glslongtok},%
11659       longplural={\the\glslongtok\noexpand\acrpluralsuffix},%
11660       text={\noexpand\@glo@short},%
11661       textaccess={\noexpand\@glo@shortaccess},%
11662       plural={\noexpand\@glo@shortpl},%

```

```

11663     first={\the\glslongtok},%
11664     firstaccess=\relax,
11665     firstplural={\the\glslongtok\noexpand\acrpluralsuffix},%
11666     description={\noexpand\@glo@first},%
11667     descriptionplural={\noexpand\@glo@firstplural},%
11668     symbol={\the\glsshorttok},%
11669     symbolaccess={\the\glslongtok},%
11670     symbolplural={\the\glsshorttok\noexpand\acrpluralsuffix},%
11671     \the\glskeylisttok
11672 }%
11673 }%
11674 \let\@org@gls@assign@firstpl\gls@assign@firstpl
11675 \let\@org@gls@assign@plural\gls@assign@plural
11676 \let\@org@gls@assign@descplural\gls@assign@descplural
11677 \let\@org@gls@assign@symbolplural\gls@assign@symbolplural
11678 \def\gls@assign@firstpl##1##2{%
11679   \@@gls@expand@field{##1}{firstpl}{##2}%
11680 }%
11681 \def\gls@assign@plural##1##2{%
11682   \@@gls@expand@field{##1}{plural}{##2}%
11683 }%
11684 \def\gls@assign@descplural##1##2{%
11685   \@@gls@expand@field{##1}{descplural}{##2}%
11686 }%
11687 \def\gls@assign@symbolplural##1##2{%
11688   \@@gls@expand@field{##1}{symbolplural}{##2}%
11689 }%
11690 \do@newglossaryentry
11691 \let\gls@assign@firstpl\@org@gls@assign@firstpl
11692 \let\gls@assign@plural\@org@gls@assign@plural
11693 \let\gls@assign@descplural\@org@gls@assign@descplural
11694 \let\gls@assign@symbolplural\@org@gls@assign@symbolplural
11695 }

```

The following are kept for compatibility with versions before 3.0:

sshortaccesskey

```
11696 \newcommand*{\glsshortaccesskey}{\glsshortkey access}%
```

pluralaccesskey

```
11697 \newcommand*{\glsshortpluralaccesskey}{\glsshortpluralkey access}%
```

lslongaccesskey

```
11698 \newcommand*{\glslongaccesskey}{\glslongkey access}%
```

pluralaccesskey

```
11699 \newcommand*{\glslongpluralaccesskey}{\glslongpluralkey access}%
```

5.5 Debugging Commands

owglonameaccess

```
11700 \newcommand*{\showglonameaccess}[1]{%  
11701   \expandafter\show\csname glo@\glsdetoklabel{#1}@textaccess\endcsname  
11702 }
```

owglotextaccess

```
11703 \newcommand*{\showglotextaccess}[1]{%  
11704   \expandafter\show\csname glo@\glsdetoklabel{#1}@textaccess\endcsname  
11705 }
```

glopluralaccess

```
11706 \newcommand*{\showglopluralaccess}[1]{%  
11707   \expandafter\show\csname glo@\glsdetoklabel{#1}@pluralaccess\endcsname  
11708 }
```

wglofirstaccess

```
11709 \newcommand*{\showglofirstaccess}[1]{%  
11710   \expandafter\show\csname glo@\glsdetoklabel{#1}@firstaccess\endcsname  
11711 }
```

rstpluralaccess

```
11712 \newcommand*{\showglofirstpluralaccess}[1]{%  
11713   \expandafter\show\csname glo@\glsdetoklabel{#1}@firstpluralaccess\endcsname  
11714 }
```

glosymbolaccess

```
11715 \newcommand*{\showglosymbolaccess}[1]{%  
11716   \expandafter\show\csname glo@\glsdetoklabel{#1}@symbolaccess\endcsname  
11717 }
```

bolpluralaccess

```
11718 \newcommand*{\showglosymbolpluralaccess}[1]{%  
11719   \expandafter\show\csname glo@\glsdetoklabel{#1}@symbolpluralaccess\endcsname  
11720 }
```

owglodescaccess

```
11721 \newcommand*{\showglodescaccess}[1]{%  
11722   \expandafter\show\csname glo@\glsdetoklabel{#1}@descaccess\endcsname  
11723 }
```

escpluralaccess

```
11724 \newcommand*{\showglodescpluralaccess}[1]{%  
11725   \expandafter\show\csname glo@\glsdetoklabel{#1}@descpluralaccess\endcsname  
11726 }
```


wgloshortaccess

```
11727 \newcommand*{\showgloshortaccess}[1]{%  
11728   \expandafter\show\csname glo@\glsdetoklabel{#1}@shortaccess\endcsname  
11729 }
```

ortpluralaccess

```
11730 \newcommand*{\showgloshortpluralaccess}[1]{%  
11731   \expandafter\show\csname glo@\glsdetoklabel{#1}@shortpluralaccess\endcsname  
11732 }
```

owglolongaccess

```
11733 \newcommand*{\showglolongaccess}[1]{%  
11734   \expandafter\show\csname glo@\glsdetoklabel{#1}@longaccess\endcsname  
11735 }
```

ongpluralaccess

```
11736 \newcommand*{\showglolongpluralaccess}[1]{%  
11737   \expandafter\show\csname glo@\glsdetoklabel{#1}@longpluralaccess\endcsname  
11738 }
```

6 Multi-Lingual Support

Many thanks to everyone who contributed to the translations both via email and on comp.text.tex. Language support has now been split off into independent language modules.

```
11739 \NeedsTeXFormat{LaTeX2e}
11740 \ProvidesPackage{glossaries-babel}[2017/09/20 v4.33 (NLCT)]
```

Load tracklang to obtain language settings.

```
11741 \RequirePackage{tracklang}
11742 \let\glsifusetranslator\@secondoftwo
```

Check for tracked languages:

```
11743 \AnyTrackedLanguages
11744 {%
11745   \ForEachTrackedDialect{\this@dialect}{%
11746     \IfTrackedLanguageFileExists{\this@dialect}%
11747       {glossaries-}% prefix
11748       {.ldf}%
11749       {%
11750         \RequireGlossariesLang{\CurrentTrackedTag}%
11751       }%
11752     {%
11753       \PackageWarningNoLine{glossaries}%
11754         {No language module detected for ‘\this@dialect’.\MessageBreak
11755           Language modules need to be installed separately.\MessageBreak
11756           Please check on CTAN for a bundle called\MessageBreak
11757           ‘glossaries-\CurrentTrackedLanguage’ or similar}%
11758     }%
11759   }%
11760 }%
11761 {}%
```

6.1 Polyglossia Captions

Language support has now been split off into independent language modules.

```
11762 \NeedsTeXFormat{LaTeX2e}
11763 \ProvidesPackage{glossaries-polyglossia}[2017/09/20 v4.33 (NLCT)]
```

Load tracklang to obtain language settings.

```
11764 \RequirePackage{tracklang}
11765 \let\glsifusetranslator\@secondoftwo
```

Check for tracked languages:

```
11766 \AnyTrackedLanguages
```

```

11767 {%
11768     \ForEachTrackedDialect{\this@dialect}{%
11769         \IfTrackedLanguageFileExists{\this@dialect}%
11770         {glossaries-}% prefix
11771         {.ldf}%
11772         {%
11773             \RequireGlossariesLang{\CurrentTrackedTag}%
11774         }%
11775         {%
11776             \PackageWarningNoLine{glossaries}%
11777             {No language module detected for ‘\this@dialect’.\MessageBreak
11778             Language modules need to be installed separately.\MessageBreak
11779             Please check on CTAN for a bundle called\MessageBreak
11780             ‘glossaries-\CurrentTrackedLanguage’ or similar}%
11781         }%
11782     }%
11783 }%
11784 {}%

```

Glossary

`makeindex` An indexing application. [9](#), [11](#), [28](#), [29](#), [178](#)

`xindy` An flexible indexing application with multilingual support written in Perl. [9](#), [11](#), [28](#), [29](#), [178](#)

Change History

1.01 (2007-05-17)	numberline: numberline option added . . . 7
General: Added range facility in format key 112	1.12 (2008-03-08)
\writeist: Added spaces after \delimN and \delimR in ist file 160	\@GLSpl: now uses \glentrydescplural and \glentrysymbolplural instead of \glentrydesc and \glentrysymbol 126
1.04 (2007-08-03)	\@Glspl@: now uses \glentrydescplural and \glentrysymbolplural instead of \glentrydesc and \glentrysymbol 125
General: Added \glstextformat 97	\@glspl@: now uses \glentrydescplural and \glentrysymbolplural instead of \glentrydesc and \glentrysymbol 125
1.05 (2007-08-10)	General: added check for \hypertarget separate to \hyperlink (memoir defines \hyperlink but not \hypertarget) 121
\glossarysection: added \@mkboth to \glossarysection 40	descriptionplural: new 63
\gls@defglossaryentry: Changed the default value of the sort key to just the value of the name key 80	\gls@defglossaryentry: Changed default first plural to be first key with s appended (was text key with s appended) 80
1.07 (2007-09-13)	descriptionplural support added 80
\@gls@link: fixed bug caused by \theglentrycounter setting the page number too soon 110	symbolplural support added 80
\glsadd: fixed bug caused by \theglentrycounter setting the page number too soon 157	\Glsentrydescplural: New 150
1.08 (2007-10-13)	\glentrydescplural: New 150
General: Added babel support 34	\Glsentrysymbolplural: New 151
listgroup: changed listgroup style to use \glsgetgrouptitle 273	\glentrysymbolplural: New 151
altlistgroup: changed altlistgroup style to use \glsgetgrouptitle 274	\SetDescriptionFootnoteAcronymStyle: Added \protect before \footnote and \glslink 240
1.1 (2008-02-22)	\SetFootnoteAcronymStyle: Added \protect before \footnote and \glslink 246
\@glossarysection: numbered sections and auto label added 41	symbolplural: new 64
\@gls@tmpb: changed \toksdef to \newtoks 115	
\@gls@toc: numberline added 42	
\@p@glossarysection: numbered sections and auto label added 41	
General: amsgen now loaded (\new@ifnextchar needed) 4	
translate: translate option added 25	
\setglossarysection: new 41	
numberedsection: numberedsection package option added 7	

1.13 (2008-05-10)	
General: fixed bug that ignored 3rd parameter	128–135
\ACRfullpl: new	221
\Acrfullpl: new	220
\acrfullpl: new	220
\acrpluralsuffix: New	218
\gls@defglossaryentry: Changed default first value	80
Changed default firstplural value	80
Removed restriction on only using \newglossaryentry in the preamble	85
\newacronym: Removed restriction on only using \newacronym in the preamble	218
1.14 (2008-06-17)	
\@gls@hypergroup: new	268
General: added nonumberlist key to \printglossary	204
added numberedsection key to \printglossary	202
\firstacronymfont: new	221
\glsautoprefix: new	7
\glsnavhyperlink: changed \edef to \protected@edef	267
\glsnavhypertarget: added write to aux file	267
\glsnavigation: changed to only use labels for groups that are present ..	269
1.15 (2008-08-15)	
\@gls@link: added \glslabel	110
\gls@defglossaryentry: check for \@glo@first in description	84
check for \@glo@text in symbol	84
\gls@hypergroup: new	268
\glsnavhypertarget: added check if rerun required	267
\glssettoctitle: new	33
\printglossary: changed the way the TOC title is set	188
1.16 (2008-08-27)	
\@GLS@: Test glossary type is \acronymtype in addition to checking if footnote option has been used	124
\@GLSpl: Test glossary type is \acronymtype in addition to checking if footnote option has been used	126
\@Gls@: Test glossary type is \acronymtype in addition to checking if footnote option has been used	123
\@Glspl@: Test glossary type is \acronymtype in addition to checking if footnote option has been used	125
\@gls@: Test glossary type is \acronymtype in addition to checking if footnote option has been used	122
\@glsdisp: Test glossary type is \acronymtype in addition to checking if footnote option has been used	127
\@glspl@: Test glossary type is \acronymtype in addition to checking if footnote option has been used	125
\@glstarget: raised the hypertarget so the target text doesn't scroll off the top of the page	121
\gls@defglossaryentry: Changed def to let	80
1.17 (2008-12-26)	
\@do@esc@wrglossary: new	182
\@do@seeglossary: new	185
\@glo@storeentry: new	87
\@gls@glossary: changed definition to use \index instead of \@index	178
\@glsdefaultplural: new	67
\@glsdefaultsort: new	68
\@glshypernumber: new	215
\@glsnoname: new	67
\@glsnonextpages: new	204
General: added xindy support	27
parent: new	65
see: new	64
\gls@defglossaryentry: added nonumberlist key	81
added parent key	81
added see key	81
Stored main part of entry format when entry is defined	85
\gls@suffixF: new	38
\gls@suffixFF: new	38
\gls@wrglossary: modified to allow for xindy support	179

\glshyperlink: new	156	\SetDescriptionFootnoteAcronymStyle: changed \acronymfont to use \textsmaller instead of \smaller	240
\glshypernumber: modified to allow material to be attached to location	214	\SetFootnoteAcronymStyle: changed \acronymfont to use \textsmaller instead of \smaller	246
\glshnavhyperlink: replaced \hyperlink to \@glslink	267	\SetSmallAcronymStyle: changed \acronymfont to use \textsmaller instead of \smaller	249
\glshnavhypertarget: replaced \hypertarget to \@glstarget ...	267	2.01 (2009 May 30) \@glsl@link: moved \@do@wrglossary before term is displayed to prevent unwanted whatsit	111
\glsssee: new	186	\forall glossaries: replaced \ifthenelse with \ifx	52
\glssseeformat: new	186	\forall glossentries: replaced \ifthenelse with \ifx	52
\glssSetSuffixF: new	38	\glssdefmain: new	14
\glssSetSuffixFF: new	38	\glssdescwidth: changed \linewidth to \hsize	275, 297
\ifglssxindy: new	28	\glsslistdottedwidth: changed \linewidth to \hsize	275
\istfilename: added xindy support ...	37	\glsspagelistwidth: changed \linewidth to \hsize	275, 297
\newglossarystyle: made \newglossarystyle long	213	nomain: added nomain package option	15
\nopostdesc: new	36	\writeist: removed item_02 - no such makeindex key	164
nonumberlist: new	65	2.02 (2007-07-13) \@printglossary: suppressed warning globally rather than locally	191
\printglossary: added check to determine if \printglossary is already defined	188	2.02 (2009-07-13) \glossarysection: changed \@mkboth to \glossarymark	40
added print language to aux file	188	\glssglossarymark: New	40
order: order package option added	27	2.03 (2009-09-23) \@GLS@: Added check for hyperfirst	124
\writeist: added xindy support	160	\@GLSpl: Added check for hyperfirst	126
1.18 (2009-01-14) \@glsl@loadlist: new	10	\@GLs@: Added check for hyperfirst	123
\@glsl@loadlong: new	9	\@GLspl@: Added check for hyperfirst	125
\@glsl@loadsuper: new	9	\@glsl@: Added check for hyperfirst	122
\@glsl@loadtree: new	10	\@glsl@link: new	109
\glsl@defglossaryentry: Changed default value of sort to \@glsldefaultsort	80	\@glsl@link: added \leavevmode	110
moved sort sanitization to \newglossaryentry	84	Moved entry existence check to avoid duplicate code	110
\glstarget: new	208	\@glsl@disp: Added check for hyperfirst	127
\oldacronym: new	217	\@glspl@: Added check for hyperfirst	125
nolist: new	10	\glssglossarymark: Added check to see if it's already defined	40
nolong: new	9	hyperfirst: new	26
sort: moved sanitization to \newglossaryentry	63		
nostyles: new	10		
nosuper: new	9		
notree: new	10		
1.19 (2009-03-02) \glsclearpage: new	42		
\glssdisp: new	127		
\SetDescriptionAcronymStyle: changed \acronymfont to use \textsmaller instead of \smaller	244		

2.04 (2009-11-10)	
\@GLS@: Changed test to check if glossary type has been identified as a list of acronyms	124
\@GLSpl: Changed test to check if glossary type has been identified as a list of acronyms	126
\@Gls@: Changed test to check if glossary type has been identified as a list of acronyms	123
\@Glspl@: Changed test to check if glossary type has been identified as a list of acronyms	125
\@glossaryentryfield: new	86
\@glossarysubentryfield: new	86
\@gls@: Changed test to check if glossary type has been identified as a list of acronyms	122
\@glsacronymlists: new	16
\@glsdisp: Changed test to check if glossary type has been identified as a list of acronyms	127
\@glspl@: Changed test to check if glossary type has been identified as a list of acronyms	125
\@newglossaryentryposthook: new ..	86
\@newglossaryentryprehook: new ...	86
acronymlists: new	18
\DeclareAcronymList: new	17
\DefineAcronymSynonyms: new	234
\gls@defglossaryentry: added user1-6 keys	81
\glsadd: fixed bug that ignored counter	157
\Glsentryuseri: new	152
\glsentryuseri: new	152
\Glsentryuserii: new	153
\glsentryuserii: new	152
\Glsentryuseriii: new	153
\glsentryuseriii: new	153
\Glsentryuseriv: new	153
\glsentryuseriv: new	153
\Glsentryuserv: new	153
\glsentryuserv: new	153
\Glsentryuservi: new	153
\glsentryuservi: new	153
\ns@newglossary: added check to determine if \gls@<type>@display and \gls@<type>@displayfirst have been defined.	60
\SetAcronymLists: new	17
\SetDefaultAcronymDisplayStyle: new	236
\SetDefaultAcronymStyle: new	237
\SetDescriptionAcronymDisplayStyle: new	242
\SetDescriptionDUAAcronymDisplayStyle: new	240
\SetDescriptionFootnoteAcronymDisplayStyle: new	238
\SetDUADisplayStyle: new	249
\SetFootnoteAcronymDisplayStyle: new	244
\SetSmallAcronymDisplayStyle: new	247
2.05 (2010-02-06)	
\@glsdisp: Added closing brace. Patch provided by Sergiu Dotenco	127
Removed spurious brace. Patch provided by Sergiu Dotenco	127
\writeist: Added \string before opening and closing braces. Patch provided by Segiu Dotenco	165
2.06 (2010-06-14)	
\altnewglossary: new	61
\CustomAcronymFields: new	252
\CustomNewAcronymDef: new	252
\SetCustomDisplayStyle: new	251
\SetCustomStyle: new	252
2.07 (2010-07-10)	
General: glsadd format key stored in \@glsnumberformat (was mistakenly stored in \@glo@format)	156
3.0 (2010-07-12)	
\@makeglossary: Added check for savewrites	169
\gls@wrglossary: modified to take into account savewrites	179
3.0 (2010/03/31)	
\@set@glo@numformat: added 4th argument	113
3.0 (2011-04-02)	
\@do@esc@wrglossary: added check for hyper location prefix	184
modified to use new format	182
\@@glossarysec: replaced \@ifundefined with \ifcsundef ...	7
\@do@seeglossary: Sanitize and escape cross-referencing information	185
\@gls@counterwithin: new	11

\@gls@ifinlist: new	43	\glsadd: added	
\@gls@link: added		\@gls@saveentrycounter	157
\@gls@saveentrycounter	111	\GlsAddXdyCounters: new	44
added \@gls@setsort	111	\glentrycounterlabel: new	207
\@gls@saveentrycounter: new	111	\glentryitem: new	207
\@gls@setupsort@def: new	12	\Glentrylong: new	154
\@gls@setupsort@standard: new	12	\glentrylong: new	154
\@gls@setupsort@use: new	13	\Glentrylongpl: new	154
\@gls@xdy@locationlist: new	46	\glentrylongpl: new	154
\@glslink: replaced \@ifundefined		\Glentryshort: new	154
with \ifcsundef	121	\glentryshort: new	154
\@glsnextpages: new	205	\Glentryshortpl: new	154
\@print@glossary: replaced		\glentryshortpl: new	154
\@ifundefined with \ifcsundef ..	191	\glsgetgrouptitle: replaced	
\@printglossary: added		\@ifundefined with \ifcsundef ..	211
\currentglossary	190	\gls glossarymark: replaced	
added \glsnextpages	190	\@ifundefined with \ifcsundef ..	40
make toctitle default to title	190	\glshyperlink: changed default from	
\@xdyattributelist: new	43	\glentryname to \glentrytext ..	156
General: added prefix to hyperlink	216	\glshypernumber: replaced	
etoolbox now loaded	4	\@ifundefined with \ifcsundef ..	214
replaced \@ifundefined with		\glsnumberformat: replaced	
\ifcsundef	32, 34, 107, 202	\@ifundefined with \ifcsundef ..	38
\acrfootnote: new	237	\glsrefentry: new	206
\ACRfull: added starred version	219	\glsresetsubentrycounter: new ...	205
\Acrfull: added starred version	219	\glsseeitem: hyperlink uses	
\acrfull: added starred version	218	\glsseeitemformat instead of	
\ACRfullpl: added starred version ...	221	\glentryname	187
\Acrfullpl: added starred version ...	220	\glsseeitemformat: new	187
\acrfullpl: added starred version ...	220	\glssortnumberfmt: new	12
\acrlinkfootnote: new	237	\glsstepentry: new	206
\acrlinkfootnote: new	238	\glsstepsubentry: new	206
savewrites: new	29	\glssubentrycounterlabel: new ...	207
see: added \@glo@seeautonumberlist ..	64	\glssubentryitem: new	207
seeautonumberlist: new	9	theglossary: replaced \@ifundefined	
\glossarysection: replaced		with \ifcsundef	207
\@ifundefined with \ifcsundef ..	40	short: new	67
\glossarystyle: replaced		shortplural: new	67
\@ifundefined with \ifcsundef ..	213	\ifglossaryexists: replaced	
\gls@codepage: replaced		\@ifundefined with \ifcsundef ..	53
\@ifundefined with \ifcsundef ..	28	\ifglentryexists: replaced	
\gls@defglossaryentry: added		\@ifundefined with \ifcsundef ..	53
\@gls@defsort	84	\istfile: deprecated	177
added short and long keys	81	glossaryentry: new	205
replaced \@ifundefined with		glossarysubentry: new	205
\ifcsundef	81	\newglossaryentry: replaced	
\gls@doclearpage: replaced		\DeclareRobustCommand with	
\@ifundefined with \ifcsundef ..	42	\newrobustcmd	70

\newglossarystyle: replaced	
\@ifundefined with \ifcsundef .	213
\ns@newglossary: added	
\@gls@defsortcount	60
replaced \@ifundefined with	
\ifcsundef	60
entrycounter: new	11
entrycounterwithin: new	11
\oldacronym: replaced \@ifundefined	
with \ifcsundef	217
compatible-2.07: compatible-2.07	
option added	29
long: new	67
longplural: new	67
nonumberlist: now boolean	65
sort: new	11
counter: replaced \@ifundefined with	
\ifcsundef	64
\printglossary: replaced	
\@ifundefined with \ifcsundef .	188
\SetDescriptionFootnoteAcronymDisplayStyle	
expanded options link options	238
\setentrycounter: added optional	
argument	212
\showacronymlists: new	258
\showglocounter: new	255
\showgloDESC: new	256
\showgloDESCplural: new	256
\showglofirst: new	254
\showglofirstpl: new	254
\showgloflag: new	257
\showgloindex: new	257
\showglolevel: new	254
\showgloNAME: new	256
\showgloparent: new	253
\showgloplural: new	254
\showglosort: new	256
\showglossaries: new	258
\showglossarycounter: new	259
\showglossaryentries: new	259
\showglossaryin: new	258
\showglossaryout: new	258
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