

The Multibliography Package*

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Abstract

Conventional standards for bibliography styles entail a forced choice between index and name/year citations and corresponding references. We reject this false dichotomy, and describe a multibliography, comprising alphabetic, sequenced, and even chronological orderings of references. An extended inline citation format is also proposed to integrate such heterogeneous styles, and is usable and useful even without separate bibliographies.

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1 Introduction

This package illustrates our novel system for a multibibliography, which combines alphabetic, sequenced, and chronological ordering of references. The rationale for the system is provided in the enclosed TUG paper. This package provides the code for the system.

2 User Interface

The installation of the class follows the usual practice [1] for L^AT_EX packages:

1. Run `latex` on `multibibliography.ins`. This will produce the file `multibibliography.sty`.
2. Put the file `multibibliography.sty` to the place where L^AT_EX can find it (see [1] or the documentation for your T_EX system).
3. Put the file `chronological.bst` to the place where BibT_EX can find it (see [1] or the documentation for your T_EX system).
4. Put the file `multibibliography.pl` into the place where binaries are stored on your system.
5. Update the database of file names. Again, see [1] or the documentation for your T_EX system for the system-specific details.
6. The files `multibibliography.pdf` and `tug-paper.pdf` provide the documentation for the package

As an alternative to items 2 and 5 you can just put the files in the working directory where your `.tex` file is.

To use this package, add to the preamble of your document the line `\usepackage{multibibliography}`. After `latex`'ing the file, instead of running

```
bibtex FILE
```

```
run
```

```
multibibliography.pl FILE.tex
```

Then proceed in the usual way (run `latex` until the labels converge).

```
\bibliographysequence
```

The file defines two new commands: `\bibliographysequence{< bib-files >}` and `\bibliographytimeline{< bib-files >}` which are similar to the standard `\bibliography` command, but produce the reference lists ordered according to the sequence of citations or chronologically. They use `unsrt.bst` and `chronological.bst` styles correspondingly. An example of usage can be found in the file `tug-paper.tex`:

```
\renewcommand\refname{References sorted by name}
```

```
\bibliographystyle{apalike}  
\bibliography{multibibliography}  
  
\renewcommand\refname{References sorted by appearance}  
\bibliographysequence{multibibliography}  
  
\renewcommand\refname{References sorted by year}  
\bibliographytimeline{multibibliography}
```

3 Implementation

3.1 Declarations

We start with declaration, who we are:

```
1 <style>\NeedsTeXFormat{LaTeX2e}
2 <*gobble>
3 \ProvidesFile{multibibliography.dtx}
4 </gobble>
5 <style>\ProvidesPackage{multibibliography}
6 <*style>
7 [2013/05/29 v1.03 Multibibliography support for LaTeX]
```

3.2 Hyperref Patching

`\NAT@parse` Hyperref redefines a lot of bibliography related commands. Fortunately, there is a mechanism in hyperref to prevent this: if hyperref sees natbib, it defers to it. Well, we can dupe hyperref into thinking natbib is loaded:

```
8 \providecommand\NAT@parse[1]{}
```

`\@extra@binfo` This is a hook defined by natbib. We preserve it just in case:

```
9 \providecommand*\@extra@binfo{}
```

`\@extra@b@citeb` Another natbib hook:

```
10 \providecommand*\@extra@b@citeb{}
```

`\@BIBLABEL` This is a hyperref hook

```
11 \providecommand*\@BIBLABEL{\@biblabel}
```

In case hyperref is not loaded, we provide some noops

```
12 \AtBeginDocument{
13   \ifx\hyper@@link\undefined
14     \providecommand\@skiphyperreftrue{}%
15     \providecommand\@skiphyperreffalse{}%
16     \let\H@item\item
17     \providecommand\Hy@raisedlink[1]{#1}%
18     \let\hyper@anchorstart@gobble
19     \providecommand\hyper@@link[4][\#4]%
20     \providecommand\hyper@anchorend{}%
21     \providecommand\@currentHref{}%
22   \fi}
```

3.3 Checking for backref

`\if@BR@tocstarted` Backref rewrites .brf file with each iteration. So we need to make sure we call `\BR@starttoc` no more than once

```
23 \newif\if@BR@tocstarted
24 \@BR@tocstartedfalse
```

`\if@backref@loaded` We need to check whether backref is loaded:

```
25 \newif\if@backref@loaded
26 \AtBeginDocument{%
27   \ifpackage@loaded{backref}{\@backref@loadedtrue
28     \let\BR@starttoc@orig\BR@starttoc
29     \def\BR@starttoc{\if@BR@tocstarted\else
30       \BR@starttoc@orig\@BR@tocstartedtrue\fi}
31 }{\@backref@loadedfalse}}
```

3.4 Creating Bibliography Labels

`\MBbibtex` The standard `\bibtex` command has two arguments: the label and the typeset representation. Our command has four arguments: sequence number, name, date, label. We also write `\backcite` to the aux file if backref is called.

```
32 \def\MBbibtex#1#2#3#4{%
33   \@newlabel{b}{#1\@extra@binfo}{%
34     \hyper@@link[cite]{}{cite.#1\@extra@b@citeb}{#3},
35     \hyper@@link[cite]{}{cite.#1\@extra@b@citeb-timeline}{#4}:
36     \hyper@@link[cite]{}{cite.#1\@extra@b@citeb-sequence}{#2}%
37   \if@filesw
38     \if@backref@loaded\phantomsection
39     \immediate\write\@mainaux{%
40       \string\backcite{#1}{\thepage}{\@currentlabel}{\@currentHref}}\fi\fi
41   }%
42 }
```

3.5 Bibliography Commands

The default command is defined for references sorted by name—it is invoked by `\bibliography`.

`\@lbibitem` By default `\@lbibitem` typesets the optional argument, creates a hyperanchor and writes a command into the aux file. The following uses hyperref code:

```
43 \def\@lbibitem[#1]#2{%
44   \gdef\MB@sequence{}%
45   \gdef\MB@name{}%
46   \gdef\MB@name{}%
47   \def\MBlabel##1##2##3{##2,
48     \hyper@@link[cite]{}{cite.#2\@extra@b@citeb-timeline}{##3}:
49     \hyper@@link[cite]{}{cite.#2\@extra@b@citeb-sequence}{##1}%
50   \gdef\MB@sequence{##1}%
51   \gdef\MB@name{##2}%
52   \gdef\MB@date{##3}%
53 }%
54 \@skiphyperrtrue
55 \H@item[%
56   \ifx\Hy@raisedlink\@empty
57     \hyper@anchorstart{cite.#2\@extra@b@citeb}%
```

```

58         \@BIBLABEL{#1}%
59         \hyper@anchorend
60     \else
61         \Hy@raisedlink{%
62             \hyper@anchorstart{cite.#2\@extra@b@citeb}\hyper@anchorend
63         }%
64         \@BIBLABEL{#1}%
65     \fi
66     \hfill
67 ]%
68 \@skiphyperreffalse
69 \if@filesw
70     \begingroup
71         \let\protect\noexpand
72         \immediate\write\@auxout{%
73             \string\MBbibcite{#2}\@MB@sequence}\@MB@name}\@MB@date}%
74         }%
75     \endgroup
76 \fi
77 \ignorespaces
78 }

```

`\bibliographysequence` When we order by sequence, we do not write anything to the aux file

```

79 \def\bibliographysequence#1{%
80     \def\@lbibitem[##1]##2{%
81         \def\MBlabel####1####2####3{####1:
82             \hyper@@link[cite]{}{cite.##2\@extra@b@citeb}{####2},
83             \hyper@@link[cite]{}{cite.##2\@extra@b@citeb-timeline}{####3}}%
84         \@skiphyperreftrue
85         \H@item[%
86             \ifx\Hy@raisedlink\@empty
87                 \hyper@anchorstart{cite.##2\@extra@b@citeb-sequence}%
88                 \@BIBLABEL{##1}%
89                 \hyper@anchorend
90             \else
91                 \Hy@raisedlink{%
92                     \hyper@anchorstart{cite.##2\@extra@b@citeb-sequence}\hyper@anchorend
93                 }%
94                 \@BIBLABEL{##1}%
95             \fi
96             \hfill
97         ]%
98         \@skiphyperreffalse
99         \ignorespaces
100     }
101     \@input@{\jobname-sequence.bbl}}

```

`\bibliographytimeline` This is the ordering by timeline:

```

102 \def\bibliographytimeline#1{%
103     \def\@lbibitem[##1]##2{%

```

```

104 \def\MBlabel####1####2####3{%
105 \hyper@@link[cite]{}{cite.##2\@extra@b@citeb}{####2},
106 ####3:
107 \hyper@@link[cite]{}{cite.##2\@extra@b@citeb-sequence}{####1}}%
108 \@skiphyperreftrue
109 \H@item[%
110 \ifx\Hy@raisedlink\@empty
111 \hyper@anchorstart{cite.##2\@extra@b@citeb-timeline}%
112 \@BIBLABEL{##1}%
113 \hyper@anchorend
114 \else
115 \Hy@raisedlink{%
116 \hyper@anchorstart{cite.##2\@extra@b@citeb-timeline}\hyper@anchorend
117 }%
118 \@BIBLABEL{##1}%
119 \fi
120 \hfill
121 ]%
122 \@skiphyperreffalse
123 \ignorespaces
124 }
125 \@input@{\jobname-timeline.bbl}

```

3.6 Ending the Style

```
126 </style>
```

References

- [1] UK T_EX Users Group. UK list of T_EX frequently asked questions. <http://www.tex.ac.uk/cgi-bin/texfaq2html>, 2008.

Change History

v1.01		v1.02	
\@BIBLABEL: Introduced the command	4	\@lbibitem: Added interlinks	5
\@extra@b@citeb: Introduced the command	4	General: Fixed the bug in multibliography.pl that prevented correct handling of accents	1
\@extra@b@info: Introduced the command	4	\bibliographysequence: Added interlinks	6
\@lbibitem: Redefined	5	\bibliographytimeline: Added interlinks	6
\bibliographysequence: Added hyperref-compatible code	6	\if@backref@loaded: Added macro	5
\bibliographytimeline: Added hyperref-compatible code	6	\if@BR@tocstarted: Added macro	4
\MBbiblecite: Introduced the command	5	\MBbiblecite: Added backref code .	5
\NAT@parse: Introduced the command	4	v1.03	
		General: Rewrote multibliography.pl: no more temp files	1

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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	<code>\bibliographytimeline</code>	<code>\ifx</code> 13, 56, 86, 110
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