BricoSketch: Mixing Paper and Computer Drawing Tools in Professional Illustration. Tsandilas, et al. ITS. 2015.

What are the core research questions addressed by the work?

- Enabling artists to take advantage of the power of computer tools earlier in the creative process

What motivates the work?

- Switching from traditional tools to software and vice-versa often involves significant manual process in the illustration workflow

How does the work understand the usage, capabilities, and limitations of paper?

- While interactive technologies have radically changed the way visual artists work, many artists still work on paper and keep using traditional painting and drawing tools because of the following reasons: (1) resistance to progress, (2) usability properties of physical tools, (3) existing computer tools currently still fail to fully capture the richness and variety of artistic styles supported by physical media
- Illustrators use paper and computer drawing tools at different phases of a project, from sketching to final illustrations
- The illustration process involves switching between traditional tools and software because of the limitations and capabilities of the two
- Paper is tactile, captures more richness, allows for a variety of artistic styles
- Paper lacks digital capabilities like zoom, blend, and manipulation tools

What is the target application domain of the work?

- Illustration

What are some proposed extensions to paper proposed by the work?

- Enable illustrators to interactively create partial views of their drawings. Such views can be transposed and rescaled. Artists can then use them to create variations of their illustrations or rescaled. The implementation uses above-the-surface interactions and supports traditional drawing tools such as common pencils and pens.

How are the proposed extensions implemented?

- Use of iSketchnote for pen tracking
    - 7.1 x 9.7 inch magnetic surface that captures the 3D position and orientation of small magnetic rings with a latency of about 50 ms
- ACER K11 mini projector mounted 50cm above the table to display the virtual space on paper

What findings have been obtained from either the implementation process or an evaluation of the proposed system?

- Limitation
    - Calibration between physical and virtual space sometimes not accurate, and will hinder the user experience
    - Not optimized for editing, currently only supports adding strokes
    - Additional application specific requests from study participants
- System demonstrated to support effective transition between paper and computer tools