

User Interactions for Scalable Freehand Sketching

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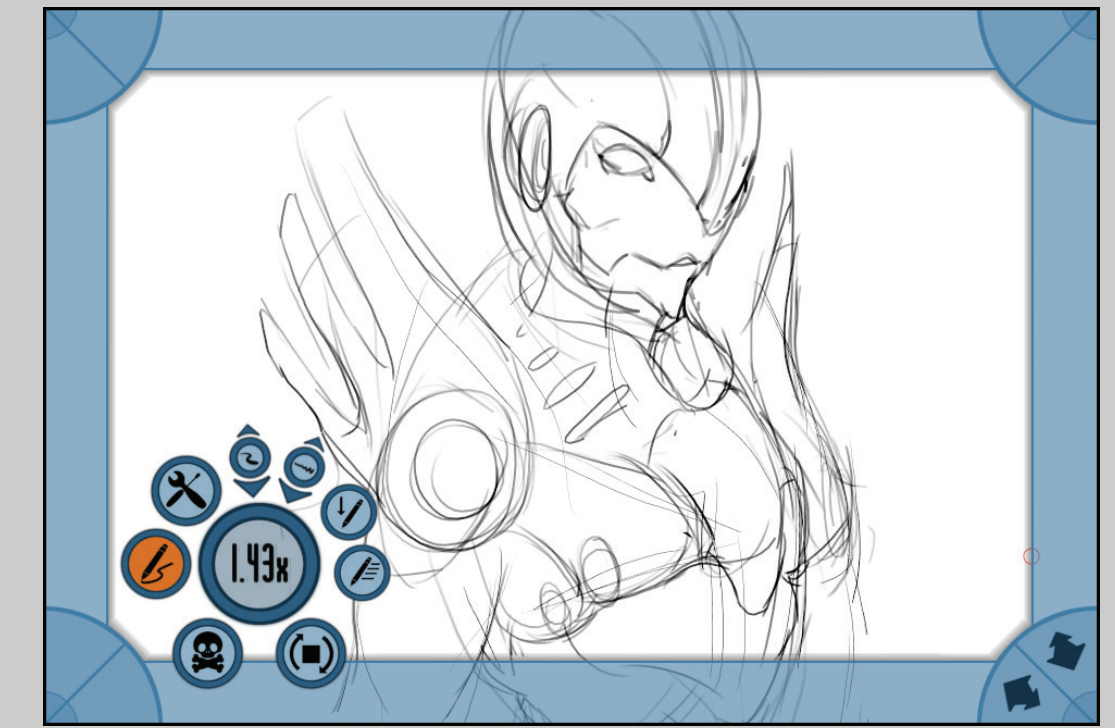
Motivation

Make digital drawing accessible for everybody, from novice to expert; break free from the screen-aligned canvas.



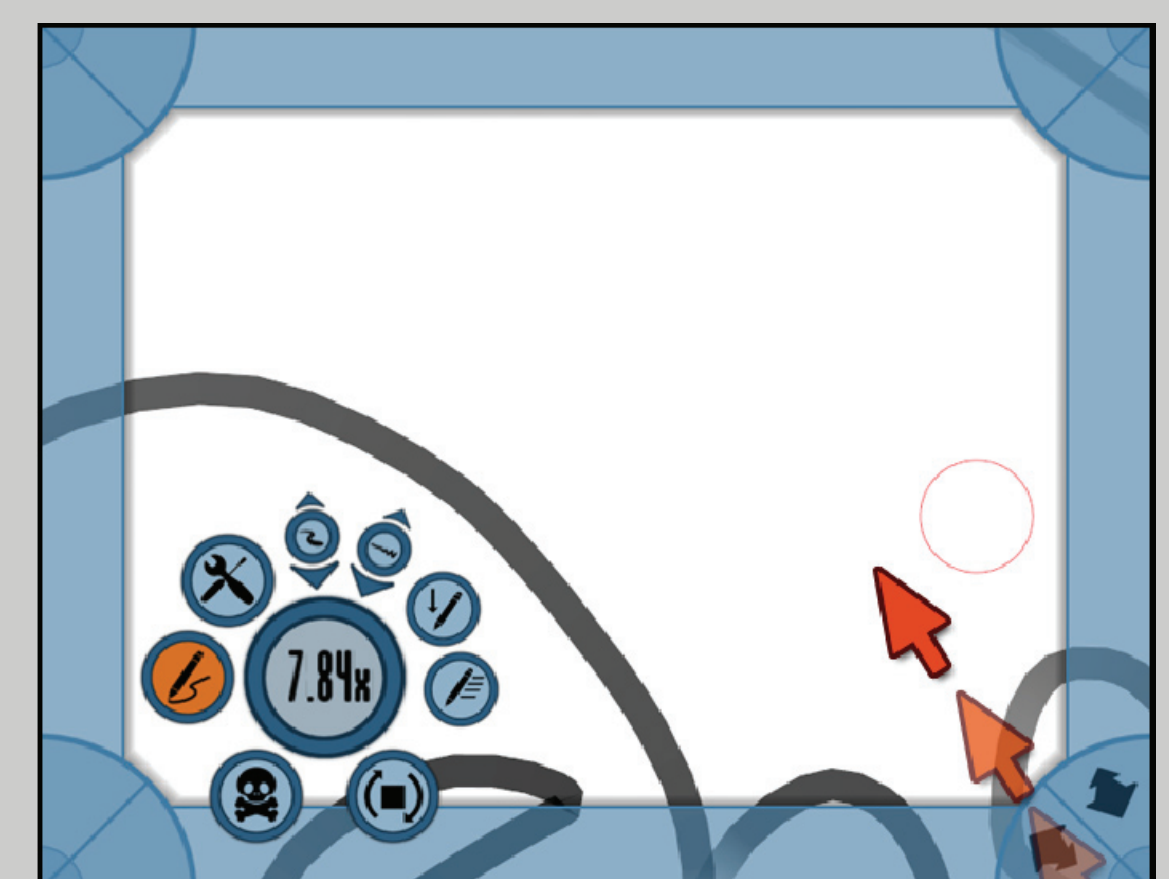
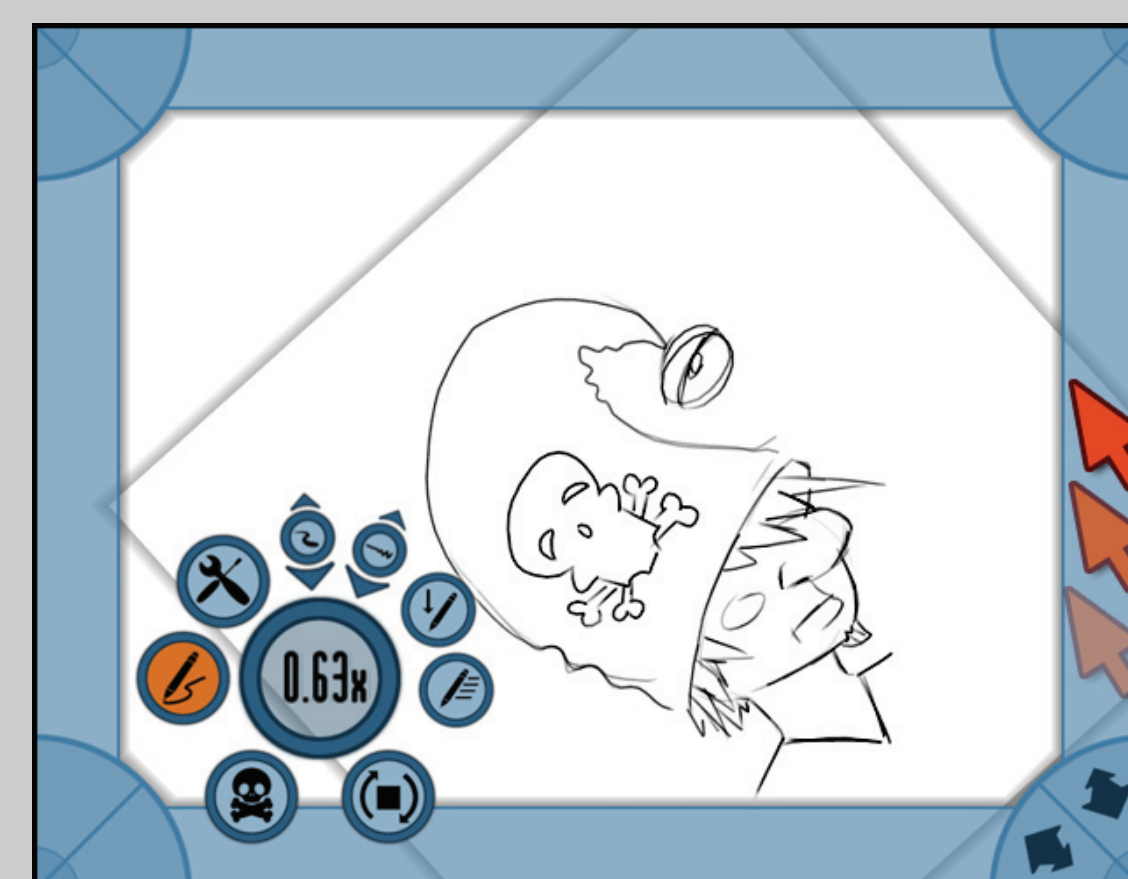
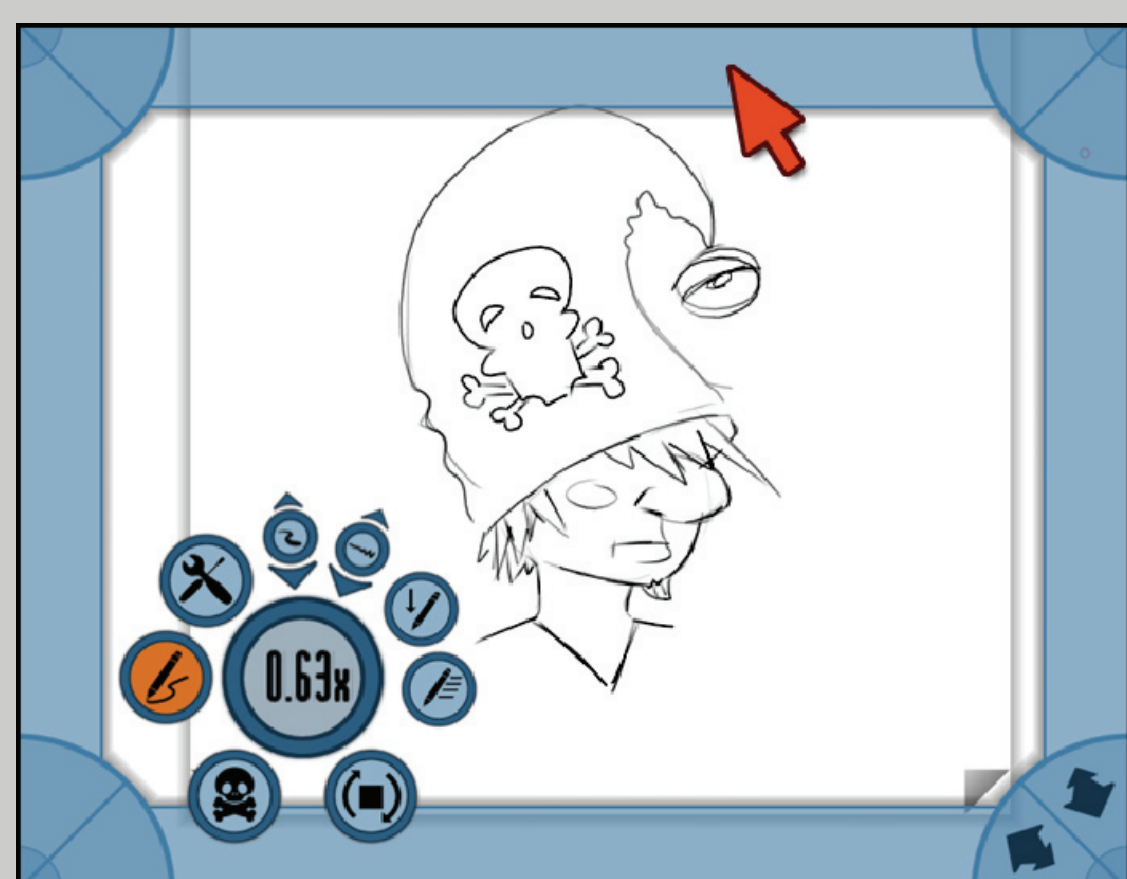
Idea

Control everything with just a pen tablet and a minimal interface: adapt interactions accordingly.

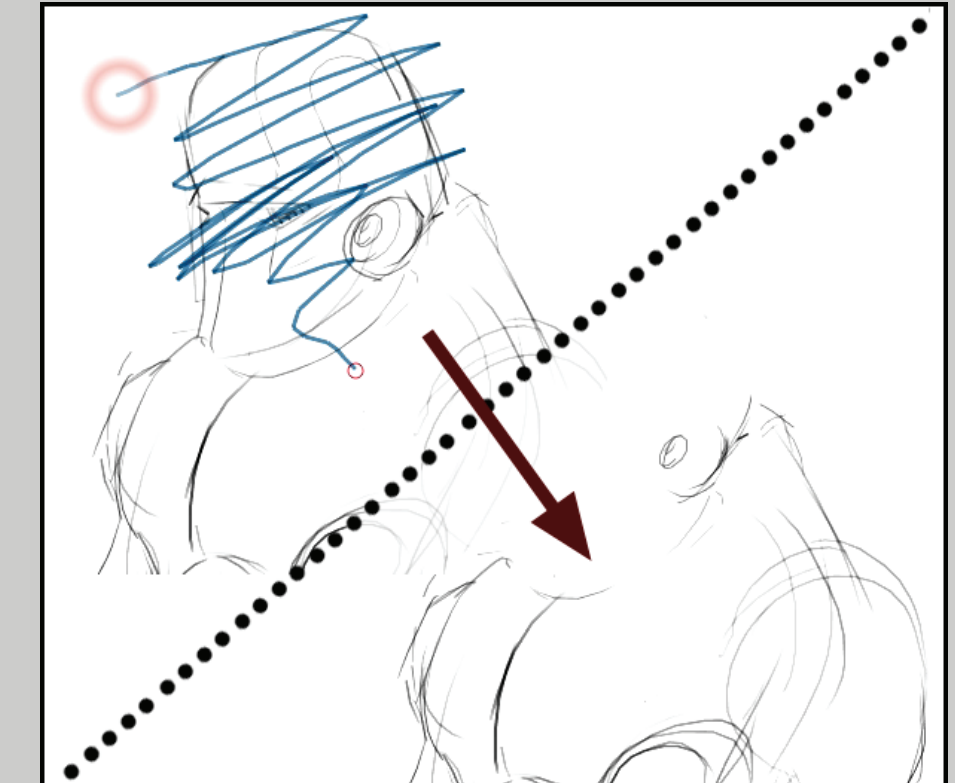
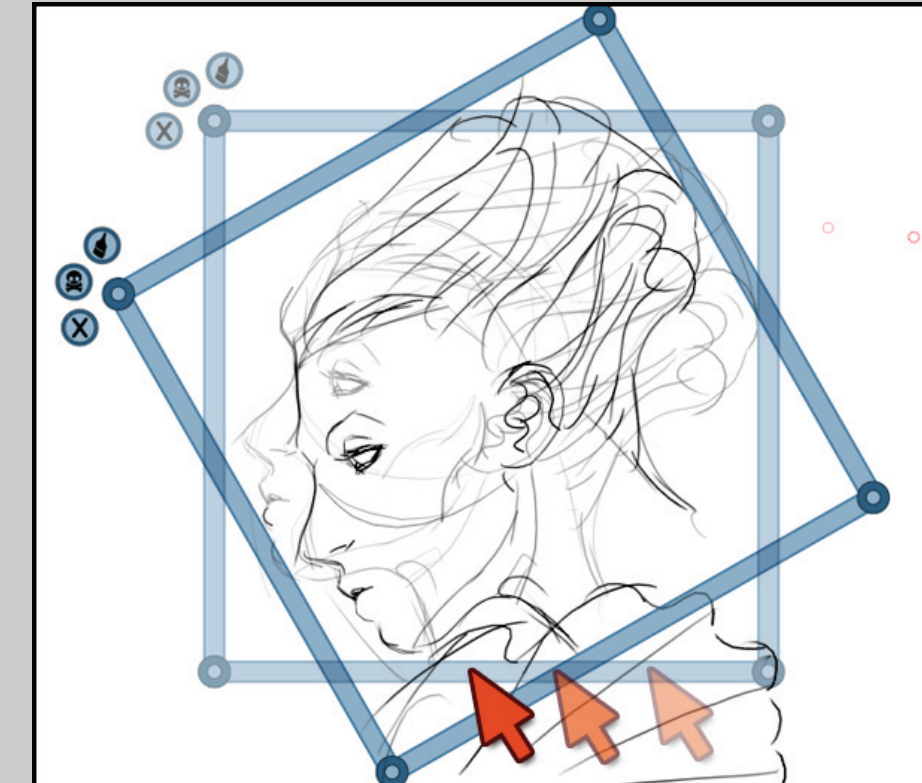
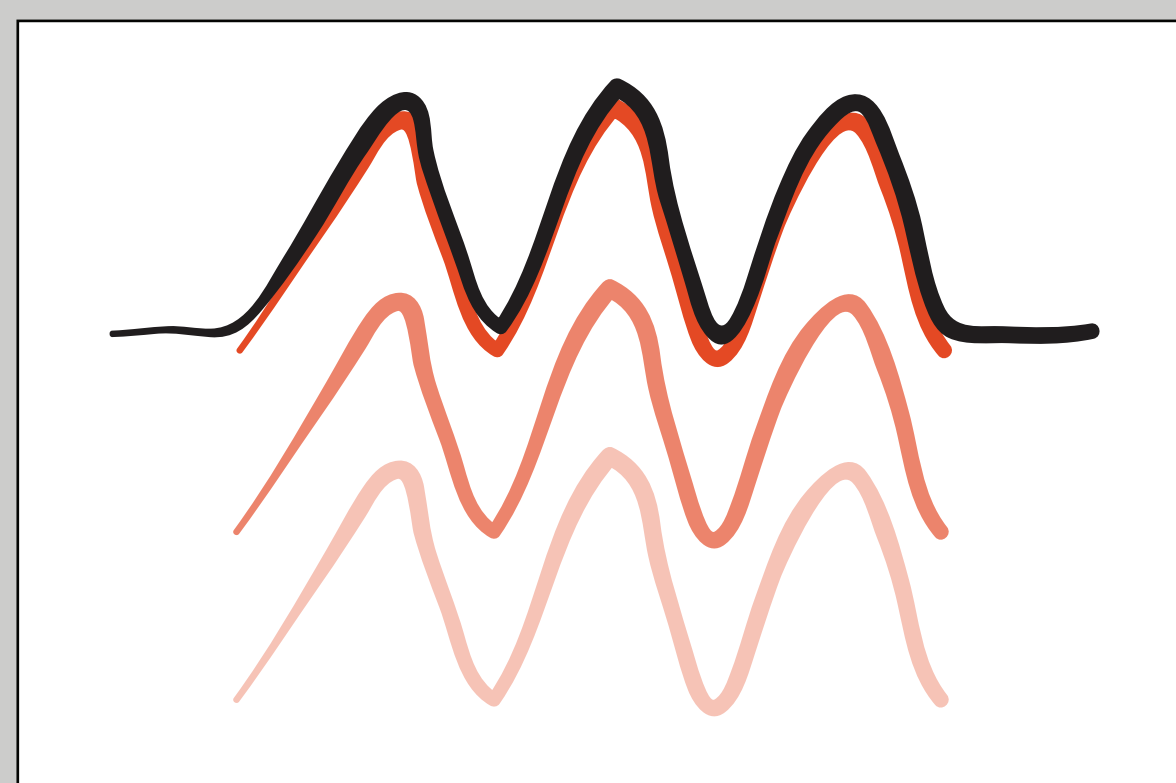
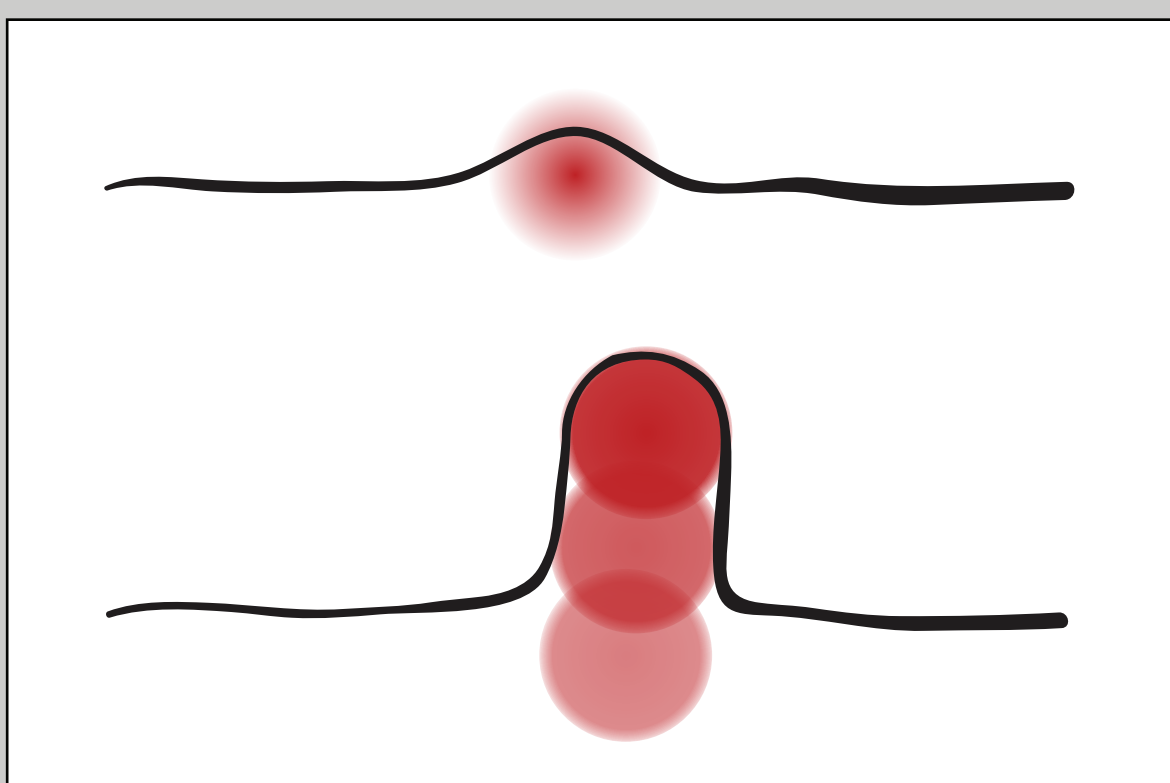


Tools and Interactions

Context-sensitive gestures for canvas manipulation. Drag straight lines from the frame to perform canvas interaction, such as translation, rotation, and scaling. The vector-based stroke representation gives almost infinite scalability.



Strokes can be manipulated with a flexible brush system or by simply using other strokes. Controlling the transformation of a selection is possible with gestures similar to those for the canvas, and a tap gesture allows users to create a tap widget from which precise selection paths can be drawn.



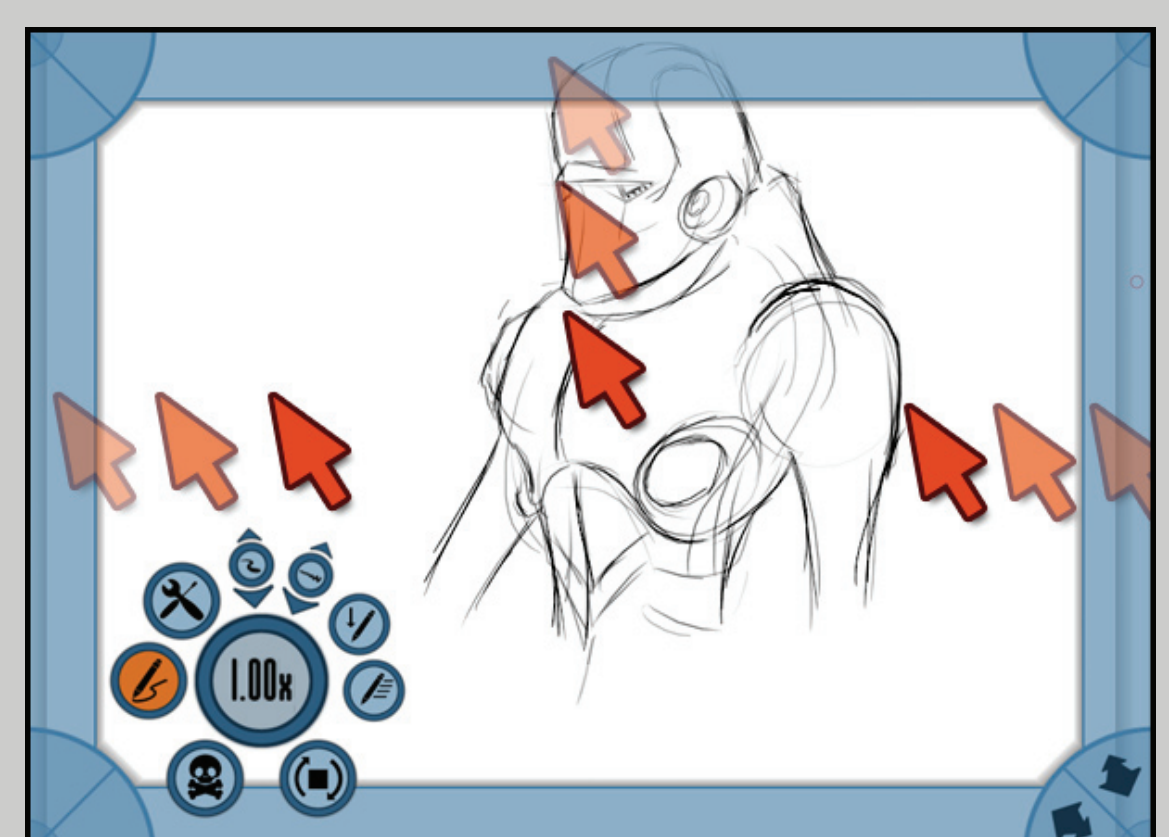
Setup

One screen, one tablet and pen, and one user.

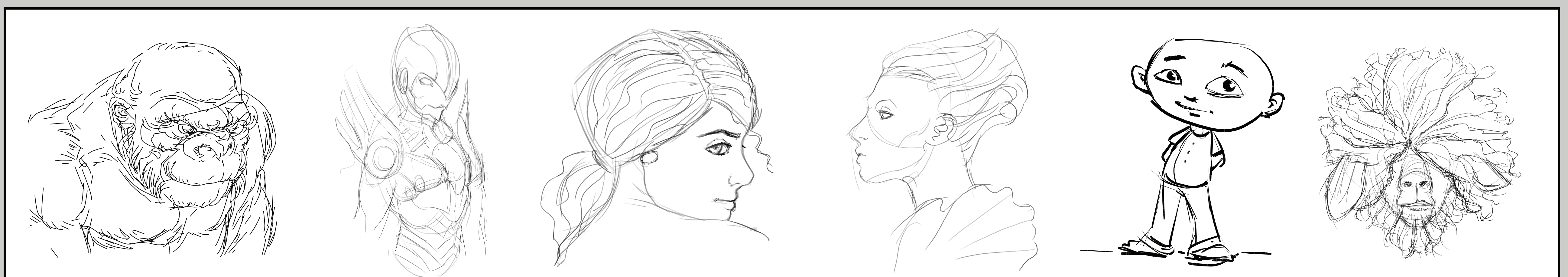


Limitations

Limited visual indication of functions, dragging the canvas only inward.



Results



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