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Cooperation between b-plus and AVL optimizes data-driven development of ADAS/AD systems

**Deggendorf, May 05, 2022 – When it comes to developing and validating driver assistance systems (ADAS) and automated vehicles (AD), data-driven processes are indispensable nowadays. The tools and methods used generate huge volumes of data. This “flood” of terabytes (TB) poses major challenges to ADAS/AD customers. AVL and b-plus offer an integrated overall solution to this, with which data acquired during real journeys can be efficiently recorded, managed and processed.**

It requires many representative test drives in the most realistic environments possible to control the performance of ADAS/AD sensors and driving functions. The higher the degree of automation (SAE level 0 to 5) of the car, the more this applies. Nevertheless, it is possible to implement cost-efficient and reliable validation methods – for example, through objective comparisons between vehicle cognition and a high-precision environmental reference, also known as ground truth.

The AVL Dynamic Ground Truth System™ (DGT) is pioneering in this field. This reference system allows 360° environment recognition, which is completely independent of the test vehicle’s sensors. Lidar sensors, high-resolution cameras and GNSS systems record the environment around the test vehicle and generate a continuous data stream of 1 TB per hour. At the same time, the sensor data from the test vehicle is also recorded in the DGT system, which means a similar volume of data.

In practice, the data continues to mount up: more than 20 TB per vehicle is the norm in a standard eight-hour shift. Global driving campaigns, which typically use 20 or more vehicles, soon reach volumes of around 0.5 petabytes (PB) per day. These figures illustrate just how important an efficient and high-performance validation environment is to a successful safeguarding.

AVL’s DGT system masters these challenges thanks to BRICK 2 from b-plus. This integrated data logger synchronously records the input from reference systems and vehicle sensors. In the subsequent processing, performance and scalability are key: Using b-plus COPYLynx, the data is automatically transferred to a high-performance computer center or a corresponding data cloud, where the AVL ADAS/AD Analytics Platform (AAP) immediately organizes and analyses it.

“Data-driven development is a key method in the development and validation of ADAS/AD systems. With the AVL Ground Truth data recording system, the high-performance b-plus data logger and the analysis platform from AVL, it is possible to call upon a standardized and scalable environment for the implementation of this method,” says Steffen Metzner, Product Manager in the field of ADAS/AD Testing Solutions at AVL.

“For our customers in the ADAS/AD environment, it is increasingly important to have access to high-quality data, which can be used as a basis for their data-driven development. The combination of the AVL reference sensor system and the hardware and software toolbox from b-plus is a comprehensive solution stack. Our technologies complement each other perfectly, in order to gather large volumes of data and transfer it to the data center,” says Stefan Rankl, Key Account Manager at b-plus.

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About b-plus GmbH:

The b-plus Group is with more than 240 employees an international leading development partner for advancing technologies in the fields of autonomous driving, driver assistance systems and the automation of mobile machines. With its development tools, automotive software and mobile automation divisions, it offers its customers a wide range of measurement technology, software and hardware.

As a long-term partner, b-plus accompanies its customers from the identification of the problem to the implementation of the development solution and beyond. The teams at the Deggendorf, Regensburg and Lindau locations work hand in hand to provide comprehensive and holistic solutions.

For more information: [www.b-plus.com](http://www.b-plus.com/?mtm_campaign=2111_Smart%20Recording&mtm_medium=PM)

About AVL

With more than 11,000 employees, AVL is the world’s largest independent company for development, simulation and testing in the automotive industry, and in other sectors. Drawing on its pioneering spirit, the company provides concepts, solutions and methodologies to shape future mobility trends. AVL creates innovative and affordable technologies to effectively reduce CO2 by applying a multi-energy carrier strategy for all applications – from hybrid to battery electric and fuel cell technologies. The company supports customers throughout the entire development process from the ideation phase to serial production. To accelerate the vision of smart and connected mobility AVL has established competencies in the fields of ADAS, autonomous driving and digitalization.

AVL’s passion is innovation. Together with an international network of experts that extends over 26 countries and with 45 Tech- and Engineering Centers worldwide, AVL drives sustainable mobility trends for a greener future. In 2020, the company generated a turnover of 1.7 billion Euros, of which 12% are invested in R&D activities.

For more information: [www.avl.com](http://www.avl.com)