Exercise 3 – Mensch-Maschine-Interaktion 1

Law of Steering

1. Implementing an application to examine the Law of Steering

(Per-group homework, 1 week)

In order to conduct the study, which you have designed in the previous week, write a simple application that will be used to conduct the study.

- Write a Java application that randomly displays a tunnel of varying length and width. At one end of the tunnel is a starting area, at the other end a goal area. The direction of the tunnel can either be left-right, right-left, up-down, or down-up.
- The width of a tunnel is either 16, 32, 64, or 128 px. Its length is either 128, 256, 512, or 1024 px.
- For each trial the user's pointer is placed in the start area. The task is to steer the pointer to the goal as quickly as possible without touching the edges of the tunnel. The task is completed once the pointer touches the goal area.
- Touching the edges of the tunnel is logged as an error and visually indicated to the user.
- The application requires the user to play all 4 (width) x 4 (height) x 4 (direction) = 64 combinations, in random order.
- The application logs all events to a file for later analysis.

The next assignment will be carrying out the study, so be sure that the application runs stable.

Reminder: Remember to specify which team members worked on which parts of the task assignment in an extra section (“division of tasks”) at the end of the design proposal.

Submission:

- Send your solution to your tutor by email. Use an attachment named exercise3-groupN.zip (N is the number of your group). Use the email subject “mmi1 exercise 3 group N”.
- The attachment must contain:
  1. A Jar file including source code
  2. A short readme.txt that explains how to use the application.
  3. A document that specifies how the work was split between the team members (“task-sharing.pdf”).
- **Deadline:** 20.05.2009, 12:00 noon