

Road Safety Challenges Posed by the Use of AVs

Oliver Carsten and Frank Mütze

ETSC



Vehicle user related

- Lack of commonality in HMI means that users cannot safely transfer their knowledge from one vehicle to another
- Mode confusion
 - Need to distinguish clearly between manual, assisted and automated driving
- Overtrust
 - Drivers may interpret driving with L2 systems as driving with L3 or L4
- Driver monitoring
 - A serious gap is that there is no certainty that driver monitoring is reliable
 - Need for a specific test procedure on DM systems

Interaction with vulnerable road users

- Safe interaction with all potential VRU groups is a prerequisite for ADS operation on urban and rural roads
- Need to recognise motorcyclist presence at long ranges to the rear on high speed roads
- External HMI
 - New eHMIs could cause confusion and added workload for VRUs
- Interaction with motorcyclists and cyclists needs more R&D

Traffic-related

- MRC does pose “minimal” risk if it entails a vehicle stopping in lane in live traffic on a high-speed road

Remote operation as backup

- Lack of evidence to verify that such operation can be performed safely
- A backup can only be offered if it can be proven to be robust, and that is far from the case here

Learning from mistakes

- Collisions involving AVs will be inevitable. It is important to learn from them so that remedies can be implemented.
- Require a system of robust oversight and investigation
- We do not have such a system for road transport now

Thank you for your attention!