

Final Paper

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May 11, 2015

Days and Topics

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| March 11 | Intro |
| March 16 | Designing Interactive Systems – Assignment 1 Published in Detail |
| 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)