CAD

Dear Reader,

There is currently a certain dichotomy in journalistic reporting and in social media: On the one hand, the celebration of the fascinating trend toward highly automated driving with the goal of Vision Zero achieved by eliminating the error factor human. On the other, reports of malfunctioning assistance systems and the resulting accidents are shaking confidence in machine perfection.

Even the industry's leader Tesla, although somewhat spared by this, is being illuminated by the US National Highway Traffic Safety Administration (NHTSA). According to the Manager magazine dated June 10, 2022, further accidents are now being investigated after a series of rear-end collisions with emergency vehicles when using autopilot. It is well-known that the system is only an assistance system at SAE level 2, but it is often assessed as being higher by users resulting in its misuse: at least when driven autonomously without the intervention option. This intensive scrutiny is new and is, in some cases, strongly criticized by the Tesla community.

The reaction in the press was all the more violent regarding an accident involving a BMW iX from the Munich company's trial fleet. Combined with the assumption that the BMW was being driven autonomously, the case caused quite a stir. The consensus of opinion was a kind of "they aren't any better", even though no other reports concerning accidents with the brand involving an assistance system can be found. At the time of publication, the case has still not been clarified, except for BMW's statement that the iX was only equipped with a system according to SAE Level 2.

If we ignore the inappropriate exaggeration of Tesla's assistance due to its name, the accidents point to a fundamental problem: zero tolerance and liability. In cases of negligence where a human driver may be granted extenuating circumstances, this crumple zone does not exist if engineering fails. Any failure with consequences, however small that failure is, is unacceptable. This is illogical in a way but fact, and in this perspective, indicates that immense effort will be required to avoid failure.

At the end of the day, perhaps Computer Aided Driving (CAD), in the sense of support providing warning and accident avoidance, should be considered as representing the maximum possible stage of development at reasonable cost for the majority of applications. This is particularly true for private use, where the costs of implementing fully automated driving would be too high for a simple comfort function.

Enjoy reading this edition.

Robert Unseld
Responsible Editor