Automated Driving and Driver Drowsiness

**Experimental design**

"This study proved the reactivation potential of non-driving-related tasks. This became clear, as no participant of the Dictation and Sport activity group exceeded KSS level 7 at the end of the reactivation phase. In addition, after the subsequent effectiveness phase the number of participants exceeding a KSS level of 7 was considerably smaller (with 30.52 percent when participants did the Dictation and 15.00 percent when participants did the Sport activity task before the Relaxation task) compared to the group who had to relax during the entire study (38.89 percent)." (Weinbeer et al., submitted)

**Results**

- There was a significant difference between the usefulness of Concept C compared to Concept D. Concept D (feedback and offer of a compensation task) was rated best.
- When Concept D was presented, 66 percent of the participants decided to conduct the compensation task. Hence, feedback about a DMS uncertainty and a compensation task should be provided before an ADS adaption is performed.
- There was no statistically significant difference between the different concepts, regarding automation trust, mistrust, and satisfying.

**References:**


Weinbeer, Muhr, and Bengler (submitted). Automated driving: The potential of non-driving-related tasks to manage driver drowsiness.