Mathifold

Mathifold is an online open source tool to simplify the creation of documents containing mathematical symbols. The product of Mathifold is an html document complete with formatted equations, text and other features such as equation folding and symbol references.

It would have the following features:

* The document owner would be able to enter equations “step wise”, hence enabling equation folding.

Depending on the level of detail required, the end user would be able to go to the required depth in the folded steps of an equation.

* The mathematical symbols would be rendered using open source javascript libraries. Images will not be used.
* Symbols such as Greek characters and integral signs can be added to an equation by a drag-and-drop method, without using LaTeX or similar code.
* Every variable or symbolic constant in an equation can be assigned a reference, which summarizes the description and first use of that variable/symbolic constant.
* From an end user point of view, he/she would be able to view the reference data of a particular variable/symbolic constant by just clicking on that variable in an equation.
* The document creator would be able to save remote copies of his document, by creating an online account.
* Traditional text formatting abilities like bold-face and paragraph indents will be available.
* The exported html document will have features such as code folding and the variable reference data embedded into it. The end user would not require a working internet connection for all such features to work.

Any libraries used in the development of Mathifold will be 100% open source. We plan to use MySQL+PHP for handling user accounts. Logic involved in equation folding and variable referencing would be implemented in Javascript.