

# **Browser-Based Collaboration with InkChat**

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We present the elements of a new architecture for computer-assisted mathematical collaboration based on a shared virtual canvas. Free-hand pen input, geometric sketches, typed input and images can be entered and viewed simultaneously by multiple participants. In particular, this allows the shared entry and manipulation of mathematics and the annotation of documents. Pen input is captured as InkML, rather than as raster graphics, allowing semantic analysis and manipulation. Unlike previous work, we make the communications layer fundamental and base composition and editing functions on top of that, instead of viewing communication as an add-on to a drawing program. Based on our past experience, we have chosen this time to make ease of casual use and adoption the principal design criterion. This has led to a JavaScript browser implementation and cloud-based storage.