Products for Usability Testing: - Paper prototypes

> Usability Conference, Feb 2009 Lars Bo Larsen <u>Ibl@es.aau.dk</u> / 9940 8635

Outline

- Why prototype?
- Different kinds of prototyping low fidelity (high fidelity)
- Examples and Tricks
- Compromises in prototyping
- Summary and links

• Unless otherwise noted, examples are from "Paper Prototyping" by Carolyn Snyder







- Technical issues
- Work flow, task design
- Screen layouts and information display
- Difficult, controversial, critical areas

Using prototypes in conceptual design

- Allow evaluation of emerging ideas
- Low-fidelity prototypes used early on, high-fidelity prototypes used later

Prototypes are excellent for <u>communicating</u> ideas!

Lo-fidelity Prototyping

- Uses a medium which is unlike the final medium, e.g. paper, cardboard
- Is quick, cheap and easily changed
- Examples:

sketches of screens, task sequences, etc 'Post-it' notes storyboards 'Wizard-of-Oz'

Sketches of Paper Prototype:

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New View Tools	New View Tools	New View Tools	New View Tools
Figure 1a	Figure 2a	Figure 3a	Figure 4a

Source: http://www.handheldusability.info/

A Lo-Fi Prototype of a Car Stereo







Simulating wall-screen interaction



A Lo-Fi prototype for air-traffic controllers

Example: Hats Lo-Fi Prototype

Handheld Asset Tracking System (HATS) Overview



Example: Hats Lo-Fi Prototype







Auto Navigating Map Screen

"Smart" Data Entry Form Asset Specific Help Screen

How to simulate the dynamics:



PRESA

How to simulate the dynamics:

Simply write the users' choices



Mockups of Complete Devices:

A can recycling machine. When testing, a researcher stood behind the machine to accept or reject each can, while another used coloured pieces of paper to simulate the indicator lights



The Washing Machine

Redesign of controls to focus on the clothes to be washed rather than programming the settings of the washing machine



<u>(thanks to grp. ST855a + ST857c 2008)</u>

Compromises in prototyping

- All prototypes involve compromises
- For software-based prototyping maybe there is a slow response? sketchy icons? limited functionality?
- Compromises in prototypes mustn't be ignored. Product needs engineering

Compromises in prototyping

- Two common types of compromise
- 'horizontal': provide a wide range of functions, but with little detail
- 'vertical': provide a lot of detail for only a few functions



Usefulness of Paper Prototyping

In a survey 172 usability professionals were asked the question: "What is the importance of paper prototyping to your work"?



From "Paper Prototyping" by C. Snyder

Summary & Links

Different kinds of prototyping are used for different purposes and at different stages

- Prototypes answer questions, so prototype appropriately
- Prototypes and scenarios are used throughout design
- Find some more examples at: http://www.paperprototyping.com/
- Check out a comparative study of paper & running prototypes at:
 - http://guir.berkeley.edu/projects/fidelity/prototypes/

Video:

 Jakob Nielsen and Don Norman's company the "Nielsen Norman group" (NN/g <u>http://www.nngroup.com/</u>) has produced the video:

"Paper Prototyping: A How-To Video"





Book:

Carolyn Snyder:

"Paper Prototyping: The Fast and Easy Way to Design and Refine User Interfaces" (Interactive Technologies)

http://www.paperprototyping.com

PAPER PROTOTYPING

THE FAST AND EASY WAY TO DESIGN

AND REFINE USER INTERFACES

CAROLYN SNYDER



- And finally: Dilbert