Musink: Composing Music through Augmented Drawing. Tsandilas, et al. CHI. 2009.

What are the core research questions addressed by the work?

- Create tools to support the creative process of composers

What motivates the work?

- Composers express their ideas on both paper and via computational tools. A key challenge is to create tools that support this creative process.

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

- In the context of music composition
    - In the beginning, composers use paper because it is flexible, easy to transport, and less cumbersome than a stylus on a graphics tablet
        - Paper permits free associations and provides a direct link between human gesture and a musical idea
    - In the middle of the process, paper and computers each offer flexible, but different, modification capabilities and powers of expression
    - In the last stage, paper is no longer valued for its flexibility, but rather for its permanence as a reference point and archival artifact
- In many cases, composers move easily back and forth between paper and computers, with no conflicts
    - Some composers experience a conflict
    - Preferred medium for imagination and writing remains paper, because it is slow and static
    - Most composers use electronic music editors when they want to implement an idea that has already been expressed on paper
- Paper is more portable, flexible, and receptive to free expression phases of creative work

What is the target application domain of the work?

- Music composition

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

- Enable composers to smoothly transition between paper drawings and an electronic music composition tool
    - Provide recognizers of common needs like scoping and annotation
    - Provide users with the ability to define new gestures and associate them with their own pre-defined software functions
- Extensible gesture-based language structured around basic musical literacy

How are the proposed extensions implemented?

- Anoto technology for pen stroke capture
- OpenMusic software

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

- Future systems must provide a flexible way of linking composers' drawings to their music composition tools
- Give users maximum control over the assignment of meaning to their gestures

- How to best integrate digital processes heavily domain dependent
    - For instance, in music composition, composers do not “sketch” - they make very precise drawings in which the physical characteristics of each gesture has meaning with respect to the musical idea being expressed and the computation will result
- The work utilizes an interesting interaction modality which might be of use in other future applications:
    - Semi-structured delayed interpretation: Offering a delayed interpretation of gestures, which addresses the issue of poor gesture recognition