Supervision 1 - HCI 2015/2016

Submission Deadline: 48 hours before supervision.

Submission details: *Preferably hand in as a PDF file via email, but you can use the blue box as well. If sending by email, the prototypes should be scanned/photographed at a reasonable quality for submission, and you should bring the originals at the supervision. Otherwise, directly submit the originals.*

The tasks below are concerned with the following design problem: You work for a company that is creating IoT devices for home environments (e.g. smart lights, home monitoring system (camera, temperature/energy sensors etc.), wifi speakers, smart window blinds). You are asked to design a mobile application that allows users to visualize, control and automate their home using some of these devices.

Task 1. Prototyping - 30 minutes

(Lecture 7 in Lecture notes), (Rogers, Preece & Sharp 2011, Ch 11.2)

First, create a low-fidelity prototype for the application. You can use storyboards, sketching, paper prototypes, index card based prototypes or anything else that you find suitable (including video).

Think about what is the first view when the user opens the application, and what they can do from there. Select a couple of IoT devices that the user can interact with and prototype their respective views. Think about how to address the three things mentioned in above (*visualize, control and automate*) through the interface.

The prototype should describe the ways in which the user interacts with the application, so it should include multiple screen images, and how the user transitions from one another.

Task 2. Visual representation - 30 minutes

(Lecture 2 in Lecture notes), (Rogers, Preece & Sharp 2011, Ch 2.2-4)

Describe three aspects of the visual language (marks, symbols, regions, surfaces) used in the design of your prototype. For each aspect, explain the nature of the correspondence between the visual appearance and its meaning or purpose within the interaction design.

Task 3. Mental Models - 2 hours

(Lecture 4 in Lecture notes), (Rogers, Preece & Sharp 2011, Ch 3.3)

Conduct a small, informal study using the Wizard of Oz technique in order to investigate the mental model of your users whilst they're using the application you designed to perform one or two tasks. You should aim for each study to take around 15-20 minutes.

Use the prototypes created in Task 1. You can recruit a couple of your friends for this, or use your supervision colleagues. You can chose to take notes or record (audio and/or video) the study. Read about the ethics of using human participants in studies. (Even though yours is not a controlled experiment, this [Research Guidance](#) would be a good starting point for treatment of participants, informed consent etc.)

First report on your study design, then identify and report on the following issues:

- Were there instances where the user's mental model or expectations were different to how you designed the application? Why do you think that is?
- Did you observe the same or different explanations between users?
- How accurate are your participants' mental models to the way in which your application works?
- Are there any interface features revealed as being particularly problematic?
- What design interventions do these suggest?