αBIB script

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1 Description

αBIB is a little Bash script allowing addition of alphabetical headers into BIBTEX bibliographies. This may be useful with large bibliographies so that to find entries quickly. It takes a bibliography file produced by BIBTEX (file with extension `.bbl`) as an input, and creates a new file with incorporated alphabetical headers. Those headers break the bibliography into bibliographic entry sets having the same initial. Each set is entitled with a header consisting of the initial letter corresponding to entries composing it. Note that this script is mostly intended for use with "alpha-like" BIBTEX styles (*e.g.* `alpha.bst`, or `apalike.bst`).

2 Usage

Of course, you always have to run BIBTEX before running αBIB. The program syntax is the following:

```
alphabib [-hsv] [-b [-l level]] <input.bbl> [<output.bbl>]
```

Input and output files may be identical, which is equivalent to no output file given. In those cases, the input file will be overwritten while running the script.

`-h` and `-v` options will display help and version information. Option `-b` will cause insertion of bookmarks into PDF files generated by `pdflatex` or `ps2pdf`. Naturally, this option requires using the `hyperref` package [3] from Sebastian Rahtz and Heiko Oberdiek, and most probably the `tocbibind` package [4] too... Besides, option `-l` allows selection of bookmarks insertion level, whose impact depends on the document class used (see Table 1 for correspondence with sectioning commands). If option `-b` is given without option `-l`, then bookmarks level is set automatically[1]. Option `-s` is used to handle different sorting policies regarding names having a "von" part – This point is discussed in §4.2.

An example is provided in the files `example.tex` and `example.bib`. Just type `make` to compile it. That will produce a PDF file with bookmarks. Ensure that the `alphabib` script is accessible from the `PATH` variable before running `make`.

[1] More precisely, the first header is set as sub-level of the current level, and next headers are set to the same level as the first one.

Table 1: Level of sectioning commands depending on document class (coming from [2]).

Document class	\part	\chapter	\section	\subsection	...
book, report	-1	0	1	2	...
article	0		1	2	...

3 Customisation

You can customise headers by redefining the three following LaTeX macros:

`\alphabibitemskip`: This command defines the skip before each initial. Its default value is `\bigskip`;

`\alphabibitemlabel`: This command defines typesetting of alphabetical item labels (optional argument of `\item` macro). The default definition is `\def\alphabibitemlabel#1{\Large\bfseries#1\hfill}`;

`\alphabibitemcontent`: This command defines typesetting of the right part of alphabetical items. The default definition is `\def\alphabibitemcontent#1{\ \\\\[-1ex]\hrule\medskip}`.

The two last commands are called with each initial as a parameter (*i.e.* `#1` is intended to be replaced by initials). Thus, you can put it either in the left (label) or the right (content) part of items.

In addition, you may use the following macro in order to modify penalties:

`\alphabibitempenalty`: This command defines a penalty before each header. Its default definition is `\def\alphabibitempenalty{\penalty-200}`, which encourages page breaks before headers.

To summarise, each header is made according to the following pattern:

```
\alphabibitiemskip%
\alphabibitiempenalty%
\alphabibitiemlabel[#1]\alphabibitiemcontent{#1}
```

where `#1` is replaced by the relevant initial letter.

4 Supported BibTeX styles

4.1 `\bibitem` macro

All standard BibTeX styles should be supported. By "standard" are meant styles that produce `\bibitem` commands in the form `\bibitem[A...` – with `A` being the initial corresponding to the entry name, which should be uppercase in most cases. Other supported styles are those which use one of the two following forms:

```
\bibitem[\foo...\bar... A...
\bibitem[\foo...\bar...{A...
```

where dots before `A` may be replaced by any characters. In other words, the `A` is assumed to be the first alphabetical character following a space or an opening brace. In those forms, at least one macro must be present before `A` (*i.e.* the first character after "`\bibitem[`" is a backslash).

Styles that do not use an optional argument and just use the mandatory argument of `\bibitem` macro (such as `plain.bst`, or `abbrv.bst`) are not supported.

4.2 Names with a "von" part

According to [1], author names can have a "von" part. For instance, "Ludwig van Beethoven" is a name having a "von" part (even if it actually is a "van" in this case...). Such an entry should be typed in the `.bib` file as either **"`Ludwig van Beethoven`"** or **"`van Beethoven, Ludwig`"** (case-sensitive) [1]. Depending on the BibTeX style you are using, this will lead to different `\bibitem` command calls into the `.bbl` file. Usually, it results in something like `\bibitem[von Beethoven...` (*e.g.* with `apalike.bst`) or `\bibitem[vB...` (*e.g.* with `alpha.bst`). There is no problem about that. However, there is a little problem regarding entries sorting. Indeed, some styles ignore the "von" part and consider the above example as starting with letter `B`, hence following the normal alphabetical order. But other styles such as `alpha.bst` use some abbreviations as citation labels, so they must consider the above example as starting with letter `v`. In order to get αBib to behave properly with those styles, you must use option `-s` which makes "von" parts considered as name initials.

5 Bug reports

You can send bug reports to `mael.hillereau at free dot fr`.

6 Version history

16.apr.2006 (v0.4): Initial public release. `\bibitem` commands are found using line breaks and partial control sequence names, which is quick-and-dirty programming. This should be fixed in a future release.

17.apr.2006 (v0.5): Removed the "`./`" prefix of `alphabib` call in the Makefile of example file. Corrected some typos in the manual. Removed Type-3 fonts from `manual.pdf` and `example.pdf`.

20.apr.2006 (v0.6): Switched to `getopts` for options processing. Added options `-b` and `-l` for inserting header bookmarks into PDF files generated using `pdflatex` and `ps2pdf`. Added penalty customisation option. Added customised headers into the example file. Fixed a bug occurring while output file was given but not already present on disk.

14.may.2006 (v1.0): This is a major release. `\bibitem` commands are now handled much more cleanly. All standard styles as well as other styles which produce `\bibitem` commands in a specific way (such as `frplainnat.bst`) should now be supported (see §4.1). Fixed a bug occurring while using an input file without BibTeX entries. Names with a

"von" part such as "Ludwig van Beethoven" are now handled properly, and the two sorting policies regarding relevant entries are supported through the `-s` option (see §4.2).

References

[1] Nicolas Markey. *Tame the BeaST – The B to X of BibTeX*, 16 October 2005. Version 1.3, `http://www.tug.org/tex-archive/info/bibtex/tamethebeast/ttb_en.pdf`.

[2] Heiko Oberdiek. PDF information and navigation elements with `hyperref`, pdfTeX, and `thumbpdf`. In *EuroTeX conference*, September 1999. `http://www.uni-giessen.de/partosch/eurotex99/oberdiek/paper.pdf`.

[3] Sebastian Rahtz and Heiko Oberdiek. The `hyperref` package, February 2004. `http://www.ctan.org/tex-archive/macros/latex/contrib/hyperref/`.

[4] Peter Wilson. The `tocbibind` package, May 2004. `http://www.ctan.org/tex-archive/macros/latex/contrib/tocbibind/`.