Chapter 5 - Interaction

Slide 5.1
- Static display
- No physical interaction
- Encoded data immediately viewable

Figure 5.1

Slide 5.2
- Static display
- No physical interaction
- Encoded data immediately viewable

Figure 5.2
- Discrete information space
- Stepped interaction

Slide 5.3
- Discrete information space
- Continuous interaction
- Responsive system

Figure 5.3
Figure 5.4

- Discrete Information Space
- Moving images
- No physical interaction


Sheelagh Carpendale
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Topics (1)

- Information space
  - Where the action takes place
- Interaction mode
  - How the action takes place
- Intention
  - Why the action takes place

Figure 5.5
- Continuous interaction
- Continuous relation
- Immediate response
- Preliminary calculation may be needed

Figure 5.6
- Two classes of information space

Figure 5.7
- Information spaces, interaction modes and examples of their combination
Topics (2)

- Information spaces
  - Continuous
  - Discrete

- Interaction modes
  - Continuous
  - Stepped
  - Passive
  - Composite

- Intention
  - Gulf of execution
  - Gulf of evaluation

Example – Using “Gulfs”

Task: can I study human-computer interaction at UCI?

Using “gulfs” (see handout), how successful is this interaction?
Topics (3)

• Continuous Interaction
  – Pop-out
  – Highlighting
  – Correspondence

Example – Continuous Interaction

Task: looking for information about names.

Baby Name Wizard

http://www.babynamewizard.com/
Example – Highlighting (1) aka correspondence

Task: looking for information about information Visualization.
Example – Highlighting (2)

Task: which other code will my change affect?

Topics (4)

• Stepped Interaction
  – Navigation
  – Scent
  – Paths

Navigation - Wittenburg’s questions

• Where am I?
• Where can I go?
• How do I get there?
• What lies beyond?
• Where can I usefully go?
• Where have I been (I want to go back.)
Earlier Example – “BS in HCI”

Example – Paths

Task: author a path for another Web user to follow:
http://www.csdl.tamu.edu/walden/

Figure 1: Sample page on a path

Figure 2: Sample off-path page
Topics (5)

• Passive Interaction
  – Static display
  – “Browsing”
    • Exploratory
    • Opportunistic
    • Involuntary
  – Moving displays

Example – Monitors / “Gauges”

Task: monitor processor usage.
(aka why is everything so slow?)

Ariadne (from Trainer’s presentation
Week 3, Thursday)

First scenario (asking for help, identifying knowledgeable developers):
• Typically chose members they felt had the most interdependencies with
  others in the team.
• Indicated that the visualization and the representation of interdependencies
  in these visualizations led them to trust the central figure
• Second scenario (sharing code):
• Results were inconclusive; in general participants needed more information
• Some state less likely to risk relying on certain team member based on their
  inactivity
• Others stated that they would trust others with their code because “If
  someone breaks it, it probably wasn’t that great to begin with.”
As Time Permits


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