Interaction Design

Prototyping UX - From Sketch to Prototype
Overview:

• Intro & Design process Phase

• Values and Levels of Prototyping

• UX Prototyping Techniques

• Prototyping Case Study
User Experience Design

- usable
- valuable
- findable
- credible
- useful
- desirable
- accessible
Overview

Research  Innovate  Prototype

DISCOVER  DEFINE

© A study of the design process - Design Council London

source: [8]
Overview

Tell a story
Make it tangible

Prototype
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For the Designer: Exploration
                Visualisation
                Feasibly
                Inspiration
                Collaboration

For the End User: Effectiveness / Usefulness
                  A change of viewpoint
                  Usability
                  Desirability

For the Producer: Conviction
                  Specification
                  Benchmarking

source: [5]
It’s really hard to design products by focus groups. A lot of times, people don’t know what they want until you show it to them.

Steve Jobs
Fidelity v. Resolution

low resolution
low fidelity

high resolution
low fidelity

high resolution
high fidelity

source: [5]
High Fidelity

Low Fidelity

Open Discussion  Sharp Opinions
Prompting Required  Self Explanatory
Quick and Dirty  Deliberate and Refined
Early Validation  Concrete Ideas

source: [5]
Low Resolution

Less Details
Focus on core interactions
Quick and Dirty
Early Validation

High Resolution

More Details
Focus on the whole
Deliberate and Refined
Concrete Ideas

source: [5]
1st Iteration
low-res/low-fi
4th Iteration
high-res/high-fi
80/20 rule
A principle for setting priorities: users will use 20% of the features of your product 80% of the time. Focus the majority of your design and development effort (80%) on the most important 20% of the product.
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Paper-prototyping
What is it?

Paper prototyping is a widely used method in the user-centered design process, a process that helps developers to create products/screen based applications that meets the user's expectations and needs.

It is **throwaway prototyping** and involves creating rough, even hand sketched, drawings of an interface to use as prototypes, or models, of a design.
History

Paper prototyping started in the mid 1980s and then became popular in the mid 1990s when companies such as IBM, Honeywell, Microsoft, and others started using the technique in developing their products.
Paper prototype of a typical form-filling screen

Paper prototype of a tabs-based design

User test of a low-fidelity paper prototype of a website

Typical set-up of the usability laboratory for a test session with a paper prototype

photo credits © NN Group
User test of a device-based interaction

User test of a high-fidelity paper prototype of a homepage.

Testing hardware user interfaces: mockup of a kiosk.
Video-prototyping

http://2.bp.blogspot.com/-CBtuuf7rZ4/U0MBJkJCUfgI/AAAAAAAADi4/fYp1bJQcdVY/s1600/Canon+XF205+left+side+view.jpg
Acting out the Scenario
Quick Kiosk Mock-up
Sketching with Hardware
Atmel AT Mega 328  
Raspberry Pi
Thermistor

Bend Sensor

PIR Sensor
Distance IR Sensor  Touch QT Sensor  Ultrasound Sensor
References (books)

Bill moggridge: designing interactions
   Publisher: The MIT Press; 1 edition (October 1, 2007)
   ISBN-10: 0262134748

Bill buxton: sketching the user experience
   Publisher: Morgan Kaufmann (March 30, 2007)
   ISBN-10: 0123740371

Don norman: the design of everyday things
   Publisher: Basic Books (September 17, 2002)
   ISBN-10: 0465067107

Kevin mullet: designing visual interfaces
   Publisher: Prentice Hall PTR (December 15, 1994)
   ISBN-10: 0133033899

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