Press Release

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Autonomous driving workshop for journalists 1 June 2022

TÜV SÜD and ZalaZONE – the cooperation

Zalaegerszeg/Munich. Although virtual testing methods are playing an increasingly important role, physical testing of automated driving functions continues to be the state-of-the-art test method for automated-vehicle (AV) approval. Against this backdrop, TÜV SÜD has now entered into extensive cooperation with AVL ZalaZONE, operator of one of Europe's most modern proving grounds in the Hungarian town of Zalaegerszeg. By entering into this cooperation, the partners are seeking to provide customers with even more comprehensive support in the type approval process, extending from the early development stage of automated vehicles. Another goal is to explore the interactions between physical and virtual test methods in order to close the regulatory gap more rapidly.

"ZalaZONE operates one of the largest and most modern proving grounds in Europe, making it the ideal partner for TÜV SÜD and an important building block in complementing our global test offerings for OEMs and suppliers", says Christian Gnandt, Global Head Highly Automated Driving at TÜV SÜD. For automated driving in particular, the proving ground offers a host of facilities including a two-lane track for cut-in tests. "Test-method development and validation are fundamental requirements for new standards. International standards, in turn, provide the basis for further closure of the regulatory gap, and for doing so as quickly as possible in order to get AVs on the road without delay", emphasises Gnandt.
In fact, approval requirements still vary from country to country. Given this, TÜV SÜD experts are already offering their customers the entire range of type approval tests – from physical and virtual test methods to cyber security and connectivity testing – for all major markets. Gnandt explains, "All services from a single source is our theme for the cooperation." And Zoltán Hamar, Head of Technology & Sales at AVL ZalaZONE, adds, "By joining forces with TÜV SÜD, we have brought on board one of the most internationally renowned cooperation partners, as well as one of the most experienced in the testing of automated driving functions to serve our customers at the highest level."

The gap

In the USA, liability for incidents involving self-driving cars rests mostly with the manufacturers. However, this comes at the price of all the safety and security risks that arise if concepts are neither tested nor scrutinised by an impartial third party. The promised level of safety, security and conformity can only be guaranteed if it is verified by additional impartial evaluations and plausibility analyses. In the opinion of the TÜV SÜD experts, this in turn requires framework conditions and standards that are harmonised at global level. While regulation is still lagging behind technological development in overall terms, agreements of regulations and standards are picking up speed.

Today many countries have already agreed on standardised regulations, such as UNECE R79 on automated steering technology, UNECE R157 on automated lane keeping systems and the planned Autonomous Vehicle Approval and Operation Ordinance (Autonome-Fahrzeuge-Genehmigungs- und Betriebsverordnung, AFGBV), the relevant amendment to the Autonomous Driving Act, which transposes EU law into national law. Still under development but expected to be published shortly is EU-L4, the first common basis for EU type approval of SAE Level 4 autonomous vehicles.
Additional guidance is offered by industrial standards, including ISO/SAE 21434, governing cyber security, and ISO 26262, which was adopted as the basis of software development in 2018. Gnandt explains, “All these regulations help to pave the way for autonomous driving, and are already being used as guidance by producers at international level today”. New standards, such as ISO 21448 (SOTIF) governing functional safety, are waiting in the wings.

The triangle

In fact, TÜV SÜD’s experts have acted as pioneers of automated driving. The company has played a major role in a variety of projects – including a partnership with Germany’s rail operator, Deutsche Bahn, to launch the first regular service by an autonomous bus on public roads in Germany, testing of autonomous vehicles made by US company Motional and collaboration with Israeli company Mobileye, a subsidiary of the Intel Group. In particular, it has served as a partner of regulation authorities around the globe. The latter category spans TÜV SÜD’s collaboration with CATARC in China through IAMTS as well as its partnership with CETRAN, the Centre of Excellence for Testing & Research of Autonomous Vehicles NTU. Working with the latter, TÜV SÜD developed one of the world’s first standards for autonomous vehicles in Singapore (TR68 – Technical Reference). “Our cooperation with OEMs, suppliers, research institutes and approval authorities around the globe is the bedrock of our expertise in approval testing and rapid market launch of autonomous driving”, explains Gnandt.
As one of the partners in the triangle of development between technical development, standardisation and safety, TÜV SÜD not only plays a critical role as third-party expert: it also acts as an important link

and facilitator with global expertise. “Standards for automated functions and vehicles which are harmonised at international level are key for rapidly bringing autonomous vehicles on public roads. This applies to smooth type approval for all relevant markets and forms the basis for introduction to road traffic”, affirms Gnandt.

Cooperation

In a nutshell, the cooperation with TÜV SÜD offers ZalaZONE customers the opportunity of working with an internationally renowned partner on combining physical and virtual testing, performing tests for cyber security and Car2X, and safeguarding trust in virtual test methods. In turn, ZalaZONE and its ultra-modern proving ground provide TÜV SÜD with an additional option to perform reproducible physical tests for the validation of autonomous vehicles. Further development and fine-tuning of simulation methods is a particular form of added value. ZalaZONE allows TÜV SÜD seamless processing and use of test data for controlling the test vehicles, or – in the case of data from physical tests – for continual improvement and evaluation of the simulation process. “Based on our cooperation with ZalaZONE, we can offer our customers one-stop access to all tests from development to homologation”, announces Gnandt.

Further information at www.tuvsud.com and at http://zalazone.hu/

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