User Interface
Software Project

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INF 134 Winter 2012
Interactive Paper Interfaces

Content derived from Buxton, Sketching User Experiences/
Interactive Paper Interfaces

- Why sketching?
  - Quick
  - Timely
  - Inexpensive
  - Disposable
  - Plentiful
  - Clear Vocabulary
  - Distinct Gesture
  - Minimal Detail
  - Appropriate degree of refinement
  - Suggest and explore, not confirm
  - Ambiguity

Sketches are intentionally ambiguous. They can be interpreted in different ways. Unexpected relationships emerge from viewing them, even for the sketcher.
Interactive Paper Interfaces

• Why sketching? Sketches are intentionally ambiguous. They can be interpreted in different ways.
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Unexpected relationships emerge from viewing them, even for the sketcher.
• Protocol
  • One person sketches and operates the sketch
  • One person is the user
  • Both are important
  • Both talk the whole time the interface is tested.
  • Sketcher explains the task
  • User verbalizes what they are thinking, looking for, expecting
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• Protocol
  • Operating the sketch means:
    • Presenting views of the interface to the user
    • Replacing views as the user interacts.
  • Being a user means
    • Using your hands to point and click
    • Verbalizing what’s going on in your head
## Interactive Paper Interfaces

<table>
<thead>
<tr>
<th>Facilitator</th>
<th>User</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Start: Sketch 1.a in front of user.) The sketch in front of you shows the screen of your PDA. I want you to send a message to your 10:00 am appointment. For this exercise, to do anything, just touch what you think is appropriate on the screen, and tell me what you are doing or thinking as you go along.</td>
<td>Okay. I assume that you want me to send a message to Mary Ford, since she is my 10:00 am appointment. So I will touch her name.</td>
</tr>
<tr>
<td>(Facilitator replaces sketch 1.a with 2.b)</td>
<td>Now I see a menu that lets me either call her or message her.</td>
</tr>
<tr>
<td>(Facilitator replaces sketch 2.b with 4.a)</td>
<td>So, what I will now do is touch “message” on the menu.</td>
</tr>
<tr>
<td></td>
<td>Okay. I now see a screen that lets me send a message to Mary Ford. What now?</td>
</tr>
</tbody>
</table>
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• What are possible outcomes?
  • Insight into the task
  • New ideas of how to implement it differently
  • Expose design errors (obvious in hindsight)
  • Insight into the user’s expectations
  • A video capture can be sent to remote collaborators
  • An analysis of the sketched interface
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- Two ways of thinking of this task

  - Design
    - “Sketching”
  - Usability Engineering
    - “Paper Prototyping”
The role of design is to find the best design
The role of usability engineering is to help make that design the best
Interactive Paper Interfaces

• Paper Interfaces in the wild
  • Designing an oscilloscope
  • Textronix only iterated in paper

• This example shows that poor keyboard design was discovered.

• Notice the way the user’s unconsciously put their fingers in the right position to manipulate the dials as if they were physical
Interactive Paper Interfaces

- Paper Interfaces in the wild
- tektronix
Interactive Paper Interfaces

• Try it

• Create an interface with two buttons
  • “Touch”
  • “Do not touch”

• Create a landing page for each
  • With a back button for “Do not touch”

• Test it with a partner
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- Turning it into a video example
- Post it note example video
Interactive Paper Interfaces

- iPhone example
  - Notice how a cut-away can be used
  - http://www.youtube.com/watch?v=6TbyXq3XHSc

- Physical example
  - Notice how an entire kiosk can be “sketched”
  - http://www.youtube.com/watch?v=jkvqLd-CMyY
Interactive Paper Interfaces

• We are going to paper prototype in class to fail fast on our interaction designs