# An Experimental Archaeology of CAD

## Using Software Reconstruction to Explore the Past and Future of Computer-Aided Design

Daniel Cardoso Llach,[1] Scott Donaldson[1]

[1]Computational Design Laboratory, School of Architecture, Carnegie Mellon University, Pittsburgh, USA

dcardoso@cmu.edu

**Abstract.** This paper proposes software reconstruction as a method to shed new light into the material, gestural, and sensual dimensions of computer-aided design technologies. Specifically, it shows how by combining historical research and creative prototyping this method can bring us closer to distant ways of seeing, touching, drawing, and designing—while raising new questions about the impact of CAD technologies on present-day architectural practices. It documents the development of two software reconstructions—of Ivan Sutherland's "Sketchpad" and of Steven A. Coons's "Coons Patch"—and reflects on the responses they elicited in the context of two exhibitions. The paper shows how software reconstruction can offer access to overlooked aspects of computer-aided design systems, specially their material and sensual dimensions, and how we may explore its broader potential for research, preservation, pedagogy, and speculative design of design technologies.

**Keywords:** Software Reconstruction, Media Archaeology, CAD, Sketchpad, Steven A. Coons, Ivan Sutherland, Computational Design History