

IS-B Assignments

(Winter Term 2014/2015)

Assignment II — Lo-Fi Prototyping

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Announcement

Next week's sessions will be held at our lab

- Location is **WE5/01.045**
- Topic will be:
'Predictive human performance Modeling — An introduction to **CogTool**'
- We will have the four regular sessions: 10.00-12.00h, 12.00-14.00h, and 14.00-16.00h, 16.00-18.00h
- Space constraints: 20 participants per session

Introduction

This is the second assignment in our series to design and evaluate the user interaction with a **subscription based Video-on-Demand Service**.

This step is concerned with building a first **interactive version** of our application in form of a **paper prototype**, which will later allow us to get **early feedback** by letting **users** perform **realistic tasks** with this prototype

Agenda

Introduction

- Low Fidelity Prototype
 - Mock-Ups
 - Paper Mock-Ups
- Instructions

Assignment

- Assignment II
- Submission
- Credits
- Comments & Questions

Mock-Ups

Non-functional Prototypes

Used to **acquire feedback** in early development stages

Produced using comparatively **cheap material**

Example: A Car Mock-Up



[<http://www.entermyworld.com/history/wood-mock-up>]

Mock-Up Example



[<http://www.canon.com/camera-museum/design/making/index.html>]

Paper Mock-Up

Is made...

- ...of **paper**...
- ...using tools like pencils, scissors, adhesive tape

Allows for collective work

Is very **cheap** in production

Can easily be **changed in seconds**

Allows for **alternate designs / modifications**

Paper Mock-Up Example



[<http://www.camcorderinfo.com/>]

Paper Mock-Ups for UI Design and Testing

Prototype of the user interface

- Every user interface **element** is modelled
 - e.g., menus, buttons, text boxes
- All **possible states** (e.g., menu selection, hover) of the interface elements have to be taken into account!

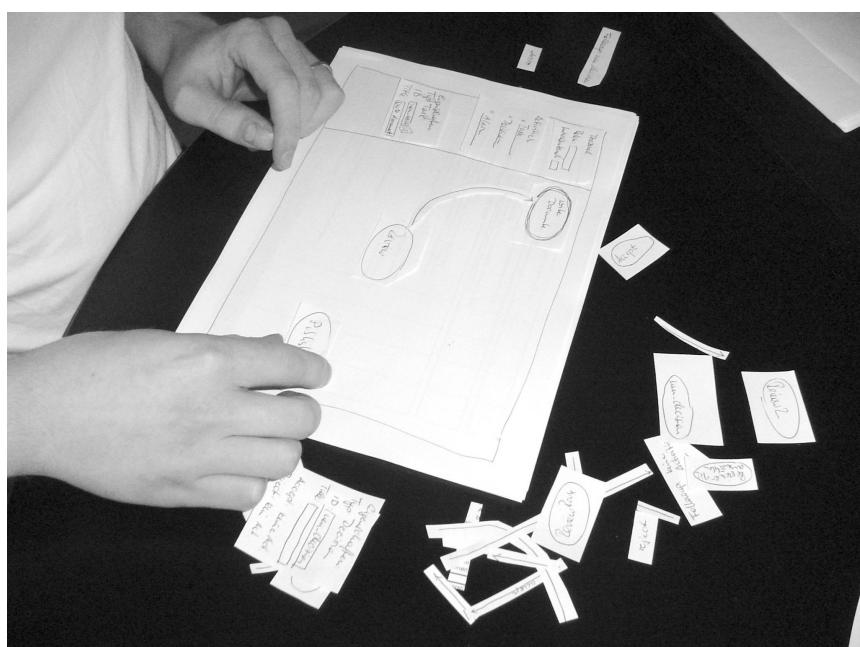
User Interface Testing

- Test users are able to **interact** with the **interface prototype**
 - Clicks, drags, and text input is performed **using a pen**
- System **response** is generated by **designer**

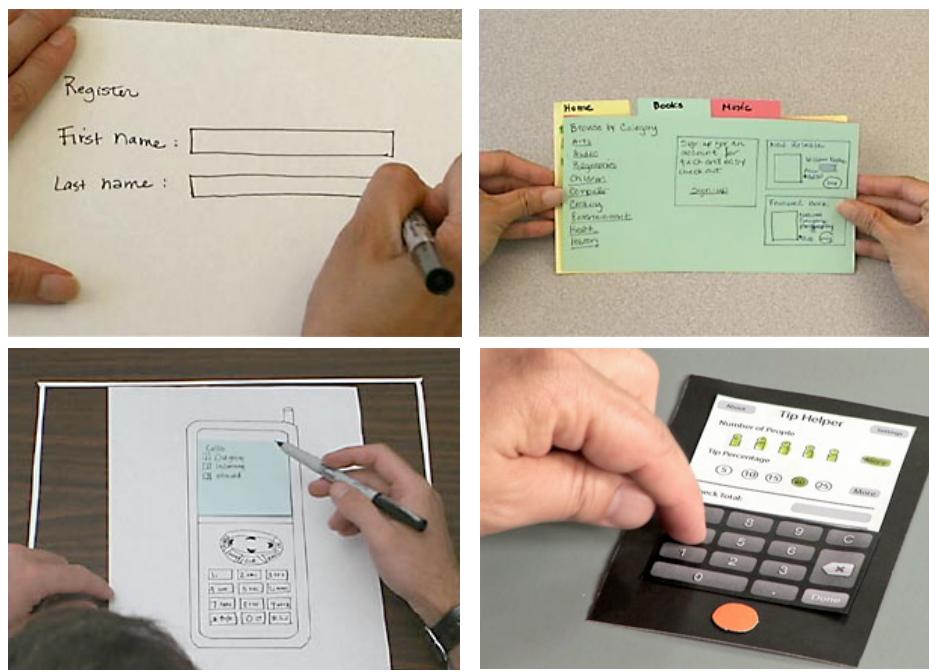


[<http://www.paperprototyping.com/>]

UI Paper Mock-Up Examples



UI Paper Mock-Up Examples (cont'd)

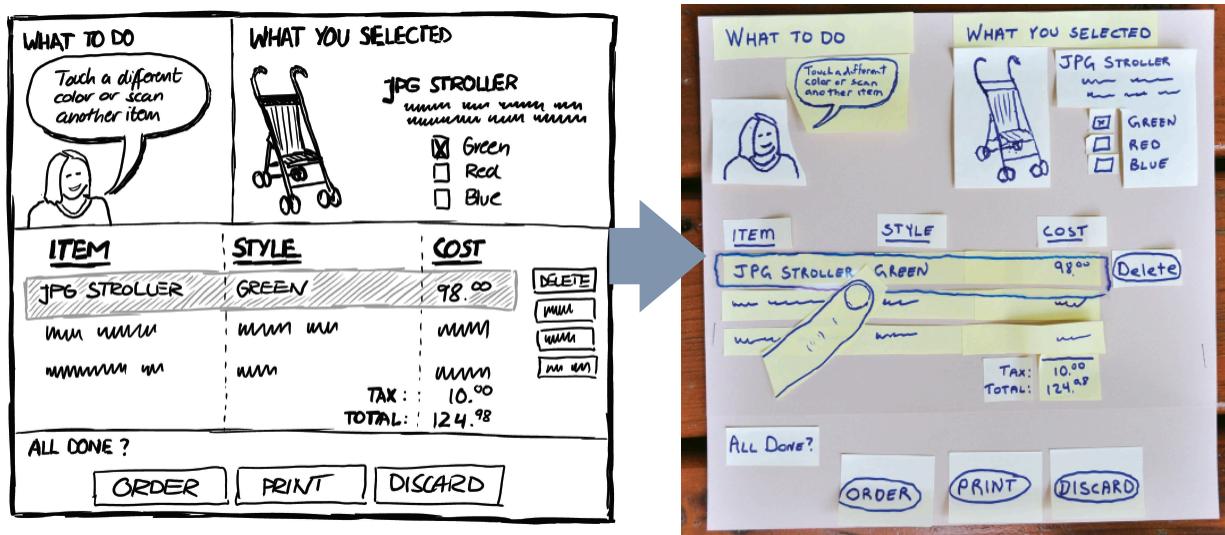


[http://www.nngroup.com/reports/prototyping/]

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UI Paper Mock-Up Examples (cont'd)



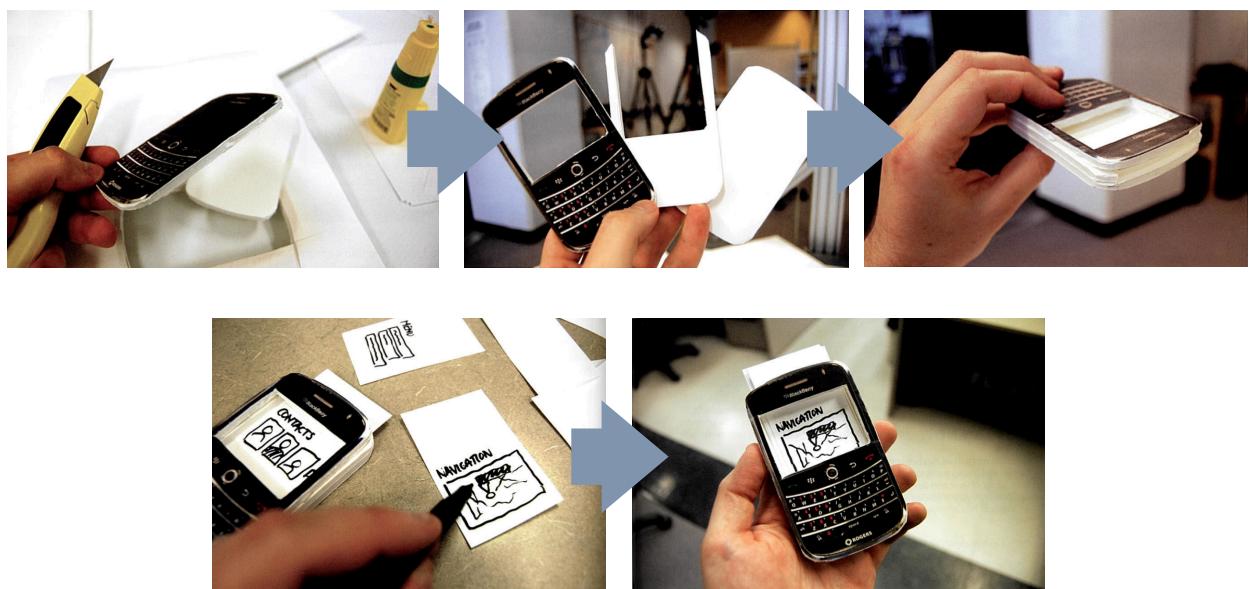
[Greenberg et al., 2012]

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UI Paper Mock-Up Examples (cont'd)



[Greenberg et al., 2012]

UI Paper Mock-Up Examples (cont'd)



[<http://iwataasks.nintendo.com>]

Practical Tips

Keep the **artwork simple**

Use (colour-) transparent films for

- Highlight effects
- Roll-over effects
- Layering effects



Use **post-its** for temporary frames or windows

Make it **robust** enough for the **test** (e.g., use cardboard)

Do not use a computer!!!

More Practical Tips

- Rettig, M. Prototyping for Tiny Fingers. Communications of the ACM 37, 4 (Apr. 1994). pp. 21-27.
- Greenberg, S., Carpendale, S., Marquardt, N. and Buxton, B. Sketching User Experiences: The Workbook. Morgan Kaufman, Waltham, MA, USA, 2012.

Pros and Cons

Pros

- **Fast** way to mock up an interface — **no coding** required
- Reveals a **wide variety of problems** in an interface, including many of the serious ones
- Allows an interface to be **refined** based on user feedback **before implementation begins**
- A **multidisciplinary team** can participate
- **Encourages creativity** from the product team and users

Cons

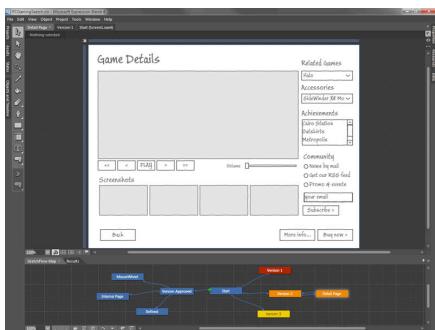
- Doesn't produce any **code** → extra effort
- **Does not find all classes of problems** with an interface
- Can **affect the way users interact** with the interface

Tool Support

Some specialised tools exist to support prototyping:

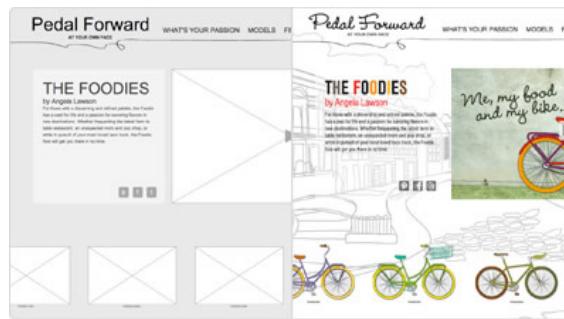
- Microsoft SketchFlow
- Axure RP
- Balsamiq Mockups

Using tools has **pros** and **cons**



[http://www.microsoft.com/expression/products/SketchFlow_Overview.aspx]

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[<http://www.axure.com>]

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[<http://www.balsamiq.com>]

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Instructions

A document type that enables a user to do something the user is not used to

Essential elements of an instruction

- Intention
 - **What happens** when the procedure is carried out?
 - What is the **purpose**?
- Prerequisites and warnings
 - What is **required** to be able to carry out the procedure?
 - What should be **avoided** and why?
- Steps
 - What **actions are required** to reach a target?
→ Top level tasks of a **HTA** are a good starting point

Instructions

Good instruction writing requires:

- Clear, simple writing
- A thorough understanding of the procedure in all its technical detail
- Your ability to put yourself in the place of the reader, the person trying to use your instructions
- Your ability to visualize the procedure in great detail

Further information

- David A. McMurrey, Online Technical Writing: Instructions in Online Technical Writing: Online Textbook, <http://www.prismnet.com/~hcexres/textbook/instrux.html> (Accessed 09/10/2012).
- Perelman, L.C., Paradis, J. and Barrett, E. Instructions and Procedures in The Mayfield Handbook of Technical & Scientific Writing. The McGraw-Hill Companies, Inc., <http://www.mhhe.com/mayfieldpub/tsw/instruct.htm>, 2001. (Accessed 09/10/2012).

Assignment II

Create a hand-drawn paper mock-up of the interface for your desktop VoD interface

- Use the interviews, scenarios and storyboards, as well as the hierarchical task analysis as base
- Digitise (photo/scan) your hand-drawings of the interface elements

Write an instruction on how the application is used

- Describe the use of your design in form of an instruction directed at users
- You might address here sound and video aspects of your interface that can not be reflected in the paper mock-up

Lay out four different example screens depicting descriptions from the instruction

- Photograph four simulated screens constructed with the interface elements

Assignment II (cont'd)

Submit **three** PDF documents containing

- Paper mock-up prototype of your group
 - All interface elements in all possible states; DIN A4
- Instructions
 - 2 pages DIN A4
- Example screens
 - 4 pages DIN A4 (one page per screen)

Submission

The assignment is due on 11 November 2014

Please submit your results according to the **submission guidelines** as archives in .tar.gz or .zip file format.

Beginning with this assignment only correct submissions will get full credit!!! That is:

- Only **one** submission by **one** member of the group
 - ...via the Virtual Campus...
 - ...in form of a **compressed folder** (.tar.gz or .zip)...
 - ...named according to the **naming scheme** (e.g.: assignment_02_03)...
 - ...which **contains all files**.
- ➔ **Result is one uploaded archive file** (e.g.: assignment_02_03.zip)!

Credits

Two (2) credits can be achieved in this assignment

- | | |
|-------------------|-----|
| • Paper Mock-Up | 40% |
| • Instruction | 40% |
| • Example screens | 20% |

Comments & Questions

Feel free to send questions and comments about this assignments to:

mirko.fetter@uni-bamberg.de

Due to SPAM-filters and to process your email quickly, please use the following subject line:

IS-B/<your concern>

Thank you!



References

- Greenberg, S., Carpendale, S., Marquardt, N. and Buxton, B. Sketching User Experiences: The Workbook. Morgan Kaufman, Waltham, MA, USA, 2012.
- Preece, J., Rogers, Y. and Sharp, H. Interaction Design: Beyond Human-Computer Interaction. Wiley, N.Y., 2002. pp. 239-249.
- Rettig, M. Prototyping for Tiny Fingers. Communications of the ACM 37, 4 (Apr. 1994). pp. 21-27.
- Snyder, C. Paper Prototyping: The Fast and Easy Way to Design and Refine User Interfaces. Morgan Kaufmann, San Francisco, 2003.