

Word processor support in citation managers: Is there a better way?

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Citations of the relevant literature are an essential feature of scientific papers. Reference Manager software helps adding these citations and creating a bibliography. Are there differences in how reference managers work together with your word processor of choice?

Support for your favorite word processor

Support for word processors other than Microsoft Word is spotty. The Mendeley plugin is only a few months old, and the latest Zotero release (1.5b) broke the plugin for Word 2004. I expect the Word for Macintosh support of both these tools to become better over time. Google Docs doesn't have any reference manager integration. This greatly limits its usefulness for writing scientific papers. The RefWorks plugin connects to an online database, so you can't add or edit references without an internet connection.

Most word processor plugins add an extra menu that allows to add and edit citations (allowing the user to search the reference manager database), and to add and edit bibliographies (allowing the user to pick a citation style, see below). Most reference managers also allow scanning for reference tags in documents produced by other word processors (e.g. in the .rtf format), but that process requires a few extra steps.

Support for your favorite journal

I think it is very unfortunate that paper authors have to deal with a large number of different citation styles. All that we really need for paper references is the DOI (e.g. doi:10.1038/455708a) to make the reference automatically identifiable and some basic information (authors, title, journal, year, issue) to make the reference readable. But it is beyond my understanding why anybody would care about formatting details such as whether the publication year appears before or after the journal name. There have been initiatives to standardize the formatting of references (e.g. Citing Medicine), but for now paper authors have to format their bibliographies in the style required by the journal. Citation styles are an

important asset for those that write reference manager software. Many people will recall that Thomson Reuters (who makes Endnote) sued George Mason University (who makes Zotero) last year, because Zotero added a feature that could convert Endnote .ens citation style files into Citation Style Language .csl files. Mendeley is also using .csl for citation styles.

Is there a better way?

Word processor plugins are fragile and usually break when a new software version is released (see for example this chart for Endnote and Word for Macintosh). Native word processor support for references allows a much tighter integration into the word processor interface. Lastly, documents produced by different reference managers are not interchangeable, as each plugin uses a slightly different formatting approach. This means you can't write on a paper using Endnote and send it to your coauthor who uses Zotero.

The latest versions of Microsoft Word (2007 and 2008 Macintosh) have built-In support for citations and bibliographies, but this feature is severely limited for the requirements of academic papers. Only a handful of citation styles are supported, adding more styles is possible but requires some serious skills in XML editing. References are stored in one flat file (Sources.xml) and can't be searched. OpenOffice is also struggling with built-in bibliographic support.

LaTeX has long included support for references using BibTex and shows how citation support should be done. Tools like JabRef or BibDesk extend this functionality, and most reference managers will import/export bibtex files.

Both Microsoft Word and OpenOffice should open up their citation APIs to third-party tools. This would create better citation tools, allows the easier exchange of documents between authors (journal submissions), and would it make easier for smaller tools such as Papers to integrate with word processors (a workaround is described here). If they wait too long, we will probably see the online word processors such as Google Docs, Zoho Writer start adding an API for citations and bibliographies and all of the sudden become very serious alternatives for writing scientific papers. Lemon8-XML already has very good bibliography support.

P.S. Bruce D'Arcus has recently come to similar conclusions (The Babel of Citations).