

Exercise 1 – Human-Computer-Interaction

(This exercise can be carried out in groups of up to three students. We may ask any member of the group to explain the experiment, the software and the results!)

Theme: Rapid and Aimed Human Movement

A) Understand Fitts' Law

Familiarize yourself with the concept of the human psychomotor behavior as described in *Fitts' Law*. Explain the concept briefly.

B) Develop an Experiment and the Software to Investigate Pointing Performance

Develop an experiment and create a program (e.g. JAVA Applet) to experimentally assess the pointing performance of a user.

The task is to move a pointer (using a mouse or another pointing device) from the start point to a target area.

For the experiment the following parameters should be varied:

- distance between start position and the target
- the size of the squared target area

The program should automatically record the parameters that are varied and the time needed by the user to perform the task for this configuration. The task has to be repeated in order to get meaningful data.

Analyze the data recorded in the experiment and describe your results