

A Desk Supporting Computer-based Interaction with Paper Documents. Newman, Wellner. CHI. 1992.

What are the core research questions addressed by the work?

- Enabling people to interact with ordinary paper documents in ways normally only possible with electronic documents on workstation screens

What motivates the work?

- Dual system of paper and electronic documents presents users with a range of problems
- The standard solution of devising a screen-based alternative is insufficient

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

- Electronic and paper documents have very different properties, are not well integrated, and working with one often requires giving up the advantages of the other
- Electronic documents lack portability, tangibility, and universal acceptance of paper
- Paper denies direct access to a variety of interactive functions available on personal workstations

What is the target application domain of the work?

- Office work

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

- Enabling new ways of inputting information into digital systems
- Enabling new ways of accessing information from digital systems

How are the proposed extensions implemented?

- Camera-projection system

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

- System generally found to be comfortable and natural by evaluation subjects
- Comments on the system: “morespace”, “more manual”, “easier on the eyes”, “much more healthy than a screen”
- Exposed research issues by concept of interacting with paper documents and other passive artifacts
 - Established roles of artifacts in the work environment, and how these roles are affected by making the artifacts active: Usage of paper documents always tended to rely on the absence of hidden information whereas in an interactive context, hidden information can be revealed
 - Problems in making passive objects active: Problems such as how to access the information content of the object, and how to provide the necessary feedback to support the user’s interaction with the object
- Two central issues in supporting interaction with paper documents
 - Development of effective styles of interaction
 - Provision of tools for design and implementation of paper-based user interfaces