Assignments 2 and 3 – Iterative Prototyping and Evaluation

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## Days and Topics

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>March 11</td>
<td>Intro</td>
</tr>
<tr>
<td>March 16</td>
<td>Designing Interactive Systems – Assignment 1 Published in Detail</td>
</tr>
</tbody>
</table>
| March 23 (10-13) | Prototyping + Evaluating Interactive Systems  
- Paper Presentation and Discussion (Assignment 1)  
- Assignments 2-4 Published in Detail  
- Android Sensing Tutorial Day will be Announced! |
| April 20   | Presentation Assignment 2/3                           |
| April 27   | Presentation Assignment 2/3                           
- Submission Assignment 4                          |
| May 4      | User Interfaces for Ubiquitous Computing               
- Assignment 5 Published in Detail              |
| May 11     | Context-Aware Computing                                
- Details on Final Paper                           |
| May 18     | Presentation Assignment 5                             |
| June 1     | Presentation Assignment 5                             |
| June 8     | Submission Final Paper                                |
General Idea

Design **Interaction Flow** of a smartphone-based system inspired by your paper - No coding allowed

Evaluate and improve your design

Since I am going to present two assignments in one, the points will add up to 200% (100% for prototypes – Assignment 2, 100% for evaluation – Assignment 3)
Learning Goals

– **Approximate** system from paper with smartphones (use your creativity to capture the core idea!)

– **Prototype**

– … iteratively
  • In order to at least partially check for this: I want to see two sufficiently different initial prototypes (different interaction flows), one more mature prototype, and the evaluation plus resulting changelist

– Task-based heuristic **evaluation** (cognitive walkthrough)
Design: Initial Prototypes – 60%

– Hand-drawn paper prototypes (use no software at all)
  • Present at least two sufficiently different pretty rough initial prototypes (take pictures)
  • Grading: You will get 30% for each of plausible prototype that is sufficiently close to the original paper (at most 60%). The points are for meaningful approximation of the original paper that demonstrates understanding the original paper, as well as for plausible interaction flow.

– Suggestion – do some iterations for these as well (Evaluate informally) …
Evaluate – 80%

Choose one of the two prototypes
Perform a cognitive walkthrough
1. Define the key user tasks (1-2) that a user wants to achieve with the system
   – Grading: You will get 20% for a reasonable choice and description
2. Identify the user actions and system responses
   – Grading: You will get 30% for a reasonably full description of user actions and system responses
3. For each user action, answer the CW questions from the lecture
   – Grading: You will get 30% for reasonably answering the CW questions
Evaluate and Refine – 20%

Describe what problems you identified during the CW, with implications for design! (Evaluate – Analyse)

- Grading: You will get 20% for a reasonable list of changes

Also use the 10 usability heuristics to check iteratively for improvements to all of your prototypes!
Design: “Final” prototype – 40%

This would be a prototype with which you go to users, for thinking aloud tests for instance!

- Grading: You will get 40% for a reasonably more mature and adapted (following your own suggestions from CW) prototype.
Presentation (30min per group – 10min questions and discussion)

Present your work on assignments 2+3

Please send me your presentation to viktoria.pammer@tugraz.at!

– Include your names and Matrikelnummer on the slides!

Rationale:

– I need to be able to grade you based on your presentation BUT need your slides to document your work.
– All others should be able to learn from your work
Presentation (30min per group)

– Show me and the class the initial prototypes. Place them physically on the table in the lecture hall, and show large enough photos on the beamer – 5min

– **Explain the key tasks**, and **demonstrate** how key tasks would be achieved with the selected prototype – 5min

– Show the detailed list of user actions and system responses, and **your assessment of CW questions** (don’t need to go in detail into this in the presentation, but show complete list and explain one or two examples) – 1min

– **Explain the key changes** that you made to the design – 4min

– … and **demo final prototype**. – 5min