From Individual to Collaborative: The Evolution of Prism, a Hybrid Laboratory Notebook. Tabard, et al. CSCW. 2008.

What are the core research questions addressed by the work?

- Designing laboratory notebooks that take advantage of both electronic and paper formats of the notebook

What motivates the work?

- The biology lab notebook is still central to the practice of biologists
- Research activities increasingly online, being conducted remotely, involving multiple streams of data, involving more data and requirement of processing with computational tools, which are not conducive to paper lab notebook use

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

- Use in the context of biology research: Recording procedures, data, results
    - Seen as a personal record of an individual scientist
    - Primary archival and communication medium
    - Biologists are under increasing pressure to use fully electronic notebooks
- The problems with managing paper and digital documents increase in collaborative settings - it is difficult maintain alignment across mediums
- Traditional lab notebooks are long-term, chronological records, formal, requires disciplined writing, cannot be edited, archive, legal document
- Capabilities of paper: lightweight, ubiquitous, inexpensive, easy to use
- Paper may not be most practical given increased use of computation in biology

What is the target application domain of the work?

- Biology research

What is the proposed system?

- Work proposes a collaborative tool for capture, visualization, and sharing of user activity that involves the following components:
    - Paper notebook: Hand-written texts and drawings
    - Electronic notebook: Typed or copied text and images
    - Desktop activity: Email, websites, documents
    - Web activity: Feeds from the web
    - Shared activity: Notebook entries from others

What is the proposed extension of paper in the work?

- Enabling cross-linking between physical and digital mediums

How are the proposed extensions implemented?

- Computer application for the most part coupled with Anoto digital pen technology for notebook written input capture

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

- A stream architecture offers a useful, general way to publish and reuse information across applications
- Scientists' needs for reflection go beyond personal information management

- Master notebooks are a common reference point that can help researchers to manage and reflect on their own activities
- Redundant information is a key element for reflection