

NOTEBOOKS THAT SHARE AND WALLS THAT REMEMBER: ELECTRONIC CAPTURE OF DESIGN EDUCATION ARTIFACTS

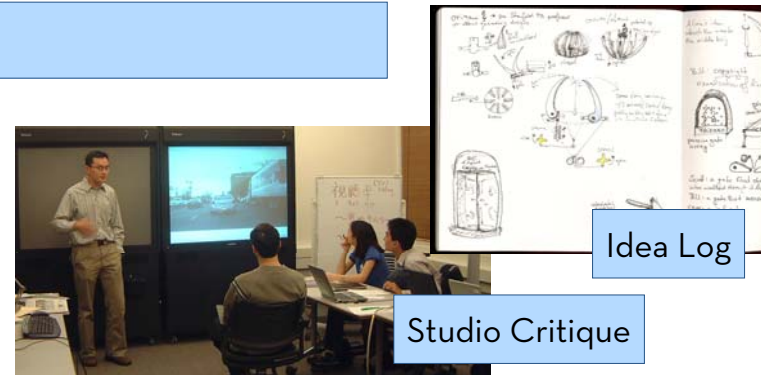
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DESIGN EDUCATION TODAY

Emphasis on sketching (idea logs), visual materials, physical artifacts

Times of ideation, reflection, group discussion, peer learning (studio critiques)

Some (limited) use of technology



HOW CAN TECHNOLOGY ENHANCE DESIGN EDUCATION?

Electronic media afford actions that physical media do not: capture of various types of content (pictures, audio, video, other media), search, editing, sharing.

The goal of the iDeas learning ecology is to *fluidly* integrate technology into existing design practices, bridging the gap between electronic and paper worlds.

Hypothesis. Imbuing physical notebooks and walls with properties of electronic media will lead to:

- Increased *documentation* (easier to create)
- Increased *reflection* (easier to review)
- Increased peer and student-teacher *discussion* (easier to share)

CURRENT STATUS

Java J2SE 5.0 implementation of desktop client with HSQLDB database backend

Design sketches of augmented mobile and wall-based interactions

Deployment to students in design courses (starting fall 2005)

FUTURE WORK

New interaction techniques for heterogeneous media, design content

Adding affordances of digital technology while preserving virtues of physical interaction

Evaluation and metrics for design

iDEAS LEARNING ECOLOGY

iDeas notebook

Input technologies: smart pens and notebooks, camera phones (off-the-shelf hardware) ▶

Digital capture of traditional design activities retains advantages of traditional input:

- *Expressive* (rapid capture of rich data)
- *Fluid* (ready-at-hand; focus on tasks, not tools)
- *Mobile* (in the field, accompanying users wherever, whenever design happens)



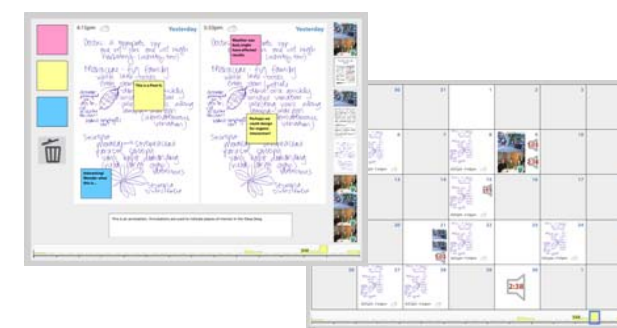
iDeas blog

Digital repository of collected information, created content

Lightweight integration and archival of heterogeneous inputs

User interfaces for annotation, search, browsing, adding new content ▼

Easily shareable via web



iDeas wall

Interactive surface for co-located, collaborative creation and presentation of content ▼

Direct manipulation (touch/stylus)
Supports meetings, presentations, brainstorming sessions

Content saved to iDeas blog

