The Use of Digital Ink in Lecture Presentation

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http://www.cs.washington.edu/education/dl/presenter/

Classroom Presenter

Instructor view of Classroom Presenter

Professional Masters’ Program class

Webviewer for lecture replay

Classroom Ink Examples

Code tracing with isolated words

Stroke segmentation

Multiple use of diagrams

Writing example with inconsistent writing / speech (2000 vs 5000)

Slide corrections

Isolated words

Markov Blanket Sampling

Diagrammatic ink with ties to content

Multiple attentional marks with values

Whiteboard example with attentional markings

Archival whiteboard usage

Audience summarization

Results summary

• Archival vs. Ephemeral Ink Usage
  – The meaning of much of the ink was dependent on the spoken context
  – Different types of ephemeral usage
  – Diagrammatic, attentional, process simulation

• Attentional Markings
  – Ink to provide a link between spoken utterance and slide content
  – Heavily used, often more than 50% of ink usage

• Attentional markings and hand gestures
  – Intriguing tie with linguistic work on hand gestures (McNeill – Hand and Mind)
  – Synchronous and co-expressive with speech
  – Non-combinatoric and lack standard of form
  – Gesture types: iconic, metaphoric, deictic, cohesive, beats

• Breakdowns in display of persistent information
  – Loss of directional, temporal, and ordering information

• Possible enhancements to digital ink
  – Directional cues, boundaries
  – Fading or “drying”

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Contact Information

Classroom Presenter is available free for educational and research use: http://www.cs.washington.edu/research/edtech/

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