Final Paper

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# Days and Topics

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<th>Date</th>
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<td>March 11</td>
<td>Intro</td>
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<td>March 16</td>
<td>Designing Interactive Systems – Assignment 1 Published in Detail</td>
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| 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                                                |
Recap Assignments

1. Read a good paper (provides use case, rationale, general direction)
2. Design two different Mock-Ups
3. Improve / merge them based on heuristic evaluations (obligatory: cognitive walkthrough; voluntary: other heuristics)
4. System architecture
5. Technical feasibility study: smartphone-based demo prototype that shows core functionality
Learning Goal of Final Paper

You learned in this lecture a methodological approach to interactive system design and approximated ubiquitous computing systems with sensor-based smartphone applications.

Writing the final paper should help you

- Frame the assignments you did as (the first parts of ) an iterative software engineering process
- Reflect on what your final prototype achieved and what not
- … in your own words (as opposed to working in a group)
- … and draw from this insights for making your current design and development better
- Practice writing in English (but you can also submit in German)
Paper Structure

1. **What** – Describe shortly what kind of application you designed and implemented
   - Don’t go yet into details of what your implementation cannot do in comparison to your design – this is more about the goal of the application
   - 1/3 of a page
   - 10% (exists and is intelligible)

2. **Why** - is such an application useful, for whom?
   - Borrow shamelessly from the paper you read – but cite the paper correctly, rephrase in your own words, and comment if there are significant differences between the application in the paper and your prototype
   - 1/3 of a page
   - 10% (exists and is intelligible)
Paper Structure

3. How – Method: Design and development process
   - Follow the assignments: Use case from paper, 2 initial prototypes, heuristic evaluations, improved prototype (from here in reality you would go to user exposure probably); technical development: system architecture, technical study prototype (from here in reality if everything works you would iterate system architecture, functionality, … or go on to more fully develop prototype)
   - 2/3 page
   - 10% (exists and is intelligible)

4. Details: Design – Interaction Concept and Evolution
   - Communicate the basic interaction concepts of your final prototype
   - 1 page text, plus screenshots (no limit, but only selected screenshots – I got the complete documentation anyway)
   - 20% (exists and is intelligible, captures the concept!)
Paper Structure

5. **Details: Implementation** – System architecture and technical feasibility prototype

- Describe the system architecture shortly – what is so unique, so special that you think you should point it out? What would be good to know for the next person who wants to develop something similar?
- Describe what subset of the design you implemented, what kind of functionality you wanted to “test”
- 1 page
- 20% (exists, is intelligible, shows the focus of your implementation)
6. **Next Steps** – What did you learn, how would you go on with your prototype?

- Does the use case as you approached it make sense or does the whole application need to be re-thought (or discarded)?
- Does the interaction concept you selected make sense – what would be your next changes?
- Do your system architecture and technical prototype work – how good, what (if you would) would you change?
- Knowing all this: What would be your next steps – testing with users, re-designing/re-thinking first?
- 1-1.5 pages
- 30% (exists, is intelligible, shows reflection of your work)