From paper prototyping to Sketching with hardware

Medieninformatik Hauptseminar
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„Prototyping“
Prototyping

= a bordered representation of a design where users can interact

• we design a view executable paradigm of the final product
• has the essential features
• to check the usability and producibility
• to validate the customer requirement

⇒ A prototype is also the first full-size model to be manufactured and has the essential features
Low- and Highfidelity Prototyping

Intensive Care Paper Prototypes

Prototype Life

Self-sustaining Labs Prototypes
## Low- and Highfidelity Prototyping

<table>
<thead>
<tr>
<th>Type</th>
<th>Advantages</th>
<th>Disadvantages</th>
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</table>
| **Low-Fidelity Prototype** | • Lower development cost  
  • Evaluate multiple design concepts  
  • Useful communication device | • Limited error checking |
| **High-Fidelity Prototype** | • Complete functionality  
  • Fully interactive  
  • Look and feel of final product | • more expensive  
  • time-consuming to create |
Vertical and Horizontal Prototyping
Paper Prototyping

**History**
- started in the mid 1980s
- in the mid 1990s: more popular

**Definition**
- method for designing, testing and refining user interfaces
- users perform realistic tasks by interacting with a paper version of the product
Paper Prototyping – How it works

- type of representative users and task
- screen shots and/or hand-sketched drafts
- usability test:
  - misunderstandings, selfexplanatory or confusing parts
Paper Prototyping – pros and cons

Usefulness of Paper prototyping by a survey of Carolyn Snyder in July 2002:

- Marginal 15%
- Essential 30%
- Useful 56%
- Useless 0%

July 2002 survey of usability practitioners
172 responses
Numbers do not sum to 100% due to rounding
Paper Prototyping – pros and cons

**Advantage**
- no technical knowledge
- little time-consuming
- low-cost
- evaluation of user before implementation

**Disadvantage**
- Limited error checking
- no full-interaction
- not the look of final product
Experience Prototyping

• started in the 1980s
• find user needs given from experience
• why?
  ▪ to understand user experience
  ▪ to explore and evaluate design ideas
  ▪ to communicate design ideas
Experience Prototyping in practice

1. Understanding existing user experiences and context
Experience Prototyping in practice

2. Exploring and evaluating design ideas
Experience Prototyping in practice

3. Communicating ideas to an audience
Experience Prototyping – pros and cons

- Costs of using techniques
- Human-computer interaction methods are seen as too time consuming
- Complexity of the prototype

+ Functionality
+ Looking of the new product
Vielen Dank für Ihre Aufmerksamkeit!