

Abstract

Work title: The response of the visual system when driving a car in real conditions and in a simulator during a parallel motor task.

Aims: To implement a laboratory measurement in a driving simulator and in real conditions during a parallel motor task. To track the response of the visual system during the task and to determine potential differences in the response of the visual system and in the speed in the simulator and in the real car environment.

Methods: The laboratory measurement was realized in a driving simulator OCTAVIA II. The measurement in real conditions was realized in Škoda Octavia as well. The eye-tracking method was used to track the drivers` eyes.

Results: In the simulator the more experienced driver managed to do the parallel motor task within a shorter period of time than the less experienced driver, lower frequency of looks at the radio during the tasks with the more experienced driver was not proved. There was not an evidence of more balanced speed during the drive with the more experienced driver in the simulator. On the average the driver spent shorter time doing the tasks in the real environment than in the simulator and the total number of looks at the radio was lower. The speed of the drive in the real environment was lower than the speed in the simulator.

Key words: eye-tracker, visual system, driving a car, driving simulator, parallel motor task