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**Intersecting representation and communication infrastructures.**

Hegedus, Stephen J. (ed.) et al., The SimCalc vision and contributions. Democratizing access to important mathematics. Dordrecht: Springer (ISBN 978-94-007-5695-3/hbk; 978-94-007-5696-0/ebook). *Advances in Mathematics Education*, 47-62 (2013).

Summary: We analyze the intersection of new forms of representation infrastructures in SimCalc MathWorlds® with the affordances of available communication infrastructures. We describe the fundamental design principles from a software and curriculum perspective of why these two infrastructures can be overlapped in educational environments for important and meaningful learning outcomes. The products of this intersection result in new modes of expression (in terms of gesture, deixis and informal/formal registers), classroom identity formation in mathematically meaningful ways, and pedagogy in terms of activity structure and intentionality.

*Classification:* U50 A40 B20 C30 D20 C70

*Keywords:* representational infrastructure; communication infrastructure; mathematical expressivity; activity structure; intentionality; classroom identity formation; computer aided instruction

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