

BibTeX and Annotated Bibliographies

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1 BibTeX

BibTeX is a program that works in conjunction with LaTeX to produce inline citations and references. To use BibTeX, you need to create a “.bib” file that contains your bibliographic entries in BibTeX format. You use `cite` (and variations thereof) to create inline citations and

```
\bibliographystyle{STYLE}
\bibliography{BIBFILE}
```

to produce the references section, where `STYLE` is the name of a BibTeX style file (i.e., `STYLE.bst` exists in your LaTeX search path), and `BIBFILE.bib` is your BibTeX file.

To produce a formatted LaTeX output file that includes citations and references, you must run `pdflatex`, then `bibtex`, then `pdflatex` *twice* to update all of the symbol table references. For example,

```
% pdflatex sample-bib                ;; processes sample-bib.tex
% pdfbibtex sample-bib                ;; processes sample-bib.bib
                                       ;; produces sample-bib.bbl

% pdflatex sample-bib
% pdflatex sample-bib
```

You now have a “.pdf” output file that contains your document and formatted references.

We’ll go over the specifics of BibTeX in class.

The best online sources for BibTeX I’ve found are:

"Getting to Grips with LaTeX: Bibliographics with BibTeX,"
by Andrew Roberts,
<http://www.andy-roberts.net/writing/latex/bibliographies>

"BibTeX and Bibliography Styles,"
<http://amath.colorado.edu/documentation/LaTeX/reference/faq/bibstyles.html>

There are some nice back-end tools for managing a database of bibtex entries, and exporting individual bibtex entries when needed. Some of my students use BibDesk or EndNote for this purpose. I haven’t yet taken the plunge to choose and learn one of these tools, so can’t give you any advice about them, but you might want to explore on your own.

2 Annotated Bibliographies

Your annotated bibliography is due on Monday, February 27. In order to use BibTeX to produce this document, you should download the following files from the course website:

```
plain-annotate.bst -- annotated bibliography style file or BibTeX
                    (written and distributed online by Harvey J. Greenberg)
unsrt-annotate.bst -- an unsorted version
bib-guidelines.tex -- the latex source for this handout
bib-guidelines.bib -- the associated bibtex file
```

The command

```
\nocite{*}
```

will include all of the references in your BibTeX file. Using

```
\bibliographystyle{plain-annotate}  
\bibliography{BIBFILE}
```

will produce a references section in annotated-bibliography format, using the `annotate` field in the BibTeX entries for the annotations. (The references section in this handout were produced in this way.)

I haven't been able to find a BibTeX style file that will let you group references together and include section headers (as in Zobel's annotated bibliography on pp. 164–170). To get the section headers that you see in the annotated bibliography here, I explicitly listed all of the papers I wanted to use, in the order I wanted them to appear.

```
\nocite{boutilier97,boutilier01,bacchus96,cohen01}
```

I used the `unsrt-annotate.bst` BibTeX style file, then edited the `bib-guidelines.bbl` file (which BibTeX produces) manually, *after* running BibTeX. Each section header is produced by the line

```
\subsection*{SECTION HEADER}
```

just before the first

`bibitem` entry for that section. This isn't a very pretty solution, because every time you change your BibTeX database and re-run BibTeX, you have to edit the `.bbl` file again. But it works. (Obviously, your section headers should be more semantically meaningful than mine...)

References

The First Two Papers

- [1] Craig Boutilier, Ronen Brafman, Chris Geib, and David Poole. A constraint-based approach to preference elicitation and decision making. In *AAAI Spring Symposium on Qualitative Decision Theory*, 1997.

Boutilier is one of the most published researchers in the area; this seems like a nice approach to the general problem, and should have some good references to follow.

- [2] Craig Boutilier, Fahiem Bacchus, and Ronen I. Brafman. UCP-Networks: A directed graphical representation of conditional utilities. In *Proceedings of the Conference on Uncertainty in AI*, 2001.

Not about preference elicitation per se, but about representing structured utilities, which can help to guide the elicitation process.

The Last Three Papers

- [3] Fahiem Bacchus and Adam J. Grove. Utility independence in a qualitative decision theory. In *Proceedings of KR'96*, pages 542–552, 1996.

Everybody seems to cite this paper.

- [4] William W. Cohen, Robert E. Schapire, and Yoram Singer. Learning to order things. *Journal of AI Research*, 10:243–270, 1999.

Not exactly elicitation of a full preference function, but a related problem of learning rank-ordering functions over sets of objects.]