

Autonomous Driving as motivation of a Safety & Security regarding automotive development

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Future vehicles will be increasingly linked with their environment. This technology has many advantages, particularly in connection with autonomous driving. Actions such as acceleration, braking or direction changes can be communicated to other vehicles. Sensor data could be shared with other vehicles. The traffic flow could be improved through cooperation of road users in planning the route. All these applications do create something that is actually new - namely interfaces that enable an influencing of the vehicle from the outside. Thus it is necessary to engage in a systematic way with the whole question of ensuring reliability for the underlying software. Reliable software has two dimensions. Functional Safety has the protection of the environment in focus. Cybersecurity has the protection of the vehicle from the environment to the target. In the development of modern vehicles and their software considering the functional safety is an important part of development. Cybersecurity in contrast has been largely neglected in the automotive industry. With the SAE J3061 is now a uniform approach available that is prepared to be closely aligned on the procedure known from the ISO 26262. Content of the lecture is to introduce a method based on the SAE J3061 cybersecurity risk management, which can be done at reasonable cost. The aspects of recycling and a clean documentation stand in the foreground.