My Paper Writing Dream Machine 1.0

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I've written a similar post **before**, put I would like to talk about some of the features that I would like to see in an ideal paper writing application.

Intelligent Formatting
Content and formatting should be separated from each other. A manuscript should require as little formatting as possible, and that formatting (including the format of references) should be defined in a Journal style that is automatically applied to the manuscript. **Publicon** by Wolfram Research tried to achieve this, but unfortunately appears to be a dead product.

References
A reference database should be integrated into the paper writing application. Ideally this would be a web-based database such as **Connotea**, **CiteULike**. Both **Refworks** and **EndNote Web** already offer some level of integration.

Versioning
Storing all versions of a manuscript is very important for obvious reasons: backup, keeping track of revisions and coordinating the input from more than one author. Version control is standard practice in software development, using tools like **Subversion** or the newer **Git**.

Integration with Online Submission Systems
Submitting a manuscript to an online manuscript submission system such as **EditorialManager** or **Topaz** is too complicated. This process could and should be automated.

Summary
My Paper Writing Dream Machine will in all likelihood turn out to be a web-based application, using on one of the more advanced platforms **Google Gears**, **Microsoft Silverlight** or **Adobe Flex**. And the data will be in XML using a standard **DTD**. Some of the pieces of the puzzle already exist, but nobody has yet put them together in a way that it creates a compelling alternative to the currently used systems.