Agileviews: A Human-Centered Framework for Interfaces to Information Spaces

Gary Marchionini
INLS 818
Information Perspective

• Search is embedded in real life tasks
• Search is both analytical and interactive
• People and needs are diverse
• Vision is both a primary channel and a metaphor
Design Provenance

• Direct Manipulation (Shneiderman, 1983)
  – Visible objects and actions
  – Rapid, reversible, incremental actions
  – Dynamic queries
• Xerox alto, Apple Lisa, Macintosh & GUIs & WIMP interfaces (1979+)
• Hypertext (Bush, 1945; Nelson, 1974)
  – Links are first class objects
• Games and visualizations (lunar lander 1960s, Atari Pong, 1972); VR (Engelbart—radar; Sutherland—simulations)
  – See http://www.designboom.com/eng/education/pong.html for history of games
Views

• A view is a partition of an information space
  – There are many possible partitions for any space since many attributes may be used to ‘slice and dice’ the space

• People should be able to effortlessly change views
  – Focus can change based on granularity
  – Focus can change based on attribute
Agile Views Framework
Theory to Practice

• **Design challenge 1: creating views**
  – What granularities (collections and items)
  – Which attribute sets?
  – Creating or extracting metadata

• **Design challenge 2: manipulating/controlling views**
  – Perceptual estimation (e.g., look ahead)
  – Physical and conceptual inertia
Three Examples

• Relation Browser
  – Federal statistics, overviews of relationships (several different partitions). Useful for small number of attribute sets, each with small number of attribute values. Backend database of metadata, Java applet interface (Ben Brunk, Junliang Zhang)

• Enriched Links
  – Complex web sites, previews, overviews, and reviews of pages. Backend computation and Javascript interface (Gary Geisler)

• Integrated overviews and previews
  – Multimedia digital library, backend computation, Java applet interface (Wei Ding, Gary Geisler)
Relation Browser (2000)

This is an experimental tool that requires Netscape 4.5 (or higher) or Internet Explorer 4.0 (or higher). Please be patient as the tool may take some time to load. After you have used the tool, please take a few minutes to give us some feedback on it.

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Relation Browser+ 2003

![Image of Relation Browser+ 2003 interface]

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<thead>
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<th>Director</th>
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<tr>
<td><em>A</em></td>
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<td>1973</td>
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Enriched Links: Preview
Enriched Links: Overview
Enriched Links: Shared View
Overviews and Previews: One Screen
Open Video Agile Views

• Overviews
  – Collections, Indexes
  – Collages?

• Previews
  – Keyframes, Storyboards, fast forwards, clips
  – Key segments?

• Review/History
  – Back, browser favorites
  – Explicit recommendations

• Shared views
  – Implicit recommendations
  – Contributions
Overview: Open Video

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<tr>
<th>Preview</th>
<th>Video Title</th>
<th>Video Segment</th>
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<th>Details</th>
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</tbody>
</table>

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One of many previews: Open Video
Give People Flexibility!

• Multiple views require rich and accessible metadata
• Control mechanisms are kludges in today’s WWW environment
• A click is a terrible thing to waste!