

JSXGraph - Dynamic Mathematics running on (nearly) every device

Bianca Valentin and Alfred Wassermann, University of Bayreuth, Germany

JSXGraph (<http://jsxgraph.org>) is a cross-browser library for interactive geometry, function plotting, charting, and data visualization in a web browser. It is implemented completely in JavaScript, does not rely on any other library and no plug-ins are required. JSXGraph is easy to embed and has a small footprint: about 80 KByte if embedded in a web page. Special care has been taken to optimize the performance.

This talk gives an overview on the JSXGraph development since CADGME 2009: JSXGraph runs on every computer which supports a SVG or VML capable web browser. This includes a broad range of computing devices from the desktop computer down to the iPhone and other multi-touch devices. Furthermore, new elements like conic sections and Bezier curves have been introduced, as well as a layer system. Labels and texts may use LaTeX-syntax and animation of objects has been improved. The supported file formats now include Geonext, Geogebra, Intergeo and Cinderella files (the latter at least partially), as well as the ArcView format for displaying geographic data. Finally, we will present our new worksheet creator XWC2. This new project enables the teacher or student the easy creation of web-based dynamic worksheets containing geometric constructions without any knowledge of HTML and JavaScript.