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.

**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 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, 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