Low-fi Prototyping

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Autumn 2008

November 4, 2008

Interface Hall of Shame or Fame?

- Amtrak Web Site

Interface Hall of Fame/Shame!

- Amtrak Web Site
  - Good
    - tells you what’s wrong
    - gets your attention
  - Bad
    - doesn’t label where to fix
    - tells you that you made an error, because you didn’t know their codes

Outline

- Review midterm course survey
- Low-fi prototyping
- Wizard of Oz technique
- Informal UI prototyping tools
- Go over Low-fi assignment (#6)

Midterm Course Survey

Things you like!

- Teaching with examples
- Slides & other materials online
- Interactive lectures
  - especially on candy days
- Project work focuses on lecture material
- Readings tied to lectures
Midterm Course Survey

Areas to Improve

• In class workshop with early feedback & help
  – we have one this Thursday, one after the midterm, and one at the end of course, but it sound like in the future I should have another one earlier (after ESM TAs?)
• Better communication about non-graded parts of course
  – e.g., web site. Usually in final presentation grade. We will create a web site grading FAQ and present this earlier in course next time
• Emphasize and define key points, terms, concepts earlier
  – too late now, but can I get examples for future?
• Pre-work/troubleshoot technical aspects before course
  – we did pre-work phone/ESM, but it IS research software. Prefer avoiding?
• Clarity grading criteria
  – Try to pretty explicit on each assignment. Examples would help me know where you need more. Remember, there is not a “right” or “best” answer as in a math or programming course.

Why Use Low-fi Prototypes?

• Traditional methods take too long
  – sketches → prototype → evaluate → iterate
• Can instead simulate the prototype
  – sketches → evaluate → iterate
  – sketches act as prototypes
    • designer “plays computer”
    • other design team members observe & record
• Kindergarten implementation skills
  – allows non-programmers to participate

Fidelity in Prototyping

• Fidelity refers to the level of detail
  • High fidelity?
    – prototypes look like the final product
  • Low fidelity?
    – artists renditions with many details missing

The Basic Materials

• Large, heavy, white paper (11 x 17)
• 5x8 in. index cards
• Post-its
• Tape, stick glue, correction tape
• Pens & markers (many colors & sizes)
• Overhead transparencies
• Scissors, X-acto knives, etc.
Constructing the Model

- Set a deadline
  - don’t think too long - build it!
- Draw a window frame on large paper
- Put different screen regions on cards
  - anything that moves, changes, appears/disappears
- Ready response for any user action
  - e.g., have those pull-down menus already made
- Use photocopier to make many versions
Constructing the Model

Preparing for a Test

- Select your “customers”
  - understand background of intended users
  - use a questionnaire to get the people you need
  - don’t use friends or family
  - I think existing “customers” are OK (Rettig disagrees)

- Prepare scenarios that are
  - typical of the product during actual use
  - make prototype support these (small, yet broad)

- Practice to avoid “bugs”

Conducting a Test

- Four testers (minimum)
  - greeter – puts users at ease & gets data
  - facilitator – only team member who speaks
    - gives instructions & encourages thoughts, opinions
  - computer – knows application logic & controls it
    - always simulates the response, w/o explanation
  - observers – take notes & recommendations

- Typical session is 1 hour
  - preparation, the test, debriefing

- Read the Gommol paper (1 page) for details on conducting a test

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Evaluating Results

- Sort & prioritize observations
  - what was important?
  - lots of problems in the same area?
- Create a written report on findings
  - gives agenda for meeting on design changes
- Make changes & iterate

Advantages of Low-fi Prototyping

- Takes only a few hours
  - no expensive equipment needed
- Can test multiple alternatives
  - fast iterations
  - number of iterations is tied to final quality
- Almost all interaction can be faked

Wizard of Oz Technique

- Faking the interaction. Comes from?
  - the film “The Wizard of OZ”
    - “the man behind the curtain”
- Long tradition in computer industry
  - e.g., prototype of a PC w/ a VAX behind the curtain
- Much more important for hard to implement features
  - speech & handwriting recognition

Problems with Low-fi Prototypes

- “Computer” inherently buggy
- Slow compared to real app
  - timings not accurate
- Hard to implement some functionality
  - pulldowns, feedback, drag, viz ...
- Won’t look like final product
  - sometimes hard to recognize widgets
- End-users can’t use by themselves
  - not in context of user’s work environment

Informal UI Prototyping Tools

- Support advantages of low-fi paper prototypes
  - brainstorming
  - consider different ideas rapidly
  - do not require specification of details
  - incomplete designs
  - need not cover all cases, just illustrate important examples
- Add advantages of electronic tools
  - evolve easily
  - support for “design memory”
  - transition to other electronic tools
  - allow end-user interaction

Summary

- Low-fi testing allows us to quickly iterate
  - get feedback from users & change right away
- Informal prototyping tools bridge the gap between paper & high-fi tools
Further Reading

Prototyping

- **Books**
  - Paper Prototyping: The Fast and Easy Way to Design and Refine User Interfaces, by Carolyn Snyder, Morgan Kaufmann, 2003
- **Articles**
  - “Prototyping for Tiny Fingers” by Marc Rettig, in Communications of the ACM, 1994
- **Web Sites**
  - dub Group website, for DENIM & SUEDE downloads, http://dub.washington.edu

Lo-fi Prototyping Assignment

- **Due: Thur. 11/13**
- Presentation by new team member
- Get industry mentor involved
  - you are not required to do everything they say, simply to give you a resource
- Make sure to use new participants
- Two good reports from CSE 440, Au07
  - What’s Happening
  - TripMe
- Questions?

Next Time

- In class work on project
- Come to class and I will move around between the teams giving feedback