

Back referencing from bibliographical citations^{*}

David Carlisle and Sebastian Rahtz (deceased)[†]

2023-08-01

Documentation overview for `hyperref`

The documentation for package `hyperref` consists of several files:

[Manual](#) The **USER MANUAL** (also available as HTML).

[ChangeLog](#) This file records the version history.

[Bookmark talk, slides](#) Slides for the talk “PDF information and navigation elements with `hyperref`, `pdfTeX` and `thmbpdf`” at EuroTeX 1999.

[Bookmark talk, paper](#) The paper version of the talk.

Source code documentation:

[hyperref.dtx](#) This is the source code documentation for `hyperref`.

 [backref.dtx](#) “Back referencing from bibliographical citations” (this file)

[nameref.dtx](#) “Section name references in `LATEX`”

Contents

1	Introduction	2
2	Usage	2
2.1	Options	2
2.1.1	Options for type of back references	2
2.1.2	Language options	3
2.1.3	Other options	3
2.2	Detecting the end of a bibliography entry	3
2.3	Formatting of the back references list	4
2.3.1	Formatting hook <code>\backref</code>	4
2.3.2	Formatting hook <code>\backrefalt</code>	4
2.3.3	Refinement <code>\backrefentrycount</code>	5

^{*}This file has version number v1.43, last revised 2023-08-01.

[†]<https://github.com/latex3/hyperref/issues>

3	The macros	5
3.1	Package identification	5
3.2	Options	5
3.2.1	Option verbose	5
3.2.2	Options for way of working	6
3.2.3	Language options	6
3.2.4	Process options	8
3.3	The bibliography	9
3.4	Reading .brf file	10
3.5	Initialization	14
3.6	Collecting back cite informations	15
3.7	Rerun warning	15
4	Index	16

1 Introduction

2 Usage

2.1 Options

The supported options are given as package options. Few options (e.g. `verbose`, `enable`, `disable`) can be changed after the package is loaded by the macro `\backrefsetup`, e.g.:

```
\usepackage[verbose]{backref}
\backrefsetup{verbose=false}
```

This macro is available since version 2012/07/24 v1.37.

2.1.1 Options for type of back references

In short the following options set the type of back references. Default is option `pageref`.

<code>ref</code>	section number
<code>pageref</code>	page number
<code>hyperref</code>	section number as hyper link
<code>hyperpageref</code>	page number as hyper link

The options that start with `hyper` are intended for the use with package `hyperref`. In this case package `backref` will be loaded automatically if the `hyperref` options `backref` or `pagebackref` are given. Package `hyperref` then loads package `backref` with the appropriate option:

hyperref option	backref option set by hyperref
<code>backref</code>	<code>hyperref</code>
<code>backref=section</code>	<code>hyperref</code>
<code>backref=slide</code>	<code>hyperref</code>
<code>backref=page</code>	<code>hyperpageref</code>
<code>pagebackref</code>	<code>hyperpageref</code>

2.1.2 Language options

Currently supported options are `english` (`american`, `australian`, `british`, `canadian`, `newzealand`, `UKenglish`, `USenglish`), `german` (`ngerman`, `austrian`, `naustrian`), `french` (`acadian`, `canadien`, `frenchb`, `francais`), `spanish`, and `brazil` (`brazilian`). Default is `english`.

2.1.3 Other options

verbose: A message is written into the `.aux` file for each reference that is found for back citing.

enable, disable: If a citation should not be back cited, then the recording can be turned off by option `disable` and enabled again afterwards, e.g.:

```
\backrefsetup{disable}\cite{...}\backrefsetup{enable}
or
\backrefsetup{disable}\listoffigures \backrefsetup{enable}
```

Both options are added in version 2012/07/24 v1.37.

2.2 Detecting the end of a bibliography entry

Package `backref` has to be able to detect the end of an entry in the bibliography, therefore each `\bibitem` entry must be ended by an empty line (or a `\par` token).

Example:

```
\begin{thebibliography}{9}
\bibitem[bib:abc] First entry.

\bibitem[bib:foo] Second entry.

\end{thebibliography}
```

Then package `backref` can automatically add hooks for the back references list at the end of the entries.

`\backrefparscanfalse` Sometimes it is not appropriate if the entry is read as argument. For example, catcode changes for verbatim stuff do not have the desired effect. Therefore the scan for the `\par` token can be disabled by `\backrefparscanfalse` before `\bibitem` and enabled by `\backrefparscantrue` afterwards.

`\backrefprint` If the scan for the end of the entry is disabled, then package `backref` does not know where to put the back references list. The list is printed by the macro `\backrefprint`, thus just call it at the right place. Example:

```
\backrefparscanfalse % disable scan for entry ending
\bibitem[...]{...}
... \verb|...| ... % potentially dangerous stuff
... \url{...} ...
\backrefprint        % print back reference list here
\backrefparscantrue  % enable scan again
```

2.3 Formatting of the back references list

The back references list is separated from the entry by `\newblock`, if the used bibliography package supports this. The package options control the kind of back references (page numbers, sections numbers), whereas the hooks control the formatting.

There are two hooks `\backref` and a new hook `\backrefalt`, available since version 1.21 of package `backref`. The former one is enabled by default.

2.3.1 Formatting hook `\backref`

Macro `\backref` has a comma separated list of backref references as first and only argument. With `hyperref` options only this list will be printed. Without `hyperref` there is an introductory text, controlled by macros `\backrefpagesname` or `\backrefsectionsname`.

2.3.2 Formatting hook `\backrefalt`

`\backrefalt` is a new interface since version 1.21 of package `backref`. It takes four arguments:

1. Number of citations without dupes.
2. Back references list without dupes.
3. Number of all citations (with dupes).
4. Back reference list with all entries (with dupes).

The latter options consider equal entries as one entry. Now `\backrefalt` can easily be defined with text that depends on the number of citations, for example:

```
\usepackage[backref]{backref}
\renewcommand*{\backref}[1]{}% for backref < 1.33 necessary
\renewcommand*{\backrefalt}[4]{%
  \ifcase #1 %
    No citations.%
  \or
    One citation in section #2.%
  \else
    #1 citations in sections #2.%
  \fi
}
```

The separation between the list entries are controlled by the following macros:

- `\backrefsep`: inserted between entries except for the next cases, default is “`,□`”.
- `\backreftwosep`: inserted between entries in a list of two entries, default is “`□and~`”.
- `\backreflastsep`: inserted between the last two entries of a list with more than two entries, default is “`,□and~`”.

Examples:

```

\langle entry1 \rangle
\langle entry1 \rangle \backreftwosep \langle entry2 \rangle
\langle entry1 \rangle \backrefsep \langle entry2 \rangle \backreflastsep \langle entry3 \rangle

```

Since version 1.33 it is not necessary to redefine `\pages`, it is automatically disabled if defined.

2.3.3 Refinement `\backrefentrycount`

Since version 1.33 the entries of the distinct list of interface `\backrefalt` are wrapped in `\backrefentrycount`. The macro is called with two arguments. The first is the backref entry and the second one the citation count of this entry. As default the macro passes the first argument through and ignores the count argument. But it can be redefined, e.g.

```

\renewcommand*{\backrefalt}[4]{...}% see above
\renewcommand*{\backrefentrycount}[2]{%
  #1%
  \ifnum#2>1 %
    ~(#2)%
  \fi
}

```

In case of duplicates, the distinct entry is appended by the number of citations in parentheses.

3 The macros

Internal command names of this package start with `\BR@`, commands, that store the original meaning of commands, which will be redefined, are prefixed with `\BRorg@`.

3.1 Package identification

```
1 \langle *package \rangle
```

3.2 Options

```

2 \RequirePackage{kvoptions}[2011/06/30]
3 \RequirePackage{kvsetkeys}[2009/07/30]
4 \RequirePackage{ltxcmds}[2009/12/12]
5 \SetupKeyvalOptions{%
6   family=backref,%
7   prefix=BR@,%
8 }

```

```
\backrefsetup
```

```
9 \newcommand*{\backrefsetup}{\kvsetkeys{backref}}
```

3.2.1 Option verbose

If package `hyperref` is loaded, then its setting is used as default for the verbose switch.

```

10 \DeclareBoolOption[%
11   \ltx@ifundefined{ifHy@verbose}{%
12     false%
13   }{%
14     \ifx\ifHy@verbose\iftrue true\else false\fi
15   }%
16 ]{verbose}

```

3.2.2 Options for way of working

What is printed depends on how the 3 available items of information are used (page number, section number, label).

```

17 \long\def\page@backref#1#2#3{#1}
18 \long\def\section@backref#1#2#3{#2}
19 \long\def\hyper@section@backref#1#2#3{\hyperlink{#3}{#2}}
20 \long\def\hyper@page@backref#1#2#3{\hyperlink{page.#1}{#1}}

```

Now the options follows, that can be used without package hyperref.

```

21 \DeclareVoidOption{pageref}{%
22   \def\backref{\backrefpagesname\ }%
23   \let\backrefxxx\page@backref
24 }
25 \DeclareVoidOption{ref}{%
26   \def\backref{\backrefsectionsname\ }%
27   \let\backrefxxx\section@backref
28 }

```

Set up back-referencing to be hyper links, by page or section.

```

29 \DeclareVoidOption{hyperref}{%
30   \def\backref{\let\backrefxxx\hyper@section@backref
31 }
32 \DeclareVoidOption{hyperpageref}{%
33   \def\backref{\let\backrefxxx\hyper@page@backref
34 }

```

Recording the back references in the auxiliary file can be enabled and disabled by the following options.

```

35 \DeclareBoolOption[true]{enable}
36 \DeclareComplementaryOption{disable}{enable}

```

3.2.3 Language options

```

37 \def\backrefenglish{%
38   \def\backrefpagesname{pages}%
39   \def\backrefsectionsname{sections}%
40   \def\backrefsep{, }%
41   \def\backreftwosep{ and~}%
42   \def\backreflastsep{, and~}%
43 }
44 \def\backrefgerman{%
45   \def\backrefpagesname{Seiten}%
46   \def\backrefsectionsname{Abschnitte}%
47   \def\backrefsep{, }%
48   \def\backreftwosep{ und~}%
49   \def\backreflastsep{ und~}%

```

```

50 }
51 \def\backreffrench{%
52   \def\backrefpagesname{pages}%
53   \def\backrefsectionsname{sections}%
54   \def\backrefsep{, }%
55   \def\backreftwosep{ et~}%
56   \def\backreflastsep{ et~}%
57 }
58 \def\backrefspanish{%
59   \def\backrefpagesname{p\'aginas}%
60   \def\backrefsectionsname{secciones}%
61   \def\backrefsep{, }%
62   \def\backreftwosep{ y~}%
63   \def\backreflastsep{ y~}%
64 }
65 \def\backrefbrazil{%
66   \def\backrefpagesname{p\'aginas}%
67   \def\backrefsectionsname{secc\c oes}%
68   \def\backrefsep{, }%
69   \def\backreftwosep{ e~}%
70   \def\backreflastsep{ e~}%
71 }
72 \def\backrefafrikaans{%
73   \def\backrefpagesname{bladsye}%
74   \def\backrefsectionsname{afdelings}%
75   \def\backrefsep{, }%
76   \def\backreftwosep{ en~}%
77   \def\backreflastsep{ en~}%
78 }
79 \def\backrefitalian{%
80   \def\backrefpagesname{pagine}%
81   \def\backrefsectionsname{sezioni}%
82   \def\backrefsep{, }%
83   \def\backreftwosep{ e~}%
84   \def\backreflastsep{ e~}%
85 }%

```

Instead of package babel's definition of \addto the implementation of package varioref is used. Additionally argument #1 is checked for \relax.

```

86 \def\BR@addto#1#2{%
87   #2%
88   \@temptokena{#2}%
89   \ifx#1\relax
90     \let#1\@empty
91   \fi
92   \ifx#1\@undefined
93     \edef#1{\the\@temptokena}%
94   \else
95     \toks@\expandafter{#1}%
96     \edef#1{\the\toks@\the\@temptokena}%
97   \fi
98   \@temptokena{}\toks@\@temptokena
99 }
100 \def\BR@DeclareLang#1#2{%

```

```

101 \begingroup
102 \edef\x##1##2{%
103   \noexpand\ifx##2\relax
104     \errmessage{No definitions for language `#2' found!}%
105   \noexpand\fi
106 \endgroup
107 \noexpand\DeclareVoidOption{#1}{%
108   \noexpand\BR@addto{\noexpand##1}{\noexpand##2}%
109 }%
110 }%
111 \expandafter\x\csname extras#1\expandafter\endcsname
112 \csname backref#2\expandafter\endcsname
113 }
114 \BR@DeclareLang{english}{english}
115 \BR@DeclareLang{american}{english}
116 \BR@DeclareLang{australian}{english}
117 \BR@DeclareLang{british}{english}
118 \BR@DeclareLang{canadian}{english}
119 \BR@DeclareLang{newzealand}{english}
120 \BR@DeclareLang{UKenglish}{english}
121 \BR@DeclareLang{USenglish}{english}
122 \BR@DeclareLang{german}{german}
123 \BR@DeclareLang{ngerman}{german}
124 \BR@DeclareLang{austrian}{german}
125 \BR@DeclareLang{naustrian}{german}
126 \BR@DeclareLang{french}{french}
127 \BR@DeclareLang{acadian}{french}
128 \BR@DeclareLang{canadien}{french}
129 \BR@DeclareLang{frenchb}{french}
130 \BR@DeclareLang{français}{french}
131 \BR@DeclareLang{spanish}{spanish}
132 \BR@DeclareLang{brazil}{brazil}
133 \BR@DeclareLang{brazilian}{brazil}
134 \BR@DeclareLang{afrikaans}{afrikaans}
135 \BR@DeclareLang{italian}{italian}

```

Default is the english version:

```
136 \backrefenglish
```

3.2.4 Process options

```

137 \backrefsetup{pageref}
138 \ProcessKeyvalOptions*

```

\BR@DisableOption

```

139 \def\BR@DisableOption#1{%
140   \DisableKeyvalOption[%
141     action=warning,%
142     package=backref,%
143   ]{backref}{#1}%
144 }

145 \BR@DisableOption{ref}
146 \BR@DisableOption{pageref}
147 \BR@DisableOption{hyperref}
148 \BR@DisableOption{hyperpageref}

```


3.3 The bibliography

```

\ifbackrefparscan
149 \newif\ifbackrefparscan
150 \backrefparscantrue

\ifBR@BackrefAlt
151 \newif\ifBR@BackrefAlt

\BR@bibitem
152 \def\BR@bibitem{%
153   \ifbackrefparscan
154     \expandafter\@ifnextchar\expandafter[\expandafter
155     \BR@@lbibitem\expandafter\BR@@bibitem
156   \else
157     \expandafter\@ifnextchar\expandafter[\expandafter
158     \BR@@@lbibitem\expandafter\BR@@@bibitem
159   \fi
160 }

161 \def\BR@@lbibitem[#1]#2#3\par{%
162   \let\backrefprint\BR@backrefprint
163   \BRorg@bibitem[#{1}]{#2}#3%
164   \BR@backref{#2}%
165 }%
166 \def\BR@@@bibitem#1#2\par{%
167   \let\backrefprint\BR@backrefprint
168   \BRorg@bibitem{#1}#2%
169   \BR@backref{#1}%
170 }
171 \def\BR@@@lbibitem[#1]#2{%
172   \def\backrefprint{\BR@backref{#2}}%
173   \BRorg@bibitem[#{1}]{#2}%
174 }
175 \def\BR@@@bibitem#1{%
176   \def\backrefprint{\BR@backref{#1}}%
177   \BRorg@bibitem{#1}%
178 }
179 \def\BR@backrefprint{%
180   \PackageError{backref}{%
181     \string\backrefprint\space is only available after \string\bibitem
182     \MessageBreak
183     with setting \string\backrefparscanfalse
184   }\@ehc
185 }
186 \let\backrefprint\BR@backrefprint
187 \def\BR@backref#1{%
188   \newblock
189   \begingroup
190     \csname @safe@activetrue\endcsname
191     \expandafter\providecommand\csname brc@#1\endcsname{0}%
192     \expandafter\providecommand\csname brcd@#1\endcsname{0}%
193     \csname @safe@activesfalse\endcsname\expandafter\endcsname
194   \ifBR@BackrefAlt

```

```

195     \ifx\backrefentrycount\BR@BackrefEntryCountUnused
196     \else
197         \BR@PopulateEntryCount{#1}%
198     \fi
199     \expandafter\backrefalt\csname br@#1\expandafter\endcsname
200         \csname brl@#1\expandafter\endcsname
201         \csname brcd@#1\expandafter\endcsname
202         \csname brld@#1\endcsname
203     \else
204         \expandafter\backref\csname br@#1\expandafter\endcsname
205     \fi
206 \endgroup
207 \par
208 }
209 \ifundefined{newblock}{\def\newblock{\par}}{}
210 \let\BR@Unused\@empty
211 \def\BR@BackrefAltUnused#1#2#3#4{\BR@Unused}
212 \ifundefined{backrefalt}{%
213     \let\backrefalt\BR@BackrefAltUnused
214 }{}
215 \def\BR@BackrefEntryCountUnused#1#2{\BR@Unused#1}
216 \ifundefined{backrefentrycount}{%
217     \let\backrefentrycount\BR@BackrefEntryCountUnused
218 }{}

```

3.4 Reading .brf file

`\backcite` The file `\jobname.brf` collects the back cite informations as calls of `\backcite` with the informations in the arguments.

The first argument of macro `\backcite` is the citation label, the second parameter contains the page number (`\thepage`), the current label of the citation (`\@currentlabel`), and the current anchor name (`\@currentHref`). Example for a citation at the first page in second section:

```
\backcite {bib:abc}{1}{2}{section.2}
```

While the file `\jobname.brf` is read, the informations are collected and stored in macros whose names are build by the citation label *<label>*:

<code>\br@<label></code>	list, entries separated by comma without dupes
<code>\brc@<label></code>	number of citations without dupes
<code>\brl@<label></code>	backref list without dupes
<code>\brcd@<label></code>	number of all citations (with dupes)
<code>\brld@<label></code>	backref list with all entries (with dupes)

What are “dupes”? An instance: you have three references to an entry in the bibliography on the first page:

```

\backcite {bib:abc}{1}{1}{section.1}
\backcite {bib:abc}{1}{1}{section.1}
\backcite {bib:abc}{1}{2}{section.2}

```

Then the whole backref list with option `pageref` would print, e.g.:

Entry for `bib:abc`. Cited on pages 1, 1, 1.

Without dupes the entries with the same page number would be removed, e.g.:

Entry for `bib:abc`. Cited on page 1.

Also the third entry is removed, because it has the same page number. For the comparison only these pieces of information are considered that will be used later by `\backrefxxx`. With option `pageref` macro `\backrefxxx` becomes `\page@backref` that throws away the second and third argument and only uses the first argument with the page number. To be more precise, the first expansion of `\backrefxxx` is used in comparison. If some arguments are used here, but later omitted, then this will not be detected.

`\backrefxxxdupe` With option `hyperref` you will get two entries in the following example because the second entry differs in the link information, so the result will be the same section number, but as different links.

```
\backref {bib:abc}{1}{1}{section.1}
\backref {bib:abc}{1}{1}{equation.1}
```

Macro `\backrefxxxdupe` will be used in the comparison test if it is defined. Thus you can provide a definition in this case as follows:

```
\newcommand*{\backrefxxxdupe}[3]{#2}
```

Then only the section number is interpreted, but not the anchor name.

To avoid same entries, it is checked before, whether the entry already exists. Only the information needed by `\backrefxxx` is compared.

```
219 \def\backcite#1#2{%
220   \@for\x:=#1\do{%
221     \begingroup
222       \csname @safe@activetrue\endcsname
223       \edef\x{\endgroup
224         \def\noexpand\x{\expandafter\@firstofone\x\@empty}}%
225       }%
226     \x
```

Now macro `\x` contains the citation label name.

```
227   \expandafter\ifx\csname br@\x\endcsname\relax
```

Initialization, fill in the first entry.

```
228     \expandafter\protected@xdef\csname br@\x\endcsname{%
229       \protect\backrefxxx#2%
230     }%
231     \ifBR@BackrefAlt
232       \global\expandafter\let\csname brl@\x\expandafter\endcsname
233         \csname br@\x\endcsname
234       \global\expandafter\let\csname brld@\x\expandafter\endcsname
235         \csname br@\x\endcsname
236       \expandafter\gdef\csname brc@\x\endcsname{1}%
237       \expandafter\gdef\csname brcd@\x\endcsname{1}%
238     \fi
239   \else
```

Fill in further entry. But check for dupe first.

```

240 \begingroup
241 \ifundefined{backrefxxdupe}{-}{\let\backrefxxx\backrefxxdupe}%
242 \expandafter\def\expandafter\reserved@a\expandafter{%
243 \backrefxxx#2%
244 }%
245 \let\BRorg@backrefxxx\backrefxxx
246 \global\let\BR@found=N%
247 \long\def\backrefxxx##1##2##3{%
248 \expandafter\def\expandafter\reserved@b\expandafter{%
249 \BRorg@backrefxxx{##1}{##2}{##3}%
250 }%
251 \ifx\reserved@a\reserved@b
252 \global\let\BR@found=Y%
253 \fi
254 }%
255 \setbox\@tempboxa\hbox{\csname br@\x\endcsname}%
256 \endgroup
257 \let\backrefsep\relax
258 \def\backreftwosep{\backrefsep}%
259 \def\backreflastsep{\backrefsep}%
260 \if N\BR@found
261 \expandafter\protected@xdef\csname br@\x\endcsname{%
262 \csname br@\x\endcsname, %
263 \protect\backrefxxx#2%
264 }%
265 \ifBR@BackrefAlt
266 \expandafter\protected@xdef\csname brl@\x\endcsname{%
267 \csname brl@\x\endcsname
268 \ifnum\@nameuse{brc@\x}=1 %
269 \noexpand\backreftwosep
270 \else
271 \noexpand\backreflastsep
272 \fi
273 \protect\backrefxxx#2%
274 }%
275 \count@=\@nameuse{brc@\x}\relax
276 \advance\count@ by 1 %
277 \expandafter\xdef\csname brc@\x\endcsname{\the\count@}%
278 \fi
279 \fi
280 \ifBR@BackrefAlt
281 \expandafter\protected@xdef\csname brld@\x\endcsname{%
282 \csname brld@\x\endcsname
283 \ifnum\@nameuse{brcd@\x}=1 %
284 \noexpand\backreftwosep
285 \else
286 \noexpand\backreflastsep
287 \fi
288 \protect\backrefxxx#2%
289 }%
290 \count@=\@nameuse{brcd@\x}\relax
291 \advance\count@ by 1 %
292 \expandafter\xdef\csname brcd@\x\endcsname{\the\count@}%

```

```

293     \fi
294     \fi
295 }%
296 }

```

\BR@PopulateEntryCount

```

297 \def\BR@PopulateEntryCount#1{%
298   \begingroup
299   \toks@{}%
300   \def\backrefsep{%
301     \toks@\expandafter{\the\toks@\backrefsep}%
302   }%
303   \def\backreftwosep{%
304     \toks@\expandafter{\the\toks@\backreftwosep}%
305   }%
306   \def\backreflastsep{%
307     \toks@\expandafter{\the\toks@\backreflastsep}%
308   }%
309   \def\protect{}%
310   \let\BR@backrefxxx\backrefxxx
311   \let\backrefxxx\BR@PopulateBackrefxxx
312   \def\BR@name{#1}%
313   \csname brl@#1\endcsname
314   \expandafter\xdef\csname brl@#1\endcsname{\the\toks@}%
315   \endgroup
316 }

```

\BR@PopulateBackrefxxx

```

317 \def\BR@PopulateBackrefxxx#1#2#3{%
318   \expandafter\def\expandafter\BR@tempa\expandafter{%
319     \BR@backrefxxx{#1}{#2}{#3}%
320   }%
321   \begingroup
322     \count@=\z@
323     \def\backrefsep{}%
324     \def\backreftwosep{}%
325     \def\backreflastsep{}%
326     \let\backrefxxx\BR@PopulateBackrefxxx
327     \csname brld@\BR@name\endcsname
328     \toks\tw@={\backrefxxx{#1}{#2}{#3}}%
329     \edef\x{\endgroup
330       \toks@{%
331         \the\toks@
332         \noexpand\backrefentrycount{%
333           \the\toks\tw@
334         }{\the\count@}%
335       }%
336     }%
337   \x
338 }

```

\BR@@PopulateBackrefxxx

```

339 \def\BR@@PopulateBackrefxxx#1#2#3{%
340   \expandafter\def\expandafter\BR@tempb\expandafter{%

```

```

341 \BR@backrefxxx{#1}{#2}{#3}%
342 }%
343 \ifx\BR@tempa\BR@tempb
344 \advance\count@ \@ne
345 \fi
346 }

```

3.5 Initialization

```

347 \def\@currentHref{}
348 \AtBeginDocument{%
349 \let\BRorg@bibitem\bibitem
350 \let\bibitem\BR@bibitem
351 \let\BRorg@thebibliography\thebibliography
352 \def\thebibliography{%
353 \BR@starttoc
354 \BRorg@thebibliography
355 }%
356 \@ifundefined{NAT@parse}{%
357 \global\let\BRorg@citex\@citex
358 \global\let\@citex\BR@citex
359 }{%
360 \@ifpackageloaded{hyperref}{%}{%
361 \def\hyper@natlinkstart#1{\Hy@backout{#1}}%
362 }%
363 \PackageInfo{backref}{** backref set up for natbib **}%
364 }%
365 }

```

\BR@starttoc

```

366 \def\BR@starttoc{%
367 \ifx\backrefalt\BR@BackrefAltUnused
368 \global\BR@BackrefAltfalse
369 \else
370 \global\BR@BackrefAlttrue
371 \fi
372 \begingroup
373 \makeatletter
374 \@input{\jobname.brf}%
375 \if@filesw
376 \@ifundefined{tf@brf}{%
377 \expandafter\newwrite\csname tf@brf\endcsname
378 }{}%
379 \@ifundefined{tf@brf@open}{%
380 \BR@RerunFileCheck
381 \immediate\openout\csname tf@brf\endcsname\jobname.brf\relax
382 \gdef\tf@brf@open{}%
383 }{}%
384 \fi
385 \@nobeckfalse
386 \endgroup
387 }

```

3.6 Collecting back cite informations

```

\BR@citex
388 \def\BR@citex[#1]#2{%
389   \BRorg@citex[{#1}]{#2}%
390   \Hy@backout{#2}%
391 }

Grr. for chicago.sty
392 \@ifpackageloaded{chicago}{%
393   \let\BRorg@citedatax\@citedatax
394   \def\@citedatax[#1]#2{%
395     \BRorg@citedatax[{#1}]{#2}%
396     \Hy@backout{#2}%
397   }%
398 }{}

\Hy@backout
399 \def\Hy@backout#1{%
400   \@bsphack
401   \ifBR@enable
402     \ifBR@verbose
403       \PackageInfo{backref}{Back cite \string`#1\string'}%
404       \fi
405       \ifx\@empty\@currentlabel
406         \protected@write\@auxout{}{%
407           \string\@writefile{brf}{%
408             \string\backcite{#1}{\thepage}{(document)}{Doc-Start}}%
409         }%
410       }%
411     \else
412       \protected@write\@auxout{}{%
413         \string\@writefile{brf}{%
414           \string\backcite{#1}{\thepage}{\@currentlabel}{\@currentHref}}%
415         }%
416       }%
417     \fi
418   \else
419     \ifBR@verbose
420       \PackageInfo{backref}{Disabled back cite \string`#1\string'}%
421     \fi
422   \fi
423   \@esphack
424 }

```

3.7 Rerun warning

`\BR@RerunFileCheck` The following code computes a MD5 sum and the file size of the `.brf` file at the begin and the end of the document and compares them. A rerun warning is given, if they do not match. This method requires pdfTeX or LuaTeX. The method fails, if the MD5 sum and the file size are the same for a changed `.brf` file (it's probably very seldom).

```

425 \RequirePackage{rerunfilecheck}[2009/12/10]

```

```

426 \def\BR@RerunFileCheck{%
427   \RerunFileCheck{\jobname.brf}{%
428     \@ifundefined{tf@brf@open}{%
429       }{%
430         \immediate\closeout\tf@brf
431       }%
432     }{%
433       Rerun to get bibliographical references right%
434     }%
435 }

436 \end{package}

```

4 Index

Numbers written in *italic* refer to the page where the corresponding entry is described; numbers underlined refer to the code line of the definition; numbers in roman refer to the code lines where the entry is used.

Symbols		
\'	59, 66	\AtBeginDocument .. 348 75, 82, 257, 258, 259, 300, 301, 323
\@auxout	406, 412	B
\@bspack	400	\backcite . 219, 408, 414
\@citedatax	393, 394	\backref .. 22, 26, 30, 33, 204
\@citex	357, 358	\backrefafrikaans .. 72
\@currentHref	347, 414	\backrefalt 199, 213, 367
\@currentlabel	405, 414	\backrefbrazil .. 65
\@ehc	184	\backrefenglish 37, 136
\@empty	90, 210, 224, 405	\backrefentrycount
\@espack	423	.... 195, 217, 332
\@firstofone	224	\backreffrench .. 51
\@for	220	\backrefgerman .. 44
\@ifnextchar	154, 157	\backrefitalian .. 79
\@ifpackageloaded	360, 392	\backreflastsep . 42,
\@ifundefined	209, 212, 216, 241, 356, 376, 379, 428	49, 56, 63, 70, 77, 84, 259, 271, 286, 306, 307, 325
\@input	374	\backrefpagesname
\@nameuse	268, 275, 283, 290	.... 22, 38, 45, 52, 59, 66, 73, 80
\@ne	344	\backrefparscanfalse
\@nobreakfalse	385	.... 3, 183
\@tempboxa	255	\backrefparscantrue
\@temptokena	88, 93, 96, 98	.... 3, 150
\@undefined	92	\backrefprint .. 3, 162, 167, 172, 176, 181, 186
\@writefile	407, 413	\backrefsectionsname
_	22, 26	.... 26, 39, 46, 53, 60, 67, 74, 81
\~	67	\backrefsep .. 40, 47, 54, 61, 68,
A		
\advance	276, 291, 344	
		\backrefsetup ... 9, 137
		\backrefspanish 58
		\backreftwosep .. 41, 48, 55, 62, 69, 76, 83, 258, 269, 284, 303, 304, 324
		\backrefxxx . 23, 27, 30, 33, 229, 241, 243, 245, 247, 263, 273, 288, 310, 311, 326, 328
		\backrefxxxdupe 219, 241
		\begingroup .. 101, 189, 221, 240, 298, 321, 372
		\bibitem .. 181, 349, 350
		\BR@@@bibitem . 158, 175
		\BR@@@lbibitem 158, 171
		\BR@@@bibitem . 155, 166
		\BR@@lbibitem . 155, 161
		\BR@@PopulateBackrefxxx
		.... 326, 339
		\BR@addto .. 86, 108
		\BR@backref ... 164, 169, 172, 176, 187
		\BR@BackrefAltfalse 368
		\BR@BackrefAlttrue 370
		\BR@BackrefAltUnused
		.... 211, 213, 367
		\BR@BackrefEntryCountUnused
		.... 195, 215, 217

\BR@backrefprint ..	282, 292, 313,	267, 277, 281,
. 162, 167, 179, 186	314, 327, 377, 381	282, 292, 313,
\BR@backrefxxx		314, 327, 377, 381
..... 310, 319, 341	D	\endgroup
\BR@bibitem .. 152, 350	\DeclareBoolOption	. 106, 206, 223,
\BR@citex 358, 388	..... 10, 35	256, 315, 329, 386
\BR@DeclareLang 100,	\DeclareComplementaryOption	\errmessage 104
114, 115, 116,	..... 36	\expandafter ... 95,
117, 118, 119,	\DeclareVoidOption	111, 112, 154,
120, 121, 122,	21, 25, 29, 32, 107	155, 157, 158,
123, 124, 125,	\def 17, 18, 19, 20, 22,	191, 192, 193,
126, 127, 128,	26, 30, 33, 37,	199, 200, 201,
129, 130, 131,	38, 39, 40, 41,	204, 224, 227,
132, 133, 134, 135	42, 44, 45, 46,	228, 232, 234,
\BR@DisableOption .	47, 48, 49, 51,	236, 237, 242,
..... 139,	52, 53, 54, 55,	248, 261, 266,
145, 146, 147, 148	56, 58, 59, 60,	277, 281, 292,
\BR@found . 246, 252, 260	61, 62, 63, 65,	301, 304, 307,
\BR@name 312, 327	66, 67, 68, 69,	314, 318, 340, 377
\BR@PopulateBackrefxxx	70, 72, 73, 74,	F
..... 311, 317	75, 76, 77, 79,	\fi 14, 91, 97,
\BR@PopulateEntryCount	80, 81, 82, 83,	105, 159, 198,
..... 197, 297	84, 86, 100, 139,	205, 238, 253,
\BR@RerunFileCheck	152, 161, 166,	272, 278, 279,
..... 380, 425	171, 172, 175,	287, 293, 294,
\BR@starttoc . 353, 366	176, 179, 187,	345, 371, 384,
\BR@tempa 318, 343	209, 211, 215,	404, 417, 421, 422
\BR@tempb 340, 343	219, 224, 242,	G
\BR@Unused 210, 211, 215	247, 248, 258,	\gdef 236, 237, 382
\BRorg@backrefxxx .	259, 297, 300,	\global 232,
..... 245, 249	303, 306, 309,	234, 246, 252,
\BRorg@bibitem . 163,	312, 317, 318,	357, 358, 368, 370
168, 173, 177, 349	323, 324, 325,	H
\BRorg@citedatax ..	339, 340, 347,	\hbox 255
..... 393, 395	352, 361, 366,	\Hy@backout
\BRorg@citex . 357, 389	388, 394, 399, 426	. 361, 390, 396, 399
\BRorg@thebibliography	\DisableKeyvalOption	\hyper@natlinkstart 361
..... 351, 354	..... 140	\hyper@page@backref
C	\do 220	..... 20, 33
\c 67	E	\hyper@section@backref
\closeout 430	\edef 93, 96, 102, 223, 329	..... 19, 30
\count@ ... 275, 276,	\else 14, 94, 156, 196,	\hyperlink 19, 20
277, 290, 291,	203, 239, 270,	I
292, 322, 334, 344	285, 369, 411, 418	\if 260
\csname 111, 112, 190,	\endcsname	\if@filesw 375
191, 192, 193,	. 111, 112, 190,	\ifbackrefparscan .
199, 200, 201,	191, 192, 193,	..... 149, 153
202, 204, 222,	199, 200, 201,	\ifBR@BackrefAlt 151,
227, 228, 232,	202, 204, 222,	194, 231, 265, 280
233, 234, 235,	227, 228, 232,	\ifBR@enable 401
236, 237, 255,	233, 234, 235,	\ifBR@verbose . 402, 419
261, 262, 266,	236, 237, 255,	
267, 277, 281,	261, 262, 266,	

<code>\ifHy@verbose</code> 14	<code>\noexpand</code>	<code>\SetupKeyvalOptions</code> . 5
<code>\ifnum</code> 268, 283	. 103, 105, 107,	<code>\space</code> 181
<code>\iftrue</code> 14	108, 224, 269,	<code>\string</code> 181,
<code>\ifx</code> 14, 89, 92,	271, 284, 286, 332	183, 403, 407,
103, 195, 227,		408, 413, 414, 420
251, 343, 367, 405	O	
<code>\immediate</code> . . . 381, 430	<code>\openout</code> 381	T
J	P	<code>\tf@brf</code> 430
<code>\jobname</code> . . 374, 381, 427	<code>\PackageError</code> 180	<code>\tf@brf@open</code> 382
	<code>\PackageInfo</code>	<code>\the</code> 93, 96, 277, 292,
	. . . . 363, 403, 420	301, 304, 307,
K	<code>\page@backref</code> . . 17, 23	314, 331, 333, 334
<code>\kvsetkeys</code> 9	<code>\par</code> . 161, 166, 207, 209	<code>\thebibliography</code> . .
	<code>\ProcessKeyvalOptions</code>	. . . . . 351, 352
L	. . . . . 138	<code>\thepage</code> 408, 414
<code>\let</code> 23, 27, 30, 33, 90,	<code>\protect</code> 229,	<code>\toks</code> 328, 333
162, 167, 186,	263, 273, 288, 309	<code>\toks@</code> . . . 95, 96, 98,
210, 213, 217,	<code>\protected@write</code> . .	299, 301, 304,
232, 234, 241,	. . . . . 406, 412	307, 314, 330, 331
245, 246, 252,	<code>\protected@xdef</code> . . .	<code>\tw@</code> 328, 333
257, 310, 311,	. 228, 261, 266, 281	
326, 349, 350,	<code>\providecommand</code> 191, 192	X
351, 357, 358, 393		<code>\x</code> 102, 111, 220, 223,
<code>\long</code> . 17, 18, 19, 20, 247	R	224, 226, 227,
<code>\ltx@ifundefined</code> . . . 11	<code>\relax</code> . 89, 103, 227,	228, 232, 233,
	257, 275, 290, 381	234, 235, 236,
M	<code>\RequirePackage</code> . . .	237, 255, 261,
<code>\makeatletter</code> 373	. . . . . 2, 3, 4, 425	262, 266, 267,
<code>\MessageBreak</code> 182	<code>\RerunFileCheck</code> . . . 427	268, 275, 277,
	<code>\reserved@a</code> . . 242, 251	281, 282, 283,
N	<code>\reserved@b</code> . . 248, 251	290, 292, 329, 337
<code>\newblock</code> 188, 209		<code>\xdef</code> 277, 292, 314
<code>\newcommand</code> 9	S	
<code>\newif</code> 149, 151	<code>\section@backref</code> 18, 27	Z
<code>\newwrite</code> 377	<code>\setbox</code> 255	<code>\z@</code> 322