

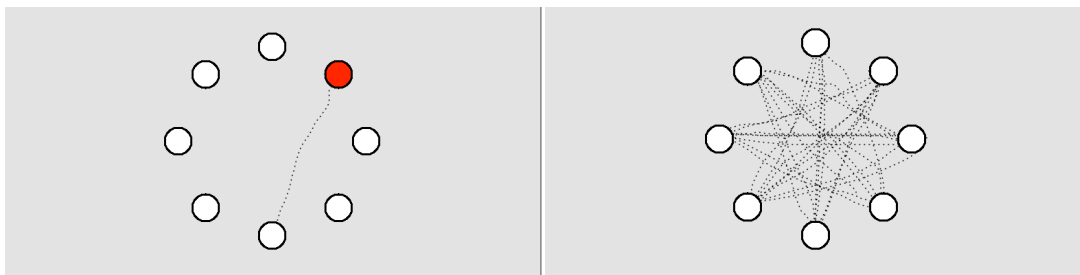
Assignment 3 – Human-Computer Interaction 2

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.

Exercise 1: Run a Fitts' law study

Have a look at Simon Wallner's (<http://www.simonwallner.at/ext/fitts/>) implementation to understand look and feel of this Fitts' experiment.



1. Arrange 8 targets in a circle inside the svg container of assignment 2 exercise 3. This time the target that needs to be clicked next turns red (try out Wallner's web page to see how the pointing experiment works).
2. Add a mouse cursor movement feedback (e.g. a dotted line as in figure above). Similar to Simon Wallner's implementation, this feedback disappears as soon as you start a pointing experiment with a new index of difficulty.
3. Update the data table with the pointing data (index of difficulty, time in ms) as the user performs the pointing experiment with the 8 targets.
4. Add a scatterplot to your html: the x-axis is the *index of difficulty (ID)* of the pointing task; y-axis is the *time in milliseconds* required for the pointing task (look at <http://www.simonwallner.at/ext/fitts/>, figure 1e).
5. Implement an experiment with three ID values (1. $ID=2bits$, $distance=300px$, 2. $ID=3bits$, $distance=140px$, 3. $ID=4bits$, $distance=150px$), that users can perform one after the other.
6. With each measured data in your array, the scatter plot should update accordingly.

Exercise 2: Sketchpad

What are key computer interaction concepts introduced by Ivan Sutherland's sketchpad?