The Multibibliography Package*

Michael Cohen† Yannis Haralambous‡ Boris Veytsman §

2013/03/26, v1.02

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 multibibliography, 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.

Contents

†mcohen@u-aizu.ac.jp
‡yannis.haralambous@telecom-bretagne.eu
§borisv@lk.net

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 LaTeX packages:

1. Run latex on `multibibliography.ins`. This will produce the file `multibibliography.sty`.
2. Put the file `multibibliography.sty` to the place where LaTeX can find it (see [1] or the documentation for your TeX system).
3. Put the file `chronological.bst` to the place where BibTeX can find it (see [1] or the documentation for your TeX 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 TeX 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` `\bibliographytimeline`

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:

```
⟨style⟩\NeedsTeXFormat{LaTeX2e}
⟨*gobble⟩
\ProvidesFile{multibibliography.dtx}
⟨/gobble⟩
⟨style⟩\ProvidesPackage{multibibliography}
⟨*style⟩
[2013/03/26 v1.02 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:

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

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

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

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

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

`\@BIBLABEL` This is a hyperref hook

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

In case hyperref is not loaded, we provide some noops

```
\AtBeginDocument{
  \ifx\hyper@@link\@undefined
  \providecommand\@skiphyperreftrue{}%
  \providecommand\@skiphyperreffalse{}%
  \let\H@item\item
  \providecommand\Hy@raisedlink[1]{#1}%
  \let\hyper@anchorstart\@gobble
  \providecommand\hyper@@link[4][]{#4}%
  \providecommand{\hyper@anchorend}{}%
  \providecommand{\@currentHref}{}%
  \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

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

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

```
\newif\if@backref@loaded
\AtBeginDocument{%
  \@ifpackageloaded{backref}{\@backref@loadedtrue
    \let\BR@starttoc@orig\BR@starttoc
    \def\BR@starttoc{\if@BR@tocstarted\else
      \BR@starttoc@orig\@BR@tocstartedtrue\fi}
}{\@backref@loadedfalse}}
```

3.4 Creating Bibliography Labels

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

```
\def\MBbibcite#1#2#3#4{%
  \@newl@bel{b}{#1\@extra@binfo}{%
    \hyper@@link[cite]{}{cite.#1\@extra@b@citeb}{#3},
    \hyper@@link[cite]{}{cite.#1\@extra@b@citeb-timeline}{#4}:
    \hyper@@link[cite]{}{cite.#1\@extra@b@citeb-sequence}{#2}%
    \if@filesw
    \if@backref@loaded\phantomsection
    \immediate\write\@mainaux{%
      \string\backcite{#1}{{\thepage}{\@currentlabel}{\@currentHref}}}\fi\fi
  }%
}%
```

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:

```
  \def\@lbibitem[#1]#2{%
    \gdef\MB@sequence{}%
    \gdef\MB@name{}%
    \gdef\MB@name{}%
    \def\MBlabel##1##2##3{##2,
      \hyper@@link[cite]{}{cite.#2\@extra@b@citeb-timeline}{##3}:
      \hyper@@link[cite]{}{cite.#2\@extra@b@citeb-sequence}{##1}%
      \gdef\MB@sequence{##1}%
      \gdef\MB@name{##2}%
      \gdef\MB@date{##3}%
    }%
    \@skiphyperreftrue
    \H@item[%
      \ifx\Hy@raisedlink\@empty
        \hyper@anchorstart{cite.#2\@extra@b@citeb}%
```

```
          \@BIBLABEL{#1}%
        \hyper@anchorend
      \else
        \Hy@raisedlink{%
          \hyper@anchorstart{cite.#2\@extra@b@citeb}\hyper@anchorend
        }%
        \@BIBLABEL{#1}%
      \fi
      \hfill
    ]%
    \@skiphyperreffalse
    \if@filesw
      \begingroup
        \let\protect\noexpand
        \immediate\write\@auxout{%
          \string\MBbibcite{#2}{\MB@sequence}{\MB@name}{\MB@date}%
        }%
      \endgroup
    \fi
    \ignorespaces
  }
```

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

```
\def\bibliographysequence#1{%
  \def\@lbibitem[##1]##2{%
    \def\MBlabel####1####2####3{####1:
      \hyper@@link[cite]{}{cite.##2\@extra@b@citeb}{####2},
      \hyper@@link[cite]{}{cite.##2\@extra@b@citeb-timeline}{####3}}%
    \@skiphyperreftrue
    \H@item[%
      \ifx\Hy@raisedlink\@empty
        \hyper@anchorstart{cite.##2\@extra@b@citeb-sequence}%
          \@BIBLABEL{##1}%
        \hyper@anchorend
      \else
        \Hy@raisedlink{%
          \hyper@anchorstart{cite.##2\@extra@b@citeb-sequence}\hyper@anchorend
        }%
        \@BIBLABEL{##1}%
      \fi
      \hfill
    ]%
    \@skiphyperreffalse
    \ignorespaces
  }
  \@input@{\jobname-sequence.bbl}}
```

`\bibliographytimeline` This is the ordering by timeline:

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

```
    \def\MBlabel####1####2####3{%
      \hyper@@link[cite]{}{cite.##2\@extra@b@citeb}{####2},
      ####3:
      \hyper@@link[cite]{}{cite.##2\@extra@b@citeb-sequence}{####1}}%
    \@skiphyperreftrue
    \H@item[%
      \ifx\Hy@raisedlink\@empty
        \hyper@anchorstart{cite.##2\@extra@b@citeb-timeline}%
          \@BIBLABEL{##1}%
        \hyper@anchorend
      \else
        \Hy@raisedlink{%
          \hyper@anchorstart{cite.##2\@extra@b@citeb-timeline}\hyper@anchorend
        }%
        \@BIBLABEL{##1}%
      \fi
      \hfill
    ]%
    \@skiphyperreffalse
    \ignorespaces
  }
  \@input@{\jobname-timeline.bbl}}
```

3.6 Ending the Style

⟨/style⟩

References

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

Change History

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.