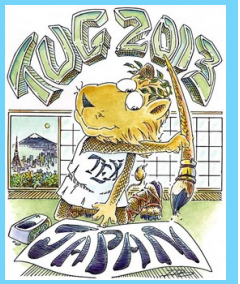

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The Multibiliography Package: Articulating and Diversifying the Ordering of Bibliographic Entries

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TUG 2013

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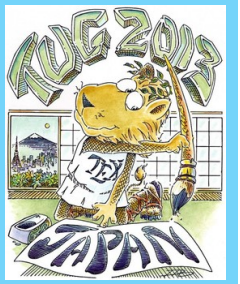
†Département Informatique Télécom Bretagne; Technopôle de Brest Iroise, CS 83818; 29238 Brest Cedex 3; France

‡Systems Biology School & Computational Materials Science Center; MS 6A2, George Mason University; Fairfax, VA 22030; USA



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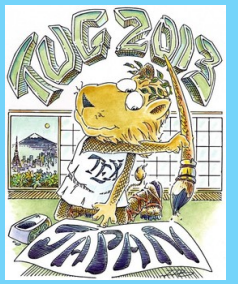
1. Why Several Bibliographies?

1. Separate bibliographies for separate chapters. E.g. chapterbib [Arseneau, 2010: 1].
2. Separate bibliographies for separate topics. E.g. multibib [Hansen, 2008: 2].
3. Separate *order* of entries. This work.



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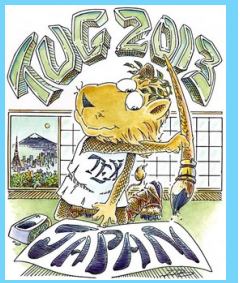
2. Bibliography as a Narrative

Bibliography is not just a technical list of cited works; it is a way to describe the state of the field.



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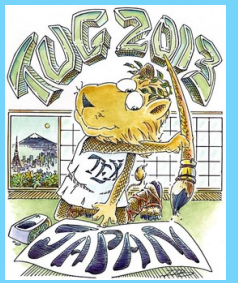

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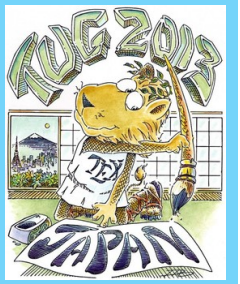

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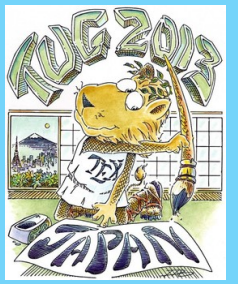
Chronological ordering: the narrative is based on a time sequence of the works.



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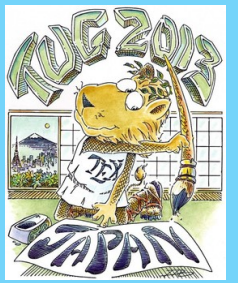
Which one to choose? Let's have them all!



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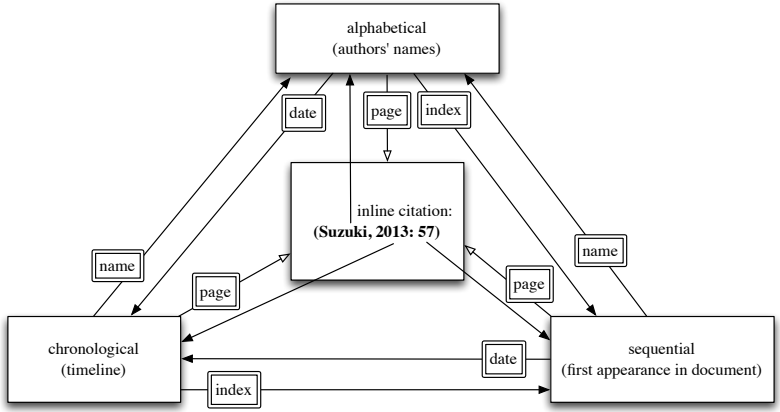
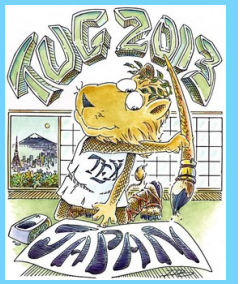
3. Our Solution



"Author and year"-like inline citations *with* sequence numbers. Up to three differently ordered lists of references. Fully clickable (hypertextualized) names, years, & dates, both in-line and in subbibliographies.

Example: [Mori, 2009: 3].



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4. Implementation

4.1. LaTeX Style

```
\usepackage{multibibliography}
```

No options (yet); inline citations with the usual `\cite` command.

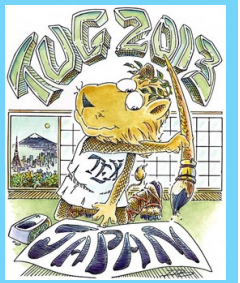
New commands: `\bibliographysequence`, `\bibliographytimeline`. Combine style *and* database commands.

Example (creating all three bibliographies):

```
\renewcommand\refname{References sorted by name}
\bibliographystyle{apalike}
\bibliography{tugtalk}

\renewcommand\refname{References sorted by appearance}
\bibliographysequence{tugtalk}

\renewcommand\refname{References sorted by year}
\bibliographytimeline{tugtalk}
```



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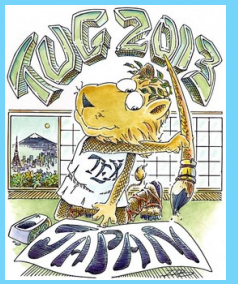
4.2. BibTeX Styles

Three styles:

1. Standard `apalike` for references sorted by name.
2. Standard `unsrt` for references sorted by appearance.
3. New style `chronological.bst` for references sorted by year.



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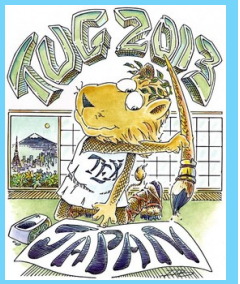
Perl script `multibibliography` is invoked instead of `bibtex`. It calls `bibtex` itself thrice, re-sorting the entries each time.



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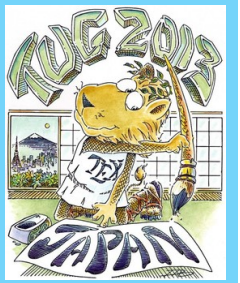
Standard sequence

`(pdf)latex` → `bibtex` → `(pdf)latex` ...



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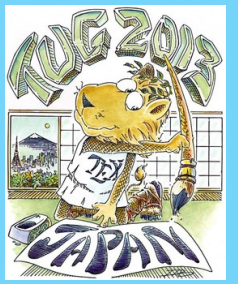

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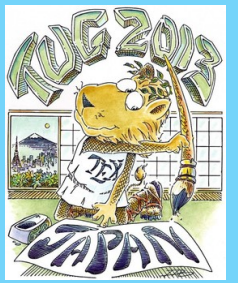
5. Bugs, Wish list, etc.

5.1. Compatibility

1. The package is compatible with hyperref [Rahtz and Oberdiek, 2012: 4] *but not* with packages that redefine its internals— e.g. beamer [Tantau et al., 2011: 5].

2. The package is also not compatible with bibliography packages like natbib [Daly, 2013: 6].



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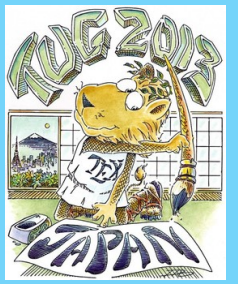
5.2. Enhancement Ideas

1. The BibTEX styles are hardwired (Section "BibTEX Styles"). It would be nice to give the user the option to choose them.
2. The citation punctuation is hardwired. It would be nice to make it customizable, in the natbib [Daly, 2013: 6] style.
3. There is no analog to the natbib `\citet` command and its friends.
4. The scale of chronological sorting should be refined beyond year to include month, day, and time (especially for snapshots of web pages, etc.).
5. Other dimensions could be used as *ad hoc* sorting keys, such as city or topic (by extending a BibTEX database).



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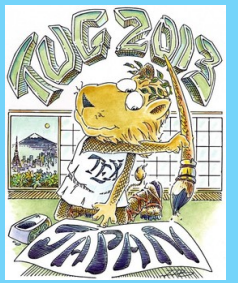
6. Conclusion

1. Extended subbibliographies both represent and re-present references, showing them in fresh and useful settings.
2. Two related activities are encouraged by such decontextualization:
   (a) looking up a particular entry (including page call-outs), and
   (b) exploiting locality of reference, so that other related sources are likely to be nearby.
3. The philosophy is to leverage the power of hyperreferential idioms to augment reading by considering a document as a special kind of database that is indexed in appropriate dimensions.



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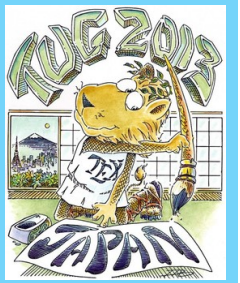
4. The multibibliography package treats the bibliography information as a spreadsheet-like database, including “pivots” on sorting keys.
   (a) offline information such as name–value pairs in associated BibTEX files
   (b) compile-time information such as sequence number and appearance location (page call-outs)
5. Various slices of bibliographic information can be displayed, so that each references section acts as a kind of special index, but with granularity not at the topic level, but at the document level.



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[Arseneau, 2010: 1] Arseneau, D. (2010). *Chapterbib. Multiple bibliographies in LaTeX*. http://mirrors.ctan.org/macros/latex/contrib/chapterbib.

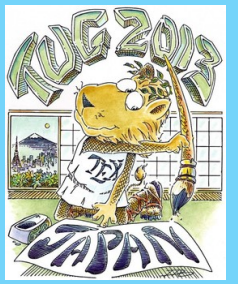
[Daly, 2013: 6] Daly, P. W. (2013). *Natural Sciences Citations and References*.

[Hansen, 2008: 2] Hansen, T. (2008). *The multibib Package*. http://mirrors.ctan.org/macros/latex/contrib/multibib.

[Mori, 2009: 3] Mori, L. F. (2009). Managing bibliographies with LaTeX. *TUGboat*, 30(1):36–48.

[Rahtz and Oberdiek, 2012: 4] Rahtz, S. and Oberdiek, H. (2012). *Hypertext marks in LaTeX: A manual for hyperref*. http://mirrors.ctan.org/macros/latex/contrib/multibib.

[Tantau et al., 2011: 5] Tantau, T., Wright, J., and Miletić, V. (2011). *The Beamer class*. http://mirrors.ctan.org/macros/latex/contrib/beamer.



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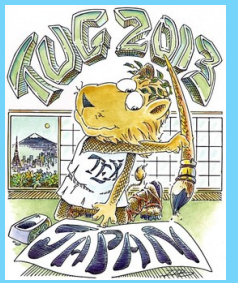
[3: Mori, 2009] Lapo F. Mori. Managing bibliographies with LaTeX. *TUGboat*, 30(1):36–48, 2009.

[4: Rahtz and Oberdiek, 2012] Sebastian Rahtz and Heiko Oberdiek. *Hypertext marks in LaTeX: A manual for hyperref*, November 2012. http://mirrors.ctan.org/macros/latex/contrib/multibib.

[5: Tantau et al., 2011] Till Tantau, Joseph Wright, and Vedran Miletić. *The Beamer class*, 2011. http://mirrors.ctan.org/macros/latex/contrib/beamer.

[6: Daly, 2013] Patrick W. Daly. *Natural Sciences Citations and References*, September 2013.



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