Assignment 4 – Human-Computer Interaction 2

Note: Exercises are voluntary with the goal of preparing you for the final exam. The sample solution will be presented during the exercise sessions on Monday.

Concepts and coding skills thought in these exercises are relevant for the exam.

28 students participated to a doodle sent at the beginning of this lecture. All but one stated to have access to programmable smart phones. All students who do not have access to a mobile phone need to team up with other students in order to test their code and test their own targeting behavior.

Exercise 1: Towards a targeting behavior study on your mobile phone

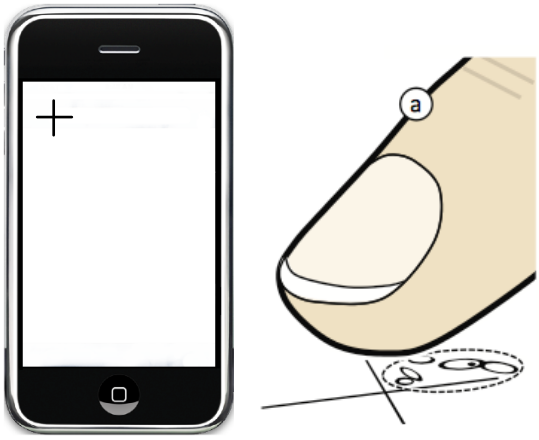

Abbildung 1: Left: a target on your phone, Right: [Holz et. al.] touch offsets when touching the cross-pixel

1. Create a 10x6 target-grid. Evenly distribute the targets on the screen of your mobile phone.
2. Use jQuery to figure out how large the screen of your particular mobile phone is and distribute targets evenly.
3. A trial consists of displaying a cross. Ask users to touch that center pixel as accurately as possible, record touch offsets in x and y for later analysis.
4. Participants touch all 60 targets 10 times in a random order. Once all data had been collected display the point pattern.
5. What can we do with these results?

Literature: Holz, C. et al.: The Generalized Perceived Input Point Model and How to Double Touch Accuracy by Extracting Fingerprints, CHI'10

Exercise 2: Gesture sets
What is an elicitation study and what is it used for?