

# Re: My Ideal CAS

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*Source:* <http://sci.tech-archive.net/Archive/sci.math.symbolic/2008-09/msg00005.html>

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  - *Date:* Mon, 01 Sep 2008 19:05:40 +0200
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Mark Lawton wrote:

I use Maxima, and I think that it is generally excellent. It falls short of my ideal, however, which would have the following features:

- \* hosted like Google Docs. Java code to run programs would be downloaded as required, and programs the user writes could optionally be saved on the server, and shared (also like Google docs). One could then, for example, email a link to one's CAS solution to a problem
- \* from a development point of view, new functions could be written in symbolic mathematical language, and stored in a database where everyone could retrieve and view them. When approved, this symbolic code would be translated into Java (which runs on most hardware platforms) in a highly optimal way, so that it would run very quickly on a user's computer
- \* all areas of mathematics would have links to the matching wikipedia pages
- \* each function would have a full tutorial on its usage (including wikipedia links)
- \* where specialist open-source software for a particular area exists that is better than the CAS's coverage of that area, the CAS should inform the user (for example, Maxima has a simplex solver, but it has nothing like the remarkable set of linear programming features that the open-source program lp\_solve can offer)
- \* the CAS would also have an expert system (probably using case-based reasoning) in which one could input a list of the elements of the problem, and the system would respond by offering a list of mathematical areas (or even particular functions) that would be likely to offer a solution to the problem, ordered by how well each area matches the elements

THAT, gentlemen, would be MY ideal CAS!

Re: My Ideal CAS

You definitely should have a look at Sage!

<http://www.sagemath.org/>

Cheers,

Jaap

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