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Donald Knuth introduced  $\text{\TeX}$  to the mathematics community in the Gibbs Lecture at the 1978 Joint Mathematics Meetings. This was a pivotal event in the development of the impressive and ever-expanding collection of tools that continue to transform all manners of mathematics communication.

Today's mathematicians are increasingly interested in preparing materials that can be accessed in a variety of electronic formats (HTML, PDF, CDF, ePub3, ...), on a wide array of devices (computers, tablets, pads, e-readers, smartphones, ...). Current tools for creating mathematical materials on the web include HTML5, javascript, MathJax, JSXGraph, jQuery, .... These tools are more powerful and generally easier to use than many of their predecessors.

In addition to presenting mathematics on the web we also want to “do” mathematics on the web. This requires the ability to create mathematical expressions that both retain their mathematical meaning and are professionally typeset. Towards this end the presenters introduce MathLex, an open source mathematics parser and renderer written in JavaScript.

This talk provides the background necessary to better appreciate the other talks in this session. (Received September 25, 2012)