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LogiSketch: a free-sketch digital circuit design and simulation SystemLogiSketch.

Hammond, Tracy (ed.) et al., The impact of pen and touch technology on education. Cham: Springer (ISBN 978-3-319-15593-7/hbk; 978-3-319-15594-4/ebook). Human-Computer Interaction Series, 83-90 (2015).

Summary: This paper presents LogiSketch, a system that recognizes hand-drawn digital logic diagrams and then allows students to simulate those diagrams. LogiSketch is one of few complete sketch recognition systems (and the first in its domain) that allows the student to draw freely, without drawing style constraints. LogiSketch employs novel recognition feedback and active support for error correction. Additionally, LogiSketch incorporates behind-the-scenes, user-targeted learning that improves recognition that requires no additional effort from the student. A pilot study reveals that LogiSketch succeeds in engaging students, even though it is not yet a suitable replacement for menu-based tools. Study results also reveal what is most important in the interface and functionality of a sketch recognition tool for education.

Classification: U70 M50 E30

Keywords: logical diagrams; recognition feedback; circuits; digital design and simulation systems
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