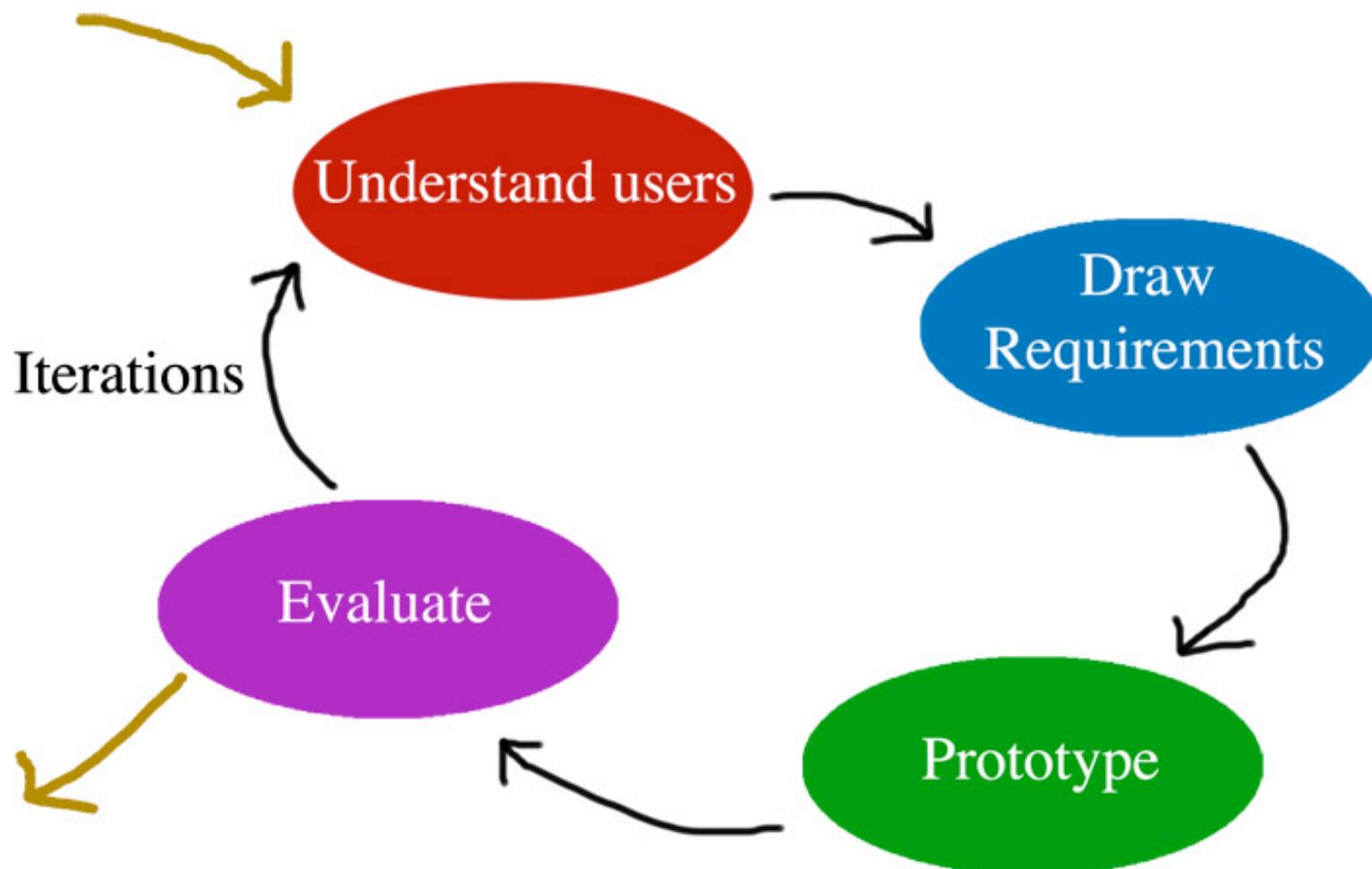


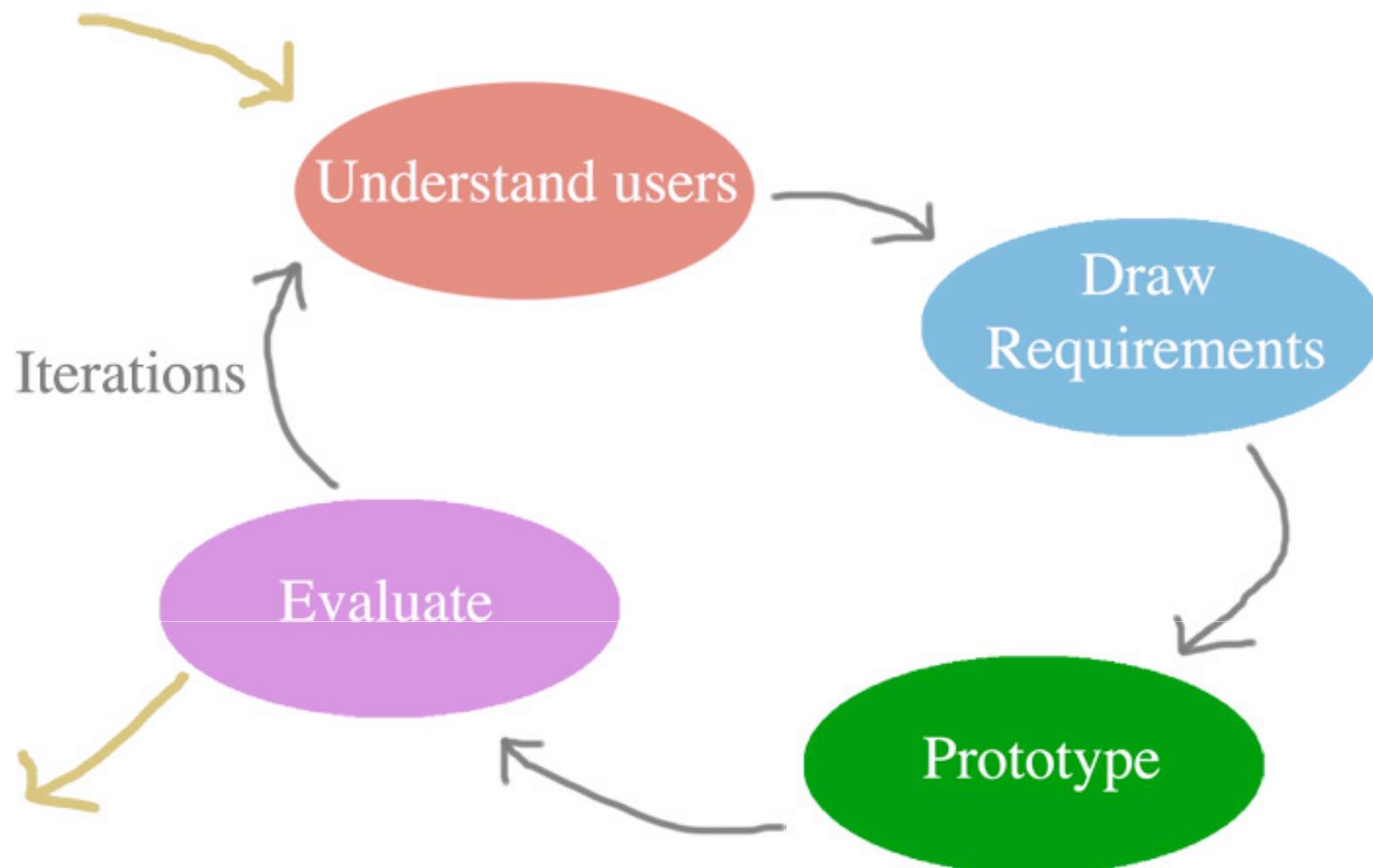
CS4826 HCI

Week 9

The User-Centred Design Process



The User-Centred Design Process



What is prototyping

- Creating a workable model of a system for evaluation and testing
- “workable” means that it supports different activities, but doesn’t necessarily have to be fully working
- A prototype is not the final system, but a version of the system that allows for evaluation and feedback

Why is prototyping useful?

- Allows for evaluation before the system is fully implemented, therefore changes can be made
- Allows designers to refine ideas and get closer to the final product
- Prototypes are hands-on ways to get users (and designers) discussing ideas

Why is prototyping useful?

Implementing some aspects of the system for evaluation and discussion

Supports formative (continuous) evaluation

Easier to modify what doesn't work

Useful for evaluating alternative designs

Encourages reflection in design

Prototypes

- Prototypes can be of different kinds and “grow” as the design process progresses
- The user-centred design process is iterative: going through subsequent design cycles means refining and developing prototypes of the system being designed
- The progress in coming closer to the final system can be assessed in terms of *fidelity*

Levels of Fidelity

- Prototypes can be classified in terms of fidelity
- Fidelity is the closeness between the prototype and the final system in terms of functionality
- Fidelity does not mean “quality”!

3 Levels of Fidelity

Low-fidelity prototyping: v. cheap, quick, only some overall features of the system are represented

Medium-fidelity prototyping: reasonably cheap, may be testing some of the system's features in detail

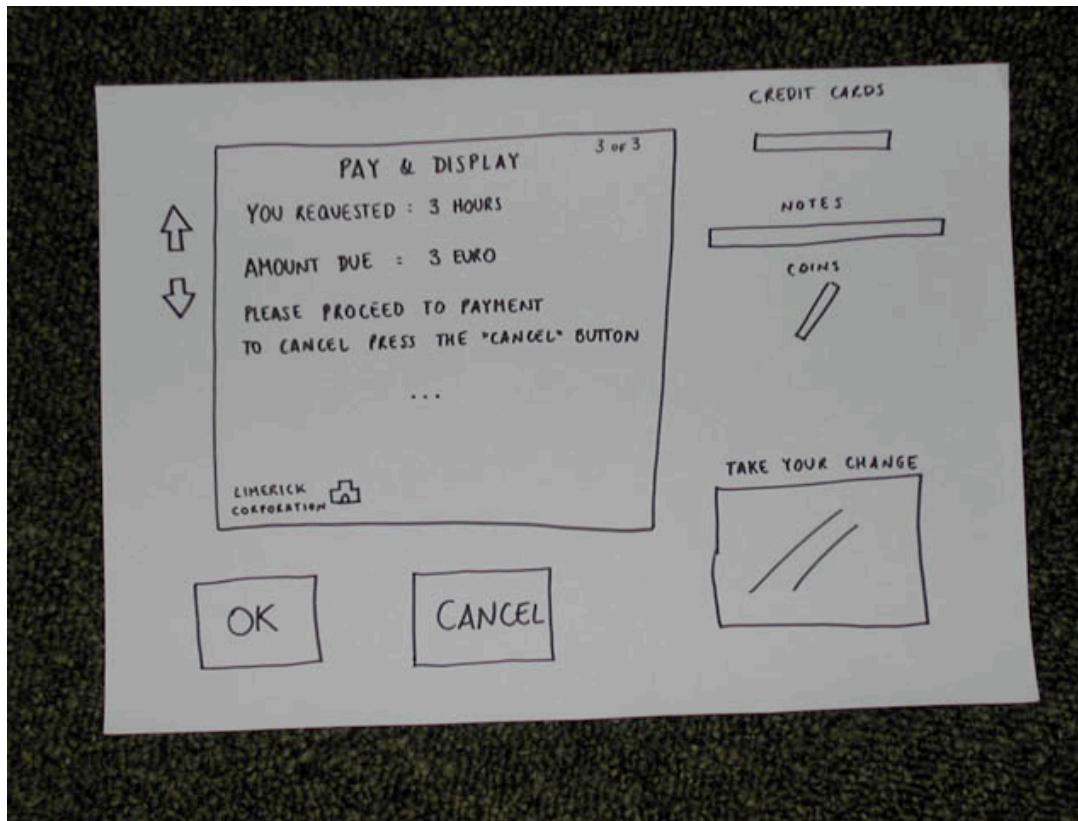
High-fidelity prototyping: more expensive, more time-consuming, system is close to its final release

Low-Fidelity

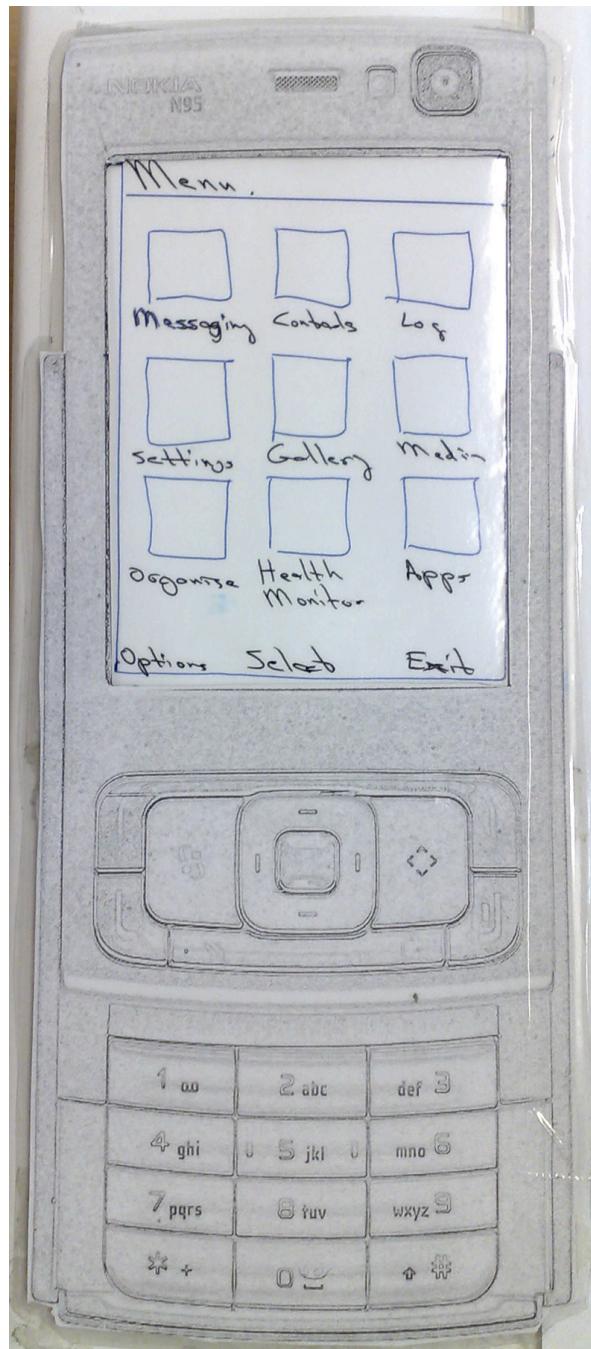
- The distance between a low-fi prototype and the final system is noticeable
- Most low-fi prototypes have no functionality but convey a sense of what the interaction can be like
- Cheap in terms of resources needed and time

Low fidelity: Paper prototyping and storyboarding

- Can be very different from final product
- Simple, cheap and can be easily modified
- Room for exploration

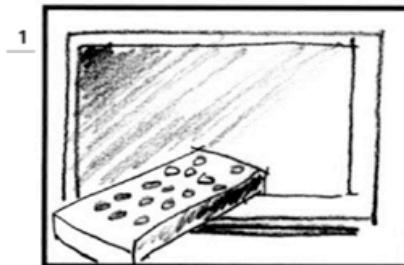
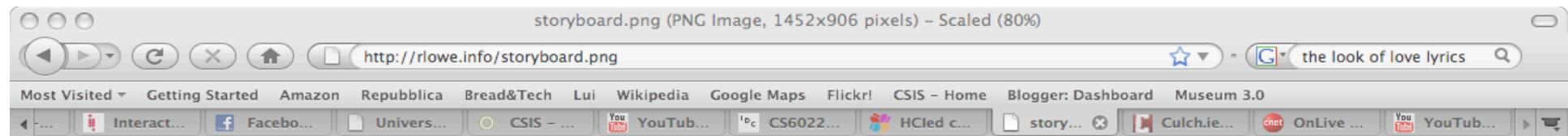


Paper prototyping and storyboarding

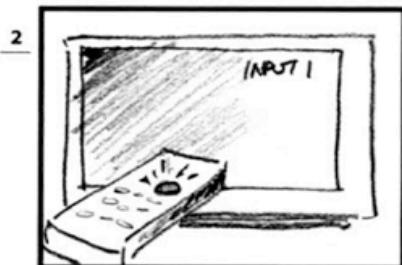


Paper prototyping and storyboarding

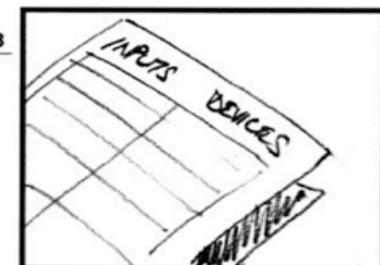
<http://www.youtube.com/watch?v=GrV2SZuRPv0>



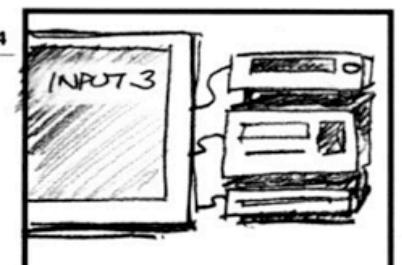
USING THE ORIGINAL
REMOTE, POWER ON
THE TV, (AND ALL
OTHER DEVICES)



SELECT "INPUTS" ON
THE REMOTE AND CYCLE
THROUGH THE INPUTS
THAT DISPLAY ON THE
SCREEN.



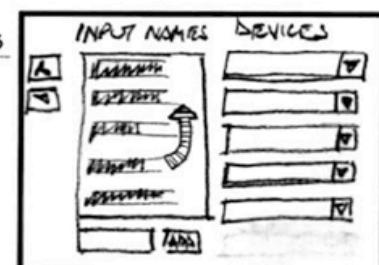
WRITE THE INPUTS NAMES
IN THE ORDER THEY
APPEAR ON THE TV USING
THE INPUT WORKSHEET.
(INCLUDING BLANKS)



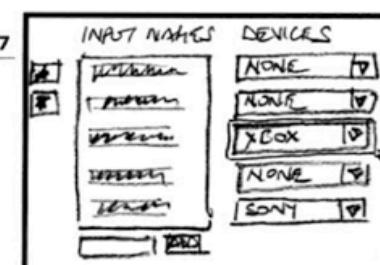
TEST EACH INPUT IN
ORDER TO DISCOVER
WHAT DEVICE IS USING
THE INPUT AND RECORD IT
ON THE WORKSHEET.



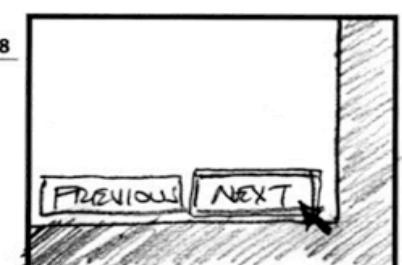
TAKE THE WORKSHEET
TO THE COMPUTER AND
VIEW THE INPUTS LISTED
IN THE SETUP SOFTWARE



ADD, DELETE, AND/OR
REORDER THE LISTED
INPUTS TO MATCH WHAT
IS ON THE WORKSHEET.

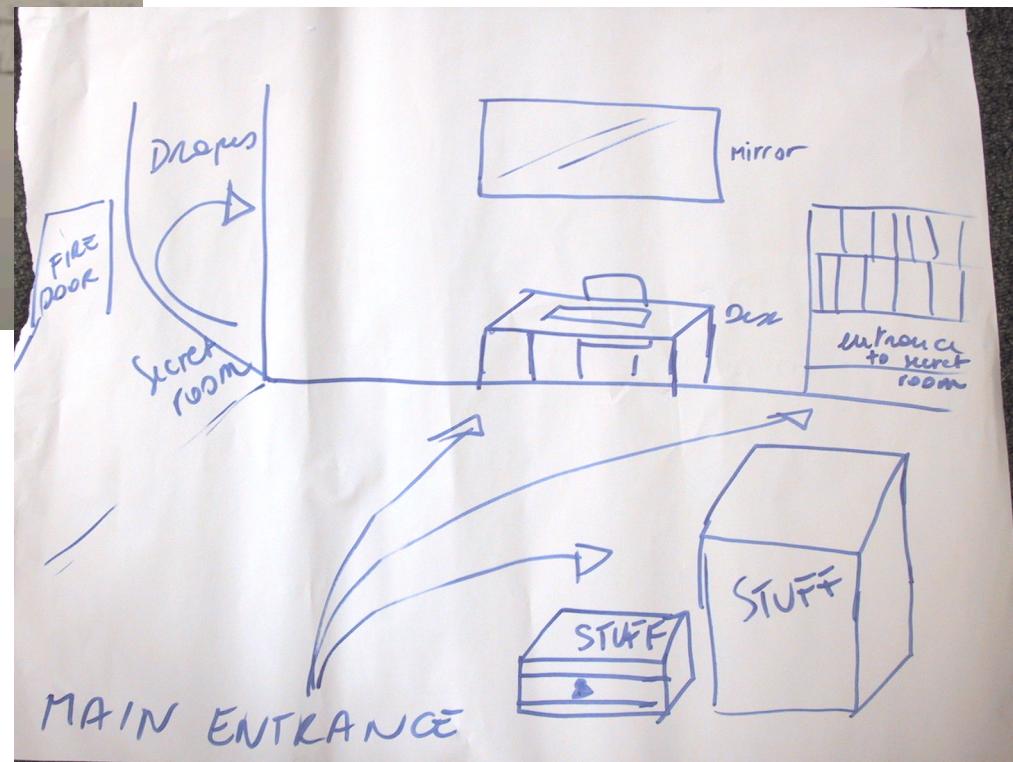
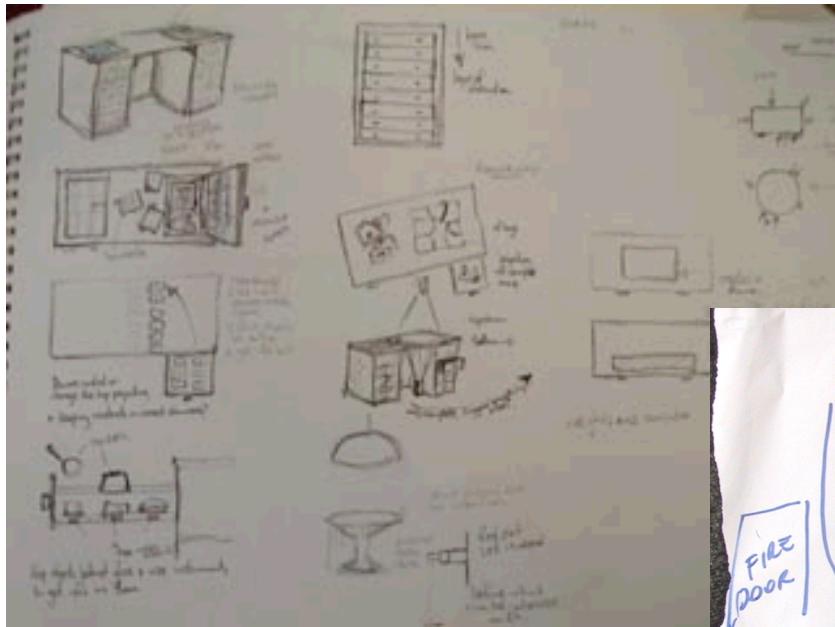


ADD THE DEVICE NAME
FOR EACH INPUT. IF THERE
IS NO DEVICE FOR AN INPUT,
SELECT "NONE".



SELECT 'NEXT' TO SAVE
AND CONTINUE. REPEAT
FOR EACH DEVICE WITH
INPUTS (IE. PASS THROUGHS)

Sketching



Sketching

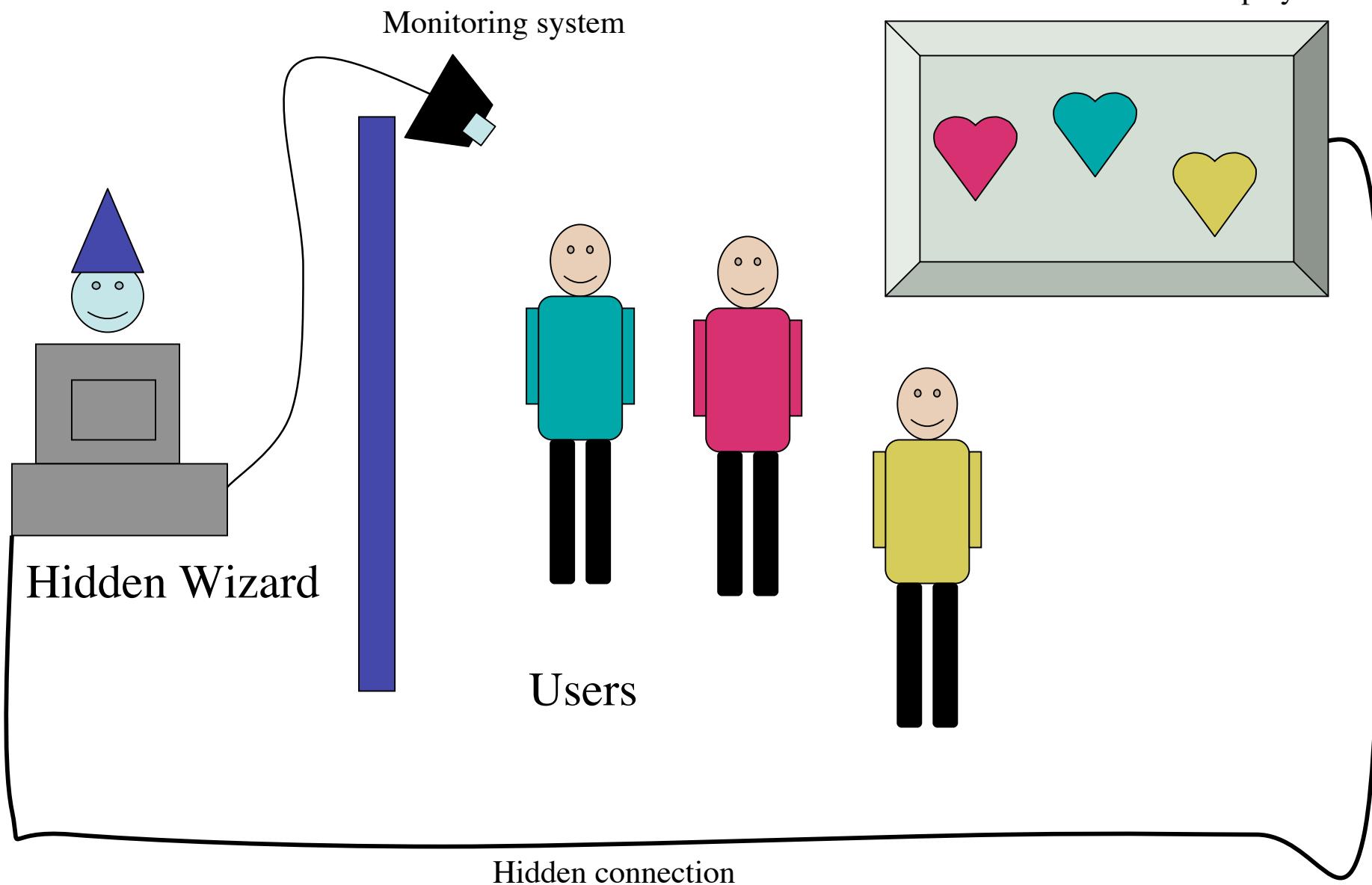


Medium Fidelity

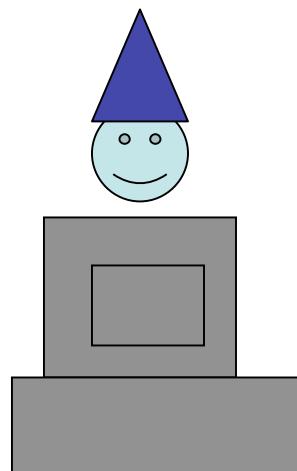
Prototype

Medium-fi Wizard of Oz: simulation

Simulated interactive display



Prototype



Hidden Wizard

Wizard of Oz: simulation

Simulates the interactive behaviours of the system, without having to implement them.

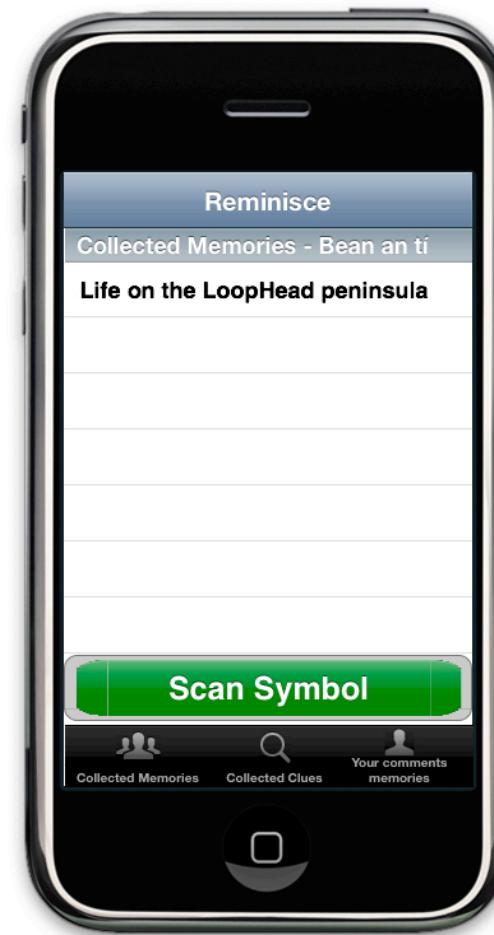
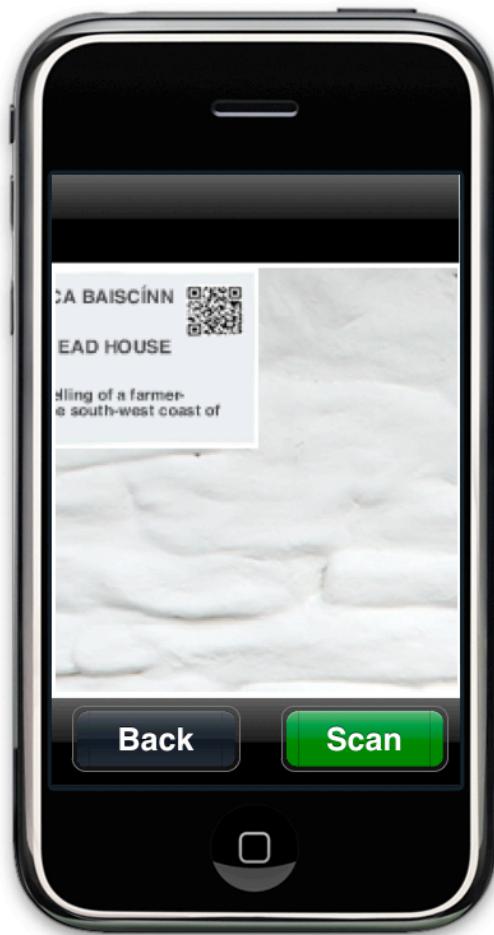
Very effective for testing the feasibility of complex interfaces (based on sensing networks, for example)

<http://www.youtube.com/watch?v=NwVBzx0LMNQ>

Prototype

Medium fidelity: screen based interfaces

Simulation of screen based interfaces with authoring tools such as MMedia Director, Flash, Omnigraffle, Dreamweaver, PPoint, Photoshop etc.



Prototype

Video prototypes

Enacting possible interactions and simulating through editing the way in which a certain system would work.

Based on scenarios

Good for stimulating design discussion, as well as testing the overall idea for a system.

Prototype

High fidelity: full functionality



Prototype

Evaluate design ideas

Foster discussion

Choose among alternative options

Envisage possible interactive behaviours

Prototyping - ky9k8Designing the Apple Lisa

- <http://www.designinginteractions.com/interviews/BillAtkinson>
- <http://www.designinginteractions.com/interviews/LarryTesler>