

# Split your bibliography into categories <sup>\*</sup>

Nicolas Markey  
`markey@lsv.ens-cachan.fr`

February 25, 2005

## Abstract

This package allows for sorting a bibliography into categories and subcategories. This is interesting for lists of publications, for grouping references by subject, by year, ... An option allows to export the resulting bibliography as a `.bbl` like file.

## 1 Introduction

Up to now, there exists several ways for sorting bibliographic references into categories:

- Using a bibliographic style allowing it. There exists a few such styles, but then you'll need to add a "category" field in each entry of your `.bib` file. Moreover, grouping criteria might change from one document to the other, and modifying categories requires that you modify your `.bib` file, which is a long and tedious task;
- `multibib.sty`, by Thorsten Hansen, allows to create several bibliographies, by defining several `\cite` commands. This however has several limitations: Duplicate labels, risk of citing one reference in two different categories, ...
- Typesetting the bibliography by hand, which should eventually give you exactly what you want, if you're patient enough...

`splitbib.sty` offers a new, original way of doing this with  $\text{\LaTeX}$ . It uses a `category` environment for defining categories. Up to two such environments can be nested. Those environments take one mandatory argument defining the "title" of the category. Within a category, command `\SBentries` defines the entries that should appear in that category. With the `reorder` option, this will also define the order in which references should appear (the default is to keep the order of the original `.bbl` file within each (sub)category).

Then, when a reference appears in a `thebibliography` environment, it is moved in its category. A warning may be echoed in case a reference appears in two categories. On the contrary, if a reference has not been assigned a category, it is put in a "miscellaneous" category.

---

<sup>\*</sup>This file has version number v1.12, last revised 2005/02/25.

## 2 How does it work?

### 2.1 Once upon a time...

The starting point of this package is a selection sorting algorithm initially proposed by Josselin Noirel on `fr.comp.text.tex`, and that I made more performant by using a quicksort algorithm. A discussion followed about the usefulness of such a command...

### 2.2 The link between sorting and categories

As mentioned previously, some bibliographic styles handle categories. This is achieved by adding a prefix to the `sort.key$` string used by Bib<sub>T</sub><sub>E</sub>X for sorting bibliographic items. We use the same idea here, using a numeric value for each category. Another numeric value is appended to the category entry, in order to keep the initial order within each category.

### 2.3 In practice

Defining categories is achieved with a `category` environment. The argument of this environment defines the title of that new category. An optional argument allows to define a prefix for the labels of each entry in that category.

Within a category, the `\SBentries` command defines which entries should appear in that category. It is a comma-separated list of internal keys.

Everything else should be transparent for the user. Several important remarks though:

- `splitbib.sty` redefines `\bibitem` and the `thebibliography` environment. More precisely, `\begin{thebibliography}` does almost nothing, `\bibitem` just stores the references (but echoes nothing), and `\end{thebibliography}` sorts and outputs the bibliography.
- Since this package deeply redefines `\bibitem` and the `thebibliography` environment, it must be loaded *after* packages that redefine those commands. In particular `apalike.sty`, `natbib.sty` or `jurabib.sty`;
- `natbib.sty` and `jurabib.sty` use very special formats for the optional argument of `\bibitem`. In order to fully use their features, you should load `splitbib.sty` with the `export` argument, so that their original definitions of `\bibitem` will be used when processing the bibliography. Globally speaking, the `export` option should make `splitbib.sty` compatible with many type of bibliography;
- Since it is possible to add a prefix to reference labels, the argument of the `thebibliography` environment is irrelevant. Therefore, the longest label will be re-computed, or can be forced;
- Last, several styles for category titles are predefined, but you can define your own style by redefining `\SBtitle` and `\SBsubtitle`.

## 2.4 An example

An example is shown on figure 1. It contains the basic commands for a simple use of `splitbib.sty`.

<pre> \documentclass{article} \usepackage{splitbib}  \begin{category}[A]{First category}   \SBentries{entry1,entry4} \end{category} \begin{category}[B]{Second category}   \begin{category}{First sub-category}     \SBentries{entry2,entry6}   \end{category}   \begin{category}{Second sub-category}     \SBentries{entry5,entry3}   \end{category} \end{category}  \begin{document} We cite~\cite{entry1,entry3,entry4,% entry5}. Note that we cite neither \verb+entry2+ nor \verb+entry6+, even though they have been assigned a category. </pre>	<pre> defined in the last category. The first sub-category will then not appear in the bibliography.  % \def\SBlongestlabel{A1} \SBtitlestyle{bar} \SBsubtitlestyle{none} \begin{thebibliography}{1} \bibitem{entry1} This is the first entry.  \bibitem{entry3} This is the third entry.  \bibitem{entry4} This is the fourth one.  \bibitem{entry5} This is the last one.  \end{thebibliography} \end{document} </pre>
<p>We cite [A1, B3, A2, B4]. Note that we cite neither <code>entry2</code> nor <code>entry6</code>, even though they have been defined in the last category. The first sub-category will then not appear in the bibliography.</p> <hr/> <h3 style="text-align: center;">First category</h3> <hr/> <p>[A1] This is the first entry.</p> <p>[A2] This is the fourth one.</p> <hr/> <h3 style="text-align: center;">Second category</h3> <hr/> <p>[B3] This is the third entry.</p> <p>[B4] This is the last one.</p>	

Figure 1: An example using `splitbib.sty`

### 3 The code

<code>\ifNMSB@strict</code>	<code>splitbib.sty</code> understands four options:
<code>strict</code>	• <code>nonstrict</code> is to disallow multiple categories for one entry. Default is to allow it: In that case, <code>splitbib.sty</code> won't complain, but L <sup>A</sup> T <sub>E</sub> X will find multiply defined labels. In the other case, if an entry is declared in several categories, only the first one will be used, and <code>splitbib.sty</code> will warn you about the problem.
<code>nonstrict</code>	
<code>\ifNMSB@ownorder</code>	• <code>reorder</code> tells <code>splitbib.sty</code> to use the order the entries appear in the <code>\SBentries</code> as the output order. The default is to keep the order the references appear in the <code>.bib</code> file within each (sub)categories.
<code>reorder</code>	
<code>keeporder</code>	• <code>export</code> will export the new <code>thebibliography</code> environment into an <code>.sbb</code> file, similar to the <code>.bbl</code> file, but with categories. The default is not to create that file.
<code>\ifNMSB@export</code>	
<code>export</code>	• <code>nonewchap</code> and <code>nonewsec</code> prevent <code>thebibliography</code> to start a new chapter or section.
<code>noexport</code>	
<code>\ifNMSB@newchap</code>	
<code>newchap</code>	
<code>newsec</code>	
<code>nonewchap</code>	
<code>nonewsec</code>	
	<pre> 1 \newif\ifNMSB@strict\NMSB@strictfalse 2 \DeclareOption{strict}{\NMSB@stricttrue} 3 \DeclareOption{nonstrict}{\NMSB@strictfalse} 4 \newif\ifNMSB@ownorder\NMSB@ownorderfalse 5 \DeclareOption{reorder}{\NMSB@ownordertrue} 6 \DeclareOption{keeporder}{\NMSB@ownorderfalse} 7 \newif\ifNMSB@export\NMSB@exportfalse 8 \DeclareOption{export}{\NMSB@exporttrue} 9 \DeclareOption{noexport}{\NMSB@exportfalse} 10 \newif\ifNMSB@newchap\NMSB@newchaptrue 11 \DeclareOption{newchap}{\NMSB@newchaptrue} 12 \DeclareOption{newsec}{\NMSB@newchaptrue} 13 \DeclareOption{nonewchap}{\NMSB@newchapfalse} 14 \DeclareOption{nonewsec}{\NMSB@newchapfalse} 15 \ProcessOptions* </pre>
<code>NMSB@catlevelone</code>	These two counters are used for numbering categories. Their initial value is set to 10 here. We require that the category number always has two digits, because it is important to ensure that the sorting number we will generate all have the same number of digits (because the 11th entry in the first category should be numbered differently from the 1st entry in the 11th category). The definition below allows up to 89 categories (in fact, 90, but one is reserved as the "misc" category), and $89 \times 89$ subcategories, which should be sufficient. If this is not, be aware that modifying the values below is not sufficient, and that several other values has to be updated.
<code>NMSB@catleveltwo</code>	<pre> 16 \newcounter{NMSB@catlevelone} 17 \newcounter{NMSB@catleveltwo} 18 \setcounter{NMSB@catlevelone}{10} 19 \setcounter{NMSB@catleveltwo}{10} </pre>
<code>NMSB@catlevel</code>	This counter counts the nesting depth of categories. This depth is limited to 2, and nesting 3 categories raises an error.
	<pre> 20 \newcounter{NMSB@catlevel} 21 \setcounter{NMSB@catlevel}{0} </pre>

`SBresetdepth` When using numerical labels, this defines when the label counter has to be reset. 0 means "never", 1 means "at each new level-1 category", and 2 means "at each new category".

```
22 \newcounter{SBresetdepth}
23 \setcounter{SBresetdepth}{0}
```

`NMSB@ent` `NMSB@ent` will be the number of the current entry. `NMSB@maxent` is the max value, computed from the initial value `\NMSB@initent` in order to always have the same number of digits. Here, we allow up to 900 entries per category or subcategory. `\NMSB@initent` If you *really* need more, you'll probably also have to modify the memory limits of L<sup>A</sup>T<sub>E</sub>X anyway. However, as regards `splitbib.sty`, this can be achieved by simply replacing "100" below by, say, "1000". `\NMSB@tok` is a token that will be used to protect commands against expansion.

```
24 \newcounter{NMSB@ent}
25 \newcounter{NMSB@maxent}
26 \def\NMSB@initent{100}
27 \newtoks\NMSB@tok
28 \setcounter{NMSB@maxent}{\NMSB@initent0}
29 \addtocounter{NMSB@maxent}{-1}
30 \setcounter{NMSB@ent}{\NMSB@initent}
```

`\NMSB@longest` Those variables are used when computing the longest label. This is done in two phases: first when reading `\bibitems`. It is just an approximation, since we can't know numeric labels at that time. Exact computation is done at a second time, when writing bibliographic references. This second computation uses `\NMSB@reallylongest` and `\NMSB@reallylongestlabel`.

```
31 \newdimen\NMSB@longest
32 \newdimen\NMSB@reallylongest
33 \setlength{\NMSB@longest}{0pt}
34 \setlength{\NMSB@reallylongest}{0pt}
35 \def\NMSB@reallylongestlabel{}
```

`\NMSB@title@99` Some macros for handling titles and prefix. "Misc" commands will be used for bibliographic entries whose category has not been defined.

```
\NMSB@prefix@9999
\NMSB@currprefixtok
\NMSB@currprefixlevelonetok
\SBmisctitle
\SBmiscprefix
36 \expandafter\def\csname NMSB@title@99\endcsname{\SBmisctitle}
37 \expandafter\def\csname NMSB@prefix@9999\endcsname{\SBmiscprefix}
38 \def\SBmisctitle{Miscellaneous}
39 \def\SBmiscprefix{}
40 \newtoks\NMSB@currprefixtok
41 \newtoks\NMSB@currprefixlevelonetok
```

`\NMSB@prevcat` Those commands will be used for detecting category changes.

```
\NMSB@prevcatlevelone
42 \def\NMSB@prevcat{0}
43 \def\NMSB@prevcatlevelone{0}
```

`\NMSB@missingcat` Those two commands will contain entries that are `\cited` but have not category, or that have two categories, resp.

```
44 \def\NMSB@missingcat{}
45 \def\NMSB@doublecat{}
```

`\NMSB@valuelist` The list of entries that appear in `\SBentries`, and that will be sorted.

```
46 \let\NMSB@valuelist\relax
```

\SBabovesepwidth	Width of lines for the “rules” style.
\SBbelowseewidth	47 \newdimen\SBabovesepwidth 48 \newdimen\SBbelowseewidth 49 \setlength{\SBabovesepwidth}{.4pt} 50 \setlength{\SBbelowseewidth}{.4pt}
\NMSB@penalty	Penalties inserted after category titles, in order to avoid lonely titles at bottom of
\NMSB@halfpenalty	pages. 51 \def\NMSB@penalty{5000} 52 \def\NMSB@halfpenalty{500}
\NMSB@warnnocateg	Errors or warning... Names should be explicit.
\NMSB@warndblcateg	53 \def\NMSB@warnnocateg#1,\end{%
\NMSB@warnwronglongest	54 \message{---- SortBib warning ----^^J%
\NMSB@errtoomanycat	55 -- The following bib entries have no category: #1^^J}}
\NMSB@errtoomanyent	56 \def\NMSB@warndblcateg#1,\end{%
\NMSB@errcattodeep	57 \message{---- SortBib warning ----^^J%
\NMSB@errentriesoutsidecat	58 -- The following bib entries have several categories: #1^^J%
\NMSB@errentrieswithoptinsidecat	59 -- The first one will be used.^^J}}
\NMSB@erraliasoutsidecat	60 \def\NMSB@warnwronglongest{%
\NMSB@erraliasalreadydef	61 \expandafter\NMSB@tok\expandafter{\NMSB@reallylongestlabel}
\NMSB@erraliasundefined	62 \message{---- SortBib warning ----^^J%
	63 -- The longest label appears to be [\the\NMSB@tok]
	64 instead of}
	65 \@ifundefined{SBlongestlabel}{\message{(forced)}}}
	66 \expandafter\NMSB@tok\expandafter{\NMSB@longestlabel}
	67 \message{[\the\NMSB@tok]^^J}}
	68 \def\NMSB@errtoomanycat#1{%
	69 \message{---- SortBib error ----^^J%
	70 -- You defined too many level-#1 categories (max = 89).^^J}}
	71 \def\NMSB@errtoomanyent{%
	72 \setcounter{NMSB@maxent}{\NMSB@initent0}
	73 \addtocounter{NMSB@maxent}{-\NMSB@initent}
	74 \message{---- SortBib error ----^^J%
	75 -- You defined too many entries in one category %
	76 (max = \theNMSB@maxent)^^J}}
	77 \def\NMSB@errcattodeep{%
	78 \message{---- Sortbib error ----^^J
	79 -- Only two category depth allowed.^^J}}
	80 \def\NMSB@errentriesoutsidecat{%
	81 \message{---- Sortbib error ----^^J
	82 -- \string\SBentries outside category environment.^^J}}
	83 \def\NMSB@errentrieswithoptinsidecat{%
	84 \message{----Sortbib error ----^^J
	85 -- \string\SBentries with optional argument inside category env.^^J}}
	86 \def\NMSB@erraliasoutsidecat{%
	87 \message{----Sortbib error ----^^J
	88 -- \string\SBalias used outside category environment.^^J}}
	89 \def\NMSB@erraliasalreadydef#1{%
	90 \message{----Sortbib error ----^^J
	91 -- Alias #1 multiply defined.^^J}}
	92 \def\NMSB@erraliasundefined#1{%
	93 \message{----Sortbib error ----^^J
	94 -- Alias #1 undefined.^^J}}

```

95 \def\NMSB@errcommentoutsidecat{%
96   \message{----Sortbib error ----^^J}
97   -- \string\SBcomment used outside category environment.^^J}}

\SBtitle Macros for (sub)title styles. The arguments are the numbers of the category and
\SBsubtitle subcategory. Of course, it is also possible to add titles in the headers, in the table
\SBtitlestyle of contents, ...
\SBsubtitlestyle 98 \def\SBtitlestyle#1{\gdef\NMSB@titlestyle{#1}}
\NMSB@titlestyle 99 \def\SBsubtitlestyle#1{\gdef\NMSB@subtitlestyle{#1}}
\NMSB@subtitlestyle 100 \def\NMSB@titlestyle{bar}
\SBtitlefont 101 \def\NMSB@subtitlestyle{dash}
\SBsubtitlefont 102 \def\SBtitle#1{\def\NMSB@level{title}%
\NMSB@stylebox 103   \csname NMSB@style\NMSB@titlestyle\endcsname}{#1}}
\NMSB@stylebar 104 \def\SBsubtitle#1#2{\def\NMSB@level{subtitle}%
\NMSB@styledash 105   \csname NMSB@style\NMSB@subtitlestyle\endcsname}{#2}}
\NMSB@stylenone 106 \def\SBtitlefont#1{{\bfseries\Large #1}}
\NMSB@stylesimple 107 \def\SBsubtitlefont#1{{\bfseries #1}}
108 \def\NMSB@stylebox#1#2{\hskip-\leftmargin%
109   \vbox{%
110     \medskip\par
111     {\null\hfill
112       \setlength\fbboxsep{\baselineskip}%
113       \framebox[\textwidth]{%
114         \csname SB\NMSB@level font\endcsname{#1#2}}}%
115     \hfill\null}}%
116   \bigskip}
117 \def\NMSB@stylebar#1#2{\hskip-\leftmargin%
118   \vbox{%
119     \medskip\par
120     \vrule height \SBaboveseppwidth depth 0pt width \textwidth
121     \vskip.3\baselineskip\par\noindent
122     {\null\hfill
123       \csname SB\NMSB@level font\endcsname{#1#2}}%
124     \hfill\null}%
125     \vskip-.4\baselineskip\par\noindent
126     \vrule height \SBbelowseppwidth depth 0pt width \textwidth}}
127 \def\NMSB@styledash#1#2{\unskip\hskip-\leftmargin%
128   \vbox{%
129     \smallskip\noindent
130     {\null\hfill
131       \csname SB\NMSB@level font\endcsname{---~#1#2~---}}
132     \hfill\null}
133   \par}
134 \def\NMSB@stylenone#1#2{%
135   \vspace{-2\itemsep}\vspace{-\baselineskip}}
136 \def\NMSB@stylesimple#1#2{\hskip-\leftmargin%
137   \csname SB\NMSB@level font\endcsname{#1#2}}
138 }

\category Definition of the category environment. While not too deep, we increase the
\endcategory category number and define the corresponding title and prefix.
\NMSB@category 139 \def\category{\@ifnextchar[{\@lNMSBcategory}{\@NMSBcategory}}
\lNMSB@category 140 \def\@lNMSBcategory[#1]#2{%
141   \stepcounter{NMSB@catlevel}%

```

```

142 \ifnum\theNMSB@catlevel>2\relax
143 \NMSB@errcattoodeep
144 \addtocounter{NMSB@catlevel}{-1}%
145 \fi
146 \ifnum\theNMSB@catlevel=1\relax
147 \ifnum\theNMSB@catlevelone=98\relax
148 \NMSB@errtoomanycat{one}%
149 \else
150 \stepcounter{NMSB@catlevelone}%
151 \fi
152 \setcounter{NMSB@catleveltwo}{10}%
153 \expandafter\gdef\csname NMSBprefix@\theNMSB@catlevelone
154 \endcsname{#1}%
155 \expandafter\gdef\csname NMSBtitle@\theNMSB@catlevelone
156 \endcsname{#2}%
157 \else
158 \ifnum\theNMSB@catleveltwo=98\relax
159 \NMSB@errtoomanycat{two}%
160 \else
161 \stepcounter{NMSB@catleveltwo}%
162 \fi
163 \expandafter\let\expandafter\NMSB@tempentry\csname
164 NMSBprefix@\theNMSB@catlevelone\endcsname
165 \expandafter\NMSB@tok\expandafter{\NMSB@tempentry}
166 \expandafter\xdef\csname NMSBprefix@\theNMSB@catlevelone
167 \theNMSB@catleveltwo\endcsname{\the\NMSB@tok #1}%
168 \expandafter\gdef\csname NMSBtitle@\theNMSB@catlevelone
169 \theNMSB@catleveltwo\endcsname{#2}%
170 \fi
171 }
172 \def\@NMSBcategory#1{%
173 \stepcounter{NMSB@catlevel}
174 \ifnum\theNMSB@catlevel>2\relax
175 \NMSB@errcattoodeep
176 \addtocounter{NMSB@catlevel}{-1}%
177 \fi
178 \ifnum\theNMSB@catlevel=1\relax
179 \ifnum\theNMSB@catlevelone=98\relax
180 \NMSB@errtoomanycat{one}%
181 \else
182 \stepcounter{NMSB@catlevelone}%
183 \fi
184 \setcounter{NMSB@catleveltwo}{10}
185 \expandafter\gdef\csname NMSBtitle@\theNMSB@catlevelone
186 \endcsname{#1}%
187 \else
188 \ifnum\theNMSB@catleveltwo=98\relax
189 \NMSB@errtoomanycat{two}%
190 \else
191 \stepcounter{NMSB@catleveltwo}%
192 \fi
193 \expandafter\ifx\csname NMSBprefix@\theNMSB@catlevelone\endcsname
194 \relax
195 \else

```



```

196 \expandafter\let\expandafter\NMSB@tempentry\csname
197 NMSBprefix@\theNMSB@catlevelone\endcsname
198 \expandafter\NMSB@tok\expandafter{\NMSB@tempentry}%
199 \expandafter\xdef\csname NMSBprefix@\theNMSB@catlevelone
200 \theNMSB@catleveltwo\endcsname{\the\NMSB@tok}%
201 \fi
202 \expandafter\gdef\csname NMSBtitle@\theNMSB@catlevelone
203 \theNMSB@catleveltwo\endcsname{#1}%
204 \fi
205 }
206 \def\endcategory{\addtocounter{NMSB@catlevel}{-1}}

```

**\SBalias** This defines an alias for the category, so that you can add new items in that category afterwards, by using the optional argument of **\SBentries**.

```

207 \def\SBalias#1{%
208 \ifnum\theNMSB@catlevel<1\relax
209 \NMSB@erraliasoutsidecat
210 \else
211 \expandafter\ifx\csname NMSBalias@#1\endcsname\relax
212 \ifnum\theNMSB@catlevel=1\relax
213 \expandafter\xdef\csname NMSBalias@#1\endcsname{%
214 \theNMSB@catlevelone 10}%
215 \else
216 \expandafter\xdef\csname NMSBalias@#1\endcsname{%
217 \theNMSB@catlevelone\theNMSB@catleveltwo}%
218 \fi
219 \else
220 \NMSB@erraliasalreadydef{#1}%
221 \fi
222 \fi
223 }

```

**\SBcomment** Command **\SBcomment** allows you to put a comment at the beginning of each category. That comment will be put into a **minipage** for the moment, but that behavior should depend on the style of titles and subtitles. I'll do that shortly.

```

224 \long\def\SBcomment#1{%
225 \ifnum\theNMSB@catlevel<1\relax
226 \NMSB@errcommentoutsidecat
227 \else
228 \ifnum\theNMSB@catlevel=1\relax
229 \expandafter\gdef\csname NMSBcomment@\theNMSB@catlevelone
230 \endcsname{#1}%
231 \else
232 \expandafter\gdef\csname NMSBcomment@\theNMSB@catlevelone
233 \theNMSB@catleveltwo\endcsname{#1}%
234 \fi
235 \fi
236 }

```

**\SBentries** Command **\SBentries** for defining entries that should appear in that category. It should be either used with an optional argument outside a **category** environment, or without its optional argument inside a **category** environment.

```

237 \def\SBentries{\@ifnextchar[

```

```

238 {\NMSB@entries@withoptarg}%
239 {\NMSB@entries@incatenv}}
240 \def\NMSB@entries@withoptarg[#1]#2{%
241 \ifnum\theNMSB@catlevel>0\relax
242 \NMSB@errentrieswithoptinsidecat
243 \else
244 \@for\@citeb:=#2\do{%
245 \expandafter\ifx\csname NMSBcateg@\@citeb\endcsname\relax
246 \expandafter\ifx\csname NMSBalias@#1\endcsname\relax
247 \NMSB@erraliasundefined{#1}%
248 \else
249 \expandafter\xdef\csname NMSBcateg@\@citeb\endcsname{%
250 \csname NMSBalias@#1\endcsname}%
251 \ifNMSB@ownorder
252 \expandafter\xdef\csname NMSBcateg@\@citeb\endcsname{%
253 \csname NMSBcateg@\@citeb\endcsname\theNMSB@ent}%
254 \stepcounter{NMSB@ent}%
255 \ifnum\theNMSB@ent=\theNMSB@maxent\relax
256 \NMSB@errtoomanyent
257 \fi
258 \fi
259 \fi
260 \else
261 \ifNMSB@strict
262 \xdef\NMSB@doublecat{\NMSB@doublecat \@citeb,}%
263 \else
264 \expandafter\ifx\csname NMSBalias@#1\endcsname\relax
265 \NMSB@erraliasundefined{#1}%
266 \else
267 \expandafter\xdef\csname NMSBcateg@\@citeb\endcsname{%
268 \csname NMSBcateg@\@citeb\endcsname,%
269 \csname NMSBalias@#1\endcsname}%
270 \ifNMSB@ownorder
271 \expandafter\xdef\csname NMSBcateg@\@citeb\endcsname{%
272 \csname NMSBcateg@\@citeb\endcsname\theNMSB@ent}%
273 \stepcounter{NMSB@ent}%
274 \ifnum\theNMSB@ent=\theNMSB@maxent\relax
275 \NMSB@errtoomanyent
276 \fi
277 \fi
278 \fi
279 \fi
280 \fi}%
281 \fi
282 }
283 \def\NMSB@entries@incatenv#1{%
284 \ifnum\theNMSB@catlevel<1\relax
285 \NMSB@errentriesoutsidecat
286 \else
287 \@for\@citeb:=#1\do{%
288 \expandafter\ifx\csname NMSBcateg@\@citeb\endcsname\relax
289 \ifnum\theNMSB@catlevel=2\relax
290 \expandafter\xdef\csname NMSBcateg@\@citeb\endcsname{%
291 \theNMSB@catlevelone\theNMSB@catleveltwo}%

```

```

292 \else
293 \expandafter\xdef\csname NMSBcateg@\@citeb\endcsname{%
294 \theNMSB@catlevelone10}%
295 \fi%
296 \ifNMSB@ownorder
297 \expandafter\xdef\csname NMSBcateg@\@citeb\endcsname{%
298 \csname NMSBcateg@\@citeb\endcsname\theNMSB@ent}%
299 \stepcounter{NMSB@ent}%
300 \ifnum\theNMSB@ent=\theNMSB@maxent\relax\NMSB@errtoomanyent\fi
301 \fi
302 \else
303 \ifNMSB@strict
304 \xdef\NMSB@doublecat{\NMSB@doublecat \@citeb,}%
305 \else
306 \ifnum\theNMSB@catlevel=2\relax
307 \expandafter\xdef\csname NMSBcateg@\@citeb\endcsname{%
308 \csname NMSBcateg@\@citeb\endcsname,%
309 \theNMSB@catlevelone\theNMSB@catleveltwo}%
310 \else
311 \expandafter\xdef\csname NMSBcateg@\@citeb\endcsname{%
312 \csname NMSBcateg@\@citeb\endcsname,%
313 \theNMSB@catlevelone10}%
314 \fi
315 \fi
316 \ifNMSB@ownorder
317 \expandafter\xdef\csname NMSBcateg@\@citeb\endcsname{%
318 \csname NMSBcateg@\@citeb\endcsname\theNMSB@ent}%
319 \stepcounter{NMSB@ent}%
320 \ifnum\theNMSB@ent=\theNMSB@maxent\relax\NMSB@errtoomanyent\fi
321 \fi
322 \fi}%
323 \fi
324 }

```

\NMSBorig@@lbibitem Keep track of the original \bibitem commands.

```

\NMSBorig@@bibitem 325 \let\@NMSBrealorig@@bibitem\@bibitem
\NMSBrealorig@@bibitem 326 \let\@NMSBorig@@lbibitem\@lbibitem
327 \def\@NMSBorig@@bibitem#1{\item@if@filesw \immediate\write\@auxout
328 {\string\bibcite{#1}{\the\NMSB@currprefixtok\the\value{\@listctr}}}%
329 \fi\ignorespaces}

```

\NMSB@getcateg Those macros retrieve the category and entry number from their concatenation.

\NMSB@getent This is used when reordering.

```

330 \def\NMSB@getcateg#1#2#3#4#5-{\#1#2#3#4}
331 \def\NMSB@getent#1#2#3#4#5-{\#5}

```

\@lbibitem These are the new \bibitem commands. They won't print anything. Instead,  
\@bibitem they write their arguments in different commands named after the number of the  
current entry. Longest label ia also evaluated.

```

332 \def\@lbibitem[#1]#2#3\par{%
333 \expandafter\ifx\csname NMSBcateg@#2\endcsname\relax
334 \expandafter\gdef\csname NMSBcateg@#2\endcsname{9999}%
335 \edef\NMSB@missingcat{\NMSB@missingcat #2,}%
336 \ifNMSB@ownorder

```

```

337     \expandafter\xdef\csname NMSBcateg@\@citeb\endcsname{%
338     \csname NMSBcateg@\@citeb\endcsname\theNMSB@maxent}%
339     \fi
340 \fi
341 \let\@tempa\relax
342 \ifNMSB@ownorder
343     \edef\NMSB@temp{\csname NMSBcateg@#2\endcsname}%
344     \@for\NMSB@local:=\NMSB@temp\do{%
345         \ifx\relax\@tempa\relax
346             \edef\@tempa{\expandafter\NMSB@getcateg\NMSB@local-}%
347         \else
348             \edef\@tempa{\@tempa,\expandafter\NMSB@getcateg\NMSB@local-}%
349         \fi
350     }%
351 \else
352     \edef\@tempa{\csname NMSBcateg@#2\endcsname}%
353 \fi
354 \expandafter\ifx\csname NMSBprefix@\@tempa\endcsname\relax
355     \def\@tempb{#1}%
356 \else
357     \expandafter\let\expandafter\NMSB@tempentry\csname
358     NMSBprefix@\@tempa\endcsname
359     \expandafter\NMSB@tok\expandafter{\NMSB@tempentry #1}%
360     \edef\@tempb{\the\NMSB@tok}%
361 \fi
362 \ifundefined{SBlongestlabel}{%
363     \setbox\@tempboxa=\hbox{\@tempb}%
364     \ifdim\NMSB@longest<\wd\@tempboxa
365         \setlength\NMSB@longest{\wd\@tempboxa}%
366         \global\let\NMSB@longestlabel\@tempb
367     \fi}%
368 \ifNMSB@ownorder
369     \edef\NMSB@temp{\csname NMSBcateg@#2\endcsname}%
370     \@for\NMSB@local:=\NMSB@temp\do{%
371         \edef\NMSB@tempb{\expandafter\NMSB@getent\NMSB@local-}
372         \expandafter\xdef\csname NMSBkey@\NMSB@tempb\endcsname{#2}%
373         \global\expandafter\let\csname NMSBlabel@\NMSB@tempb\endcsname
374         \@tempb
375         \expandafter\gdef\csname NMSBentry@\NMSB@tempb\endcsname{#3}%
376         \ifx\relax\NMSB@valuelist\relax
377             \xdef\NMSB@valuelist{\NMSB@local}%
378         \else
379             \xdef\NMSB@valuelist{\NMSB@valuelist,\NMSB@local}%
380         \fi}%
381 \else
382     \expandafter\xdef\csname NMSBkey@\theNMSB@ent\endcsname{#2}%
383     \global\expandafter\let\csname NMSBlabel@\theNMSB@ent\endcsname
384     \@tempb
385     \expandafter\gdef\csname NMSBentry@\theNMSB@ent\endcsname{#3}%
386     \@for\NMSB@item:=\@tempa\do{%
387         \ifx\relax\NMSB@valuelist\relax
388             \xdef\NMSB@valuelist{\NMSB@item\theNMSB@ent}%
389         \else
390             \xdef\NMSB@valuelist{\NMSB@valuelist,\NMSB@item\theNMSB@ent}%

```

```

391     \fi}%
392     \stepcounter{NMSB@ent}%
393     \ifnum\theNMSB@ent=\theNMSB@maxent\relax\NMSB@errtoomanyent\fi
394     \fi
395 }
396 \def\@bibitem#1#2\par{%
397     \expandafter\ifx\csname NMSBcateg@#1\endcsname\relax
398     \expandafter\gdef\csname NMSBcateg@#1\endcsname{9999}%
399     \ifNMSB@ownorder
400     \expandafter\xdef\csname NMSBcateg@%\citeb\endcsname{%
401         \csname NMSBcateg@%\citeb\endcsname\theNMSB@maxent}%
402     \fi
403     \edef\NMSB@missingcat{\NMSB@missingcat #1,}%
404     \fi
405     \def\@tempa{}%
406     \ifNMSB@ownorder
407     \edef\NMSB@temp{\csname NMSBcateg@#1\endcsname}%
408     \@for\NMSB@local:=\NMSB@temp\do{%
409         \ifx\relax\@tempa\relax
410         \edef\@tempa{\expandafter\NMSB@getcateg\NMSB@local-}%
411         \else
412         \edef\@tempa{\@tempa,\expandafter\NMSB@getcateg\NMSB@local-}%
413         \fi}%
414     \else
415     \edef\@tempa{\csname NMSBcateg@#1\endcsname}%
416     \fi
417     \ifundefined{SBlongestlabel}{%
418     \expandafter\ifx\csname NMSBprefix@\@tempa\endcsname\relax
419     \let\@tempb\NMSB@initiallongestlabel
420     \else
421     \expandafter\let\expandafter\NMSB@tempentry\csname
422         NMSBprefix@\@tempa\endcsname
423     \expandafter\expandafter\expandafter\NMSB@tok
424     \expandafter\expandafter\expandafter{%
425         \expandafter\NMSB@tempentry
426         \NMSB@initiallongestlabel}%
427     \edef\@tempb{\the\NMSB@tok}%
428     \fi
429     \setbox\@tempboxa=\hbox{\@tempb}%
430     \ifdim\NMSB@longest<\wd\@tempboxa
431     \setlength\NMSB@longest{\wd\@tempboxa}%
432     \global\let\NMSB@longestlabel\@tempb
433     \fi}{}%
434     \ifNMSB@ownorder
435     \edef\NMSB@temp{\csname NMSBcateg@#1\endcsname}%
436     \@for\NMSB@local:=\NMSB@temp\do{%
437         \edef\NMSB@tempb{\expandafter\NMSB@getent\NMSB@local-}
438         \expandafter\xdef\csname NMSBkey@\NMSB@tempb\endcsname{#1}%
439         \expandafter\gdef\csname NMSBentry@\NMSB@tempb\endcsname{#2}%
440         \ifx\relax\NMSB@valuelist\relax
441         \xdef\NMSB@valuelist{\NMSB@local}%
442         \else
443         \xdef\NMSB@valuelist{\NMSB@valuelist,\NMSB@local}%
444         \fi}%

```

```

445 \else
446 \expandafter\xdef\csname NMSBkey@\theNMSB@ent\endcsname{#1}%
447 \expandafter\gdef\csname NMSBentry@\theNMSB@ent\endcsname{#2}%
448 \@for\NMSB@item:=\@tempa\do{%
449 \ifx\relax\NMSB@valuelist\relax
450 \xdef\NMSB@valuelist{\NMSB@item\theNMSB@ent}%
451 \else
452 \xdef\NMSB@valuelist{\NMSB@valuelist,\NMSB@item\theNMSB@ent}%
453 \fi}%
454 \stepcounter{NMSB@ent}%
455 \ifnum\theNMSB@ent=\theNMSB@maxent\relax\NMSB@errtoomanyent\fi
456 \fi
457 }

```

\NMSB@afterfi The sorting commands. This is an implementation of the quicksort algorithm.

```

\NMSB@afterelse 458 \def\NMSB@afterfi#1\fi{\fi#1}
\NMSB@empty 459 \def\NMSB@afterelse#1\else#2\fi{\fi#1}
\NMSB@pivot 460 \def\NMSB@empty{}
\NMSB@qsort 461 \def\NMSB@pivot#1#2#3#4#5,{%
\NMSB@resort 462 \ifx\relax#5\NMSB@empty%
\NMSB@sort 463 \ifx\relax#3\relax\else\NMSB@resort{#1}{#3}, \fi%
\NMSB@sortlt 464 #2%
465 \ifx\relax#4\relax\else,\NMSB@resort{#1}{#4}\fi%
466 \else%
467 \ifnum#5#1#2 \NMSB@afterelse{\NMSB@afterfi{%
468 \NMSB@pivot{#1}{#2}{#3#5,}{#4}}}%
469 \else%
470 \NMSB@afterfi{\NMSB@afterfi{%
471 \NMSB@pivot{#1}{#2}{#3}{#4#5,}}}%
472 \fi
473 \fi
474 }%
475 \def\NMSB@qsort#1#2,{%
476 \ifx\relax#2\relax\else
477 \NMSB@afterfi{\NMSB@pivot{#1}{#2}{}}\fi
478 \def\NMSB@resort#1#2{\NMSB@qsort{#1}#2\relax,}
479 \def\NMSB@sort#1#2{\NMSB@qsort{#1}#2,\relax,}
480 \def\NMSB@sortlt#1{\NMSB@sort{<}{#1}}

```

\NMSB@writecatbib Macros for writing unexpanded commands into the .sbb file.

```

481 \long\def\NMSB@writecatbib#1{%
482 \NMSB@tok{#1}%
483 \immediate\write\NMSB@catbib{\the\NMSB@tok}}

```

\NMSB@writeentry Those macros are to write one entry, and the list of entries, respectively. When writing an entry, we have to detect category-changes, for writing the (sub)title. \NMSB@writeentry is becoming more and more complex, but it mainly detects category changes, writes category titles if needed, and writes a \bibitem.

```

484 \def\NMSB@writeentry#1#2#3#4#5,{\ifx\relax #5\relax
485 \else
486 \def\NMSB@currcat{#1#2#3#4}%
487 \def\NMSB@currcatlevelone{#1#2}%
488 \ifx\NMSB@currcatlevelone\NMSB@prevcatlevelone\else
489 \expandafter\ifx\csname NMSBtitle@\NMSB@currcatlevelone

```

```

490 \endcsname\relax
491 \else
492 \ifNMSB@export
493 \if@files
494 \immediate\write\NMSB@catbib{%
495 \string\par\string\addpenalty{-\NMSB@penalty}%
496 \string\relax^^J%
497 \string\item[]%
498 \string\SBtitle}%
499 \expandafter\let\expandafter\NMSB@tempentry
500 \csname NMSBtitle@\NMSB@currlevelone\endcsname
501 \expandafter\NMSB@writecatbib\expandafter{%
502 \expandafter{\NMSB@tempentry}}%
503 \immediate\write\NMSB@catbib{\string\relax^^J%
504 \string\par\string\addpenalty{\NMSB@penalty}%
505 \string\relax}%
506 \expandafter\ifx\csname
507 NMSBcomment@\NMSB@currlevelone\endcsname\relax
508 \else
509 \immediate\write\NMSB@catbib{\string\vskip2ex^^J%
510 \string\hspace{-\leftmargin}\string\relax^^J%
511 \string\begin{minipage}{\textwidth}^^J%
512 \string\addtolength\string\parindent{20pt}^^J%
513 \string\noindent}
514 \expandafter\let\expandafter\NMSB@tempentry
515 \csname NMSBcomment@\NMSB@currlevelone\endcsname
516 \expandafter\NMSB@writecatbib\expandafter{%
517 \NMSB@tempentry^^J}%
518 \immediate\write\NMSB@catbib{\string\end{minipage}^^J%
519 \string\par\string\addpenalty{\NMSB@penalty}
520 \string\vskip2ex}
521 \fi
522 \fi
523 \else
524 \par\addpenalty{-\NMSB@penalty}%
525 \item[]%
526 \SBtitle{\csname NMSBtitle@\NMSB@currlevelone\endcsname}
527 \par\addpenalty{\NMSB@penalty}%
528 \expandafter\ifx\csname
529 NMSBcomment@\NMSB@currlevelone\endcsname\relax
530 \else
531 \vskip2ex\hspace{-\leftmargin}\begin{minipage}{\textwidth}%
532 \addtolength\parindent{20pt}\noindent%
533 \csname NMSBcomment@\NMSB@currlevelone\endcsname
534 \end{minipage}%
535 \par\addpenalty{\NMSB@penalty}\vskip2ex
536 \fi
537 \fi
538 \fi
539 \xdef\NMSB@prevcatlevelone{#1#2}%
540 \ifnum\theSBresetdepth>0\relax
541 \setcounter{\@listctr}{0}%
542 \fi
543 \expandafter\ifx\csname NMSBprefix@\NMSB@prevcatlevelone

```

```

544 \endcsname\relax
545 \NMSB@currprefixlevelonetok{\relax}%
546 \else
547 \expandafter\expandafter\expandafter\NMSB@currprefixlevelonetok
548 \expandafter\expandafter\expandafter{%
549 \csname NMSBprefix@\NMSB@prevcatlevelone\endcsname}%
550 \fi
551 \fi
552 \ifx\NMSB@currcat\NMSB@prevcat\else
553 \ifnum\NMSB@currcat=9999\else
554 \expandafter\ifx\csname NMSBtitle@\NMSB@currcat\endcsname
555 \relax
556 \else
557 \ifNMSB@export
558 \if@files
559 \immediate\write\NMSB@catbib{%
560 \string\par\string\addpenalty{-\NMSB@halfpenalty}%
561 \string\relax^^J%
562 \string\item[]%
563 \string\SBsubtitle}%
564 \expandafter\let\expandafter\NMSB@tempentrya
565 \csname NMSBtitle@\NMSB@currcatlevelone\endcsname
566 \expandafter\let\expandafter\NMSB@tempentryb
567 \csname NMSBtitle@\NMSB@currcat\endcsname
568 \expandafter\NMSB@writecatbib\expandafter{%
569 \expandafter{\NMSB@tempentrya}}
570 \expandafter\NMSB@writecatbib\expandafter{%
571 \expandafter{\NMSB@tempentryb}}
572 \immediate\write\NMSB@catbib{\string\relax^^J%
573 \string\par\string\addpenalty{\NMSB@penalty}%
574 \string\relax}%
575 \expandafter\ifx\csname
576 NMSBcomment@\NMSB@currcat\endcsname\relax
577 \else
578 \immediate\write\NMSB@catbib{\string\vskip2ex^^J%
579 \string\hspace{-\leftmargin}\string\relax^^J%
580 \string\begin{minipage}{\textwidth}^^J%
581 \string\addtolength\string\parindent{20pt}^^J%
582 \string\noindent}
583 \expandafter\let\expandafter\NMSB@tempentry
584 \csname NMSBcomment@\NMSB@currcat\endcsname
585 \expandafter\NMSB@writecatbib\expandafter{%
586 \NMSB@tempentry^^J}%
587 \immediate\write\NMSB@catbib{\string\end{minipage}^^J%
588 \string\par\string\addpenalty{\NMSB@penalty}%
589 \string\vskip2ex}
590 \fi
591 \fi
592 \else
593 \par\addpenalty{-\NMSB@halfpenalty}%
594 \item[]
595 \SBsubtitle{\csname NMSBtitle@\NMSB@currcatlevelone\endcsname}%
596 {\csname NMSBtitle@\NMSB@currcat\endcsname}%
597 \par\addpenalty{\NMSB@penalty}%

```



```

598         \expandafter\ifx\csname
599         NMSBcomment@\NMSB@currcat\endcsname\relax
600     \else
601         \vskip2ex\hspace{-\leftmargin}\begin{minipage}{\textwidth}%
602         \addtolength\parindent{20pt}\noindent%
603         \csname NMSBcomment@\NMSB@currcat\endcsname
604         \end{minipage}%
605         \par\addpenalty{\NMSB@penalty}\vskip2ex
606     \fi
607 \fi
608 \fi
609 \fi
610 \xdef\NMSB@prevcat{#1#2#3#4}%
611 \ifnum\theSBresetdepth>1\relax
612     \setcounter{\@listctr}{0}%
613 \fi
614 \expandafter\ifx\csname NMSBprefix@\NMSB@currcat\endcsname\relax
615     \expandafter\NMSB@currprefixtok\expandafter{%
616     \the\NMSB@currprefixlevelonetok}%
617 \else
618     \expandafter\expandafter\expandafter\NMSB@currprefixtok
619     \expandafter\expandafter\expandafter{%
620     \csname NMSBprefix@\NMSB@currcat\endcsname}
621 \fi
622 \fi
623 \expandafter\ifx\csname NMSBlabel@#5\endcsname\relax
624     \ifNMSB@export
625         \if@filesw
626             \stepcounter{\@listctr
627             \immediate\write\NMSB@catbib{%
628             \string\bibitem}%
629 \expandafter\ifx\expandafter\relax\the\NMSB@currprefixtok
630     \expandafter\def\expandafter\NMSB@tempentry
631     \expandafter{\the\value{\@listctr}}%
632     \else
633     \expandafter\expandafter\expandafter\def
634     \expandafter\expandafter\expandafter\NMSB@tempentry
635     \expandafter\expandafter\expandafter{%
636     \expandafter\the\expandafter\NMSB@currprefixtok
637     \the\value{\@listctr}}%
638 \fi
639     \expandafter\NMSB@writecatbib\expandafter{%
640     \expandafter[\NMSB@tempentry]}%
641     \immediate\write\NMSB@catbib{%
642     {\csname NMSBkey@#5\endcsname}}
643     \expandafter\let\expandafter\NMSB@tempentry
644     \csname NMSBentry@#5\endcsname%
645     \expandafter\NMSB@writecatbib\expandafter{%
646     \NMSB@tempentry^^J^^J}
647 \fi
648 \else
649     \@NMSBorig@bibitem{\csname NMSBkey@#5\endcsname}%
650     \csname NMSBentry@#5\endcsname
651 \fi

```

```

652 \setbox\@tempboxa=\hbox{\the\NMSB@currprefixtok\the\value{\@listctr}}%
653 \ifdim\NMSB@reallylongest<\wd\@tempboxa
654 \setlength{\NMSB@reallylongest}{\wd\@tempboxa}%
655 \xdef\NMSB@reallylongestlabel{%
656 \expandafter\ifx\expandafter\relax\the\NMSB@currprefixtok
657 \else\the\NMSB@currprefixtok\fi\the\value{\@listctr}}%
658 \fi
659 \else
660 \ifNMSB@export
661 \if@filesw
662 \immediate\write\NMSB@catbib{%
663 \string\bibitem}
664 \expandafter\let\expandafter\NMSB@tempentry
665 \csname NMSBlabel@#5\endcsname
666 \expandafter\NMSB@writecatbib\expandafter{%
667 \expandafter[\NMSB@tempentry]}%
668 \immediate\write\NMSB@catbib{%
669 {\csname NMSBkey@#5\endcsname}}%
670 \expandafter\let\expandafter\NMSB@tempentry
671 \csname NMSBentry@#5\endcsname%
672 \expandafter\NMSB@writecatbib\expandafter{%
673 \NMSB@tempentry^^J^^J}
674 \fi
675 \else
676 \@NMSBorig@l@bibitem[\csname NMSBlabel@#5\endcsname]%
677 {\csname NMSBkey@#5\endcsname}%
678 \csname NMSBentry@#5\endcsname
679 \fi
680 \setbox\@tempboxa=\hbox{\csname NMSBlabel@#5\endcsname}%
681 \ifdim\NMSB@reallylongest<\wd\@tempboxa
682 \setlength{\NMSB@reallylongest}{\wd\@tempboxa}%
683 \expandafter\let\expandafter\NMSB@reallylongestlabel\csname
684 NMSBlabel@#5\endcsname
685 \fi
686 \fi
687 \fi
688 }
689 \def\NMSB@writelist#1{%
690 \@for\NMSB@curritem:=#1\do{%
691 \edef\NMSB@curritem{\expandafter
692 \@firstofone\NMSB@curritem\@empty}}%
693 \expandafter\NMSB@writeentry\NMSB@curritem ,}}

```

\@NMSBorig@thebibliography \thebibliography does not really use its argument. It's simply used for approx-  
\@NMSBorig@endthebibliography imating the longest label. Note that \endthebibliography writes the entries,  
\thebibliography since sorting has to be done after \bibitems have treated all the entries.  
\endthebibliography

```

694 \let\@NMSBorig@thebibliography\thebibliography
695 \let\@NMSBorig@endthebibliography\endthebibliography
696 \def\thebibliography#1{%
697 \setcounter{NMSB@ent}{\NMSB@initent}%
698 \@ifundefined{SBlongestlabel}{%
699 \gdef\NMSB@initiallongestlabel{#1}}{%
700 \global\let\NMSB@longestlabel\SBlongestlabel
701 \setbox\@tempboxa=\hbox{\SBlongestlabel}%

```

```

702 \setlength{\NMSB@longest}{\wd\@tempboxa}}%
703 \ifNMSB@export
704 \if@filesw
705 \newwrite\NMSB@catbib
706 \immediate\openout\NMSB@catbib \jobname.sbb\relax
707 \expandafter\NMSB@tok\expandafter{\SBlongestlabel}
708 \immediate\write\NMSB@catbib{%
709 \string\begin{thebibliography}{%
710 \ifundefined{SBlongestlabel}{#1}{\the\NMSB@tok}}}
711 \fi
712 \fi
713 }
714 \def\endthebibliography{%
715 \ifNMSB@export
716 \usecounter{enumiv}%
717 \else
718 \ifNMSB@newchap
719 \ifundefined{chapter}{\section*{\refname}}{\chapter*{\bibname}}%
720 \fi
721 \list{\@biblabel{\the\NMSB@currprefixtok\@arabic\c@enumiv}\hfill}{%
722 \settowidth\labelwidth{\@biblabel{\NMSB@longestlabel}}%
723 \leftmargin\labelwidth
724 \advance\leftmargin\labelsep
725 \@openbib@code
726 \usecounter{enumiv}%
727 \let\p@enumiv\@empty
728 \renewcommand\theenumiv{\@arabic\c@enumiv}}%
729 \fi
730 \edef\NMSB@sortedvaluelist{%
731 \expandafter\NMSB@sortlt\expandafter{\NMSB@valuelist}}%
732 \expandafter\NMSB@writelist\expandafter{\NMSB@sortedvaluelist}%
733 \ifNMSB@export
734 \if@filesw
735 \immediate\write\NMSB@catbib{%
736 \string\end{thebibliography}}
737 \immediate\closeout\NMSB@catbib
738 \fi
739 \begingroup
740 \ifNMSB@newchap\else
741 \ifundefined{chapter}{\def\section##1##2{}}{\def\chapter##1##2{}}%
742 \fi
743 \let\thebibliography\@NMSBorig@thebibliography
744 \let\endthebibliography\@NMSBorig@endthebibliography
745 \let\@lbibitem\@NMSBorig@lbibitem
746 \let\@bibitem\@NMSBrealorig@bibitem
747 \input{\jobname.sbb}
748 \endgroup
749 \else
750 \endlist
751 \fi
752 \ifx\NMSB@missingcat\NMSB@empty\else
753 \expandafter\NMSB@warnnocateg\NMSB@missingcat\end
754 \fi
755 \ifNMSB@strict

```

```

756 \ifx\NMSB@doublecat\NMSB@empty\else
757 \expandafter\NMSB@warndblcateg\NMSB@doublecat\end
758 \fi
759 \fi
760 \ifdim\NMSB@reallylongest=\NMSB@longest\relax\else
761 \NMSB@warnwronglongest
762 \fi
763 }

```

## 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		D	
\@NMSBcategory	139, 172	\DeclareOption	2, 3, 5, 6, 8, 9, 11–14
\@NMSBorig@bibitem	327, 649	E	
\@NMSBorig@lbibitem	326, 676, 745	\endcategory	139
\@NMSBorig@endthebibliography	694	\endthebibliography	694
\@NMSBorig@thebibliography	694	\export	1
\@NMSBrealorig@bibitem	325, 746	G	
\@auxout	327	\global	366, 373, 383, 432, 700
\@bibitem	325, 332, 746	H	
\@biblabel	721, 722	\hspace	510, 531, 579, 601
\@citeb	244, 245,	I	
	249, 252, 253, 262, 267, 268,	\if@files	327, 493, 558, 625, 661, 704, 734
	271, 272, 287, 288, 290, 293,	\ifNMSB@export	1,
	297, 298, 304, 307, 308, 311,		492, 557, 624, 660, 703, 715, 733
	312, 317, 318, 337, 338, 400, 401	\ifNMSB@newchap	1, 718, 740
\@ifnextchar	139, 237	\ifNMSB@ownorder	1, 251, 270, 296,
\@input@	747		316, 336, 342, 368, 399, 406, 434
\@lNMSBcategory	139, 140	\ifNMSB@strict	1, 261, 303, 755
\@lbibitem	326, 332, 745	\item	327, 497, 525, 562, 594
\@listctr	328,	\itemsep	135
	541, 612, 626, 631, 637, 652, 657	J	
\@openbib@code	725	\jobname	706, 747
A		K	
\addpenalty	495, 504, 519, 524, 527,	\keeporder	1
	535, 560, 573, 588, 593, 597, 605	L	
\addtolength	512, 532, 581, 602	\labelsep	724
B		\labelwidth	722, 723
\bibcite	328	\leftmargin	108, 117, 127,
\bibitem	628, 663		136, 510, 531, 579, 601, 723, 724
\bibname	719	\lNMSB@category	139
C			
\c@enumiv	721, 728		
\category	139		
\closeout	737		

N			
\newchap	1	\NMSB@longest	31, 364, 365, 430, 431, 702, 760
\newsec	1	\NMSB@longestlabel	66, 366, 432, 700, 722
\newtoks	27, 40, 41	\NMSB@maxent	24
\newwrite	705	\NMSB@missingcat	44, 335, 403, 752, 753
\NMSB@afterelse	458	\NMSB@newchapfalse	13, 14
\NMSB@afterfi	458	\NMSB@newchaptrue	10–12
\NMSB@catbib	483, 494, 503, 509, 518, 559, 572, 578, 587, 627, 641, 662, 668, 705, 706, 708, 735, 737	\NMSB@ownorderfalse	4, 6
\NMSB@category	139	\NMSB@ownordertrue	5
\NMSB@catlevel	20	\NMSB@penalty	51, 495, 504, 519, 524, 527, 535, 573, 588, 597, 605
\NMSB@catlevelone	16	\NMSB@pivot	458
\NMSB@catleveltwo	16	\NMSB@prevcat	42, 552, 610
\NMSB@currcat	486, 552–554, 567, 576, 584, 596, 599, 603, 614, 620	\NMSB@prevcatlevelone	42, 488, 539, 543, 549
\NMSB@currcatlevelone	487–489, 500, 507, 515, 526, 529, 533, 565, 595	\NMSB@qsort	458
\NMSB@curritem	690–693	\NMSB@reallylongest	31, 653, 654, 681, 682, 760
\NMSB@currprefixlevelonetok	36, 545, 547, 616	\NMSB@reallylongestlabel	31, 61, 655, 683
\NMSB@currprefixtok	36, 328, 615, 618, 629, 636, 652, 656, 657, 721	\NMSB@resort	458
\NMSB@doublecat	44, 262, 304, 756, 757	\NMSB@sort	458
\NMSB@empty	458, 752, 756	\NMSB@sortedvaluelist	730, 732
\NMSB@ent	24	\NMSB@sortlt	458
\NMSB@entries@incatenv	237	\NMSB@strictfalse	1, 3
\NMSB@entries@withoptarg	237	\NMSB@stricttrue	2
\NMSB@erraliasalreadydef	53, 220	\NMSB@stylebar	98
\NMSB@erraliasoutsidecat	53, 209	\NMSB@stylebox	98
\NMSB@erraliasundefined	53, 247, 265	\NMSB@styledash	98
\NMSB@errcattoodeep	77, 143, 175	\NMSB@stylenone	98
\NMSB@errcattoodepp	53	\NMSB@stylesimple	98
\NMSB@errcommentoutsidecat	95, 226	\NMSB@subtitlestyle	98
\NMSB@errentriesoutsidecat	53, 285	\NMSB@temp	343, 344, 369, 370, 407, 408, 435, 436
\NMSB@errentrieswithoptinsidecat	53, 242	\NMSB@tempb	371–373, 375, 437–439
\NMSB@errtoomanycat	53, 148, 159, 180, 189	\NMSB@tempentry	163, 165, 196, 198, 357, 359, 421, 425, 499, 502, 514, 517, 583, 586, 630, 634, 640, 643, 646, 664, 667, 670, 673
\NMSB@errtoomanyent	53, 256, 275, 300, 320, 393, 455	\NMSB@tempentrya	564, 569
\NMSB@exportfalse	7, 9	\NMSB@tempentryb	566, 571
\NMSB@exporttrue	8	\NMSB@titlestyle	98
\NMSB@getcateg	330, 346, 348, 410, 412	\NMSB@tok	24, 27, 61, 63, 66, 67, 165, 167, 198, 200, 359, 360, 423, 427, 482, 483, 707, 710
\NMSB@getent	330, 371, 437	\NMSB@valuelist	46, 376, 377, 379, 387, 388, 390, 440, 441, 443, 449, 450, 452, 731
\NMSB@halfpenalty	51, 560, 593	\NMSB@warndblcateg	53, 757
\NMSB@initent	24, 72, 73, 697	\NMSB@warnnocateg	53, 753
\NMSB@initiallongestlabel	419, 426, 699	\NMSB@warnwronglongest	53, 761
\NMSB@item	386, 388, 390, 448, 450, 452	\NMSB@writecatbib	481, 501, 516, 568, 570, 585, 639, 645, 666, 672
\NMSB@level	102, 104, 114, 123, 131, 137		
\NMSB@local	344, 346, 348, 370, 371, 377, 379, 408, 410, 412, 436, 437, 441, 443		

\NMSB@writeentry	484	\SBsubtitle	98, 563, 595
\NMSB@writelist	484, 732	\SBsubtitlefont	98
\NMSBorig@@bibitem	325	\SBsubtitlestyle	98
\NMSBorig@@lbibitem	325	\SBtitle	98, 498, 526
\NMSBprefix@9999	36	\SBtitlefont	98
\NMSBrealorig@@bibitem	325	\SBtitlestyle	98
\NMSBsort	479, 480	\section	719, 741
\NMSBsortlt	480, 731	\strict	1
\NMSBtitle@99	36		
\noexport	1	<b>T</b>	
\nonewchap	1	\thebibliography	694
\nonewsec	1	\theenumiv	728
\nonstrict	1	\theNMSB@catlevel	142, 146, 174, 178, 208, 212, 225, 228, 241, 284, 289, 306
<b>O</b>		\theNMSB@catlevelone	147, 153, 155, 164, 166, 168, 179, 185, 193, 197, 199, 202, 214, 217, 229, 232, 291, 294, 309, 313
\openout	706	\theNMSB@catleveltwo	158, 167, 169, 188, 200, 203, 217, 233, 291, 309
<b>P</b>		\theNMSB@cent	253, 255, 272, 274, 298, 300, 318, 320, 382, 383, 385, 388, 390, 393, 446, 447, 450, 452, 455
\p@enumiv	727	\theNMSB@maxent	76, 255, 274, 300, 320, 338, 393, 401, 455
\parindent	512, 532, 581, 602	\theSBresetdepth	540, 611
\ProcessOptions	15	<b>U</b>	
<b>R</b>		\usecounter	716, 726
\refname	719	<b>W</b>	
\reorder	1	\write	327, 483, 494, 503, 509, 518, 559, 572, 578, 587, 627, 641, 662, 668, 708, 735
<b>S</b>			
\SBabovesepwidth	47, 120		
\SBalias	88, 207		
\SBbelowsepwidth	47, 126		
\SBcomment	97, 224		
\SBentries	82, 85, 237		
\SBlongestlabel	700, 701, 707		
\SBmiscprefix	36		
\SBmisctitle	36		
\SBresetdepth	22		