

Karlsruhe District of Weiherfeld-Dammerstock Becomes Test Track for Autonomous Shuttles

The project EVA-Shuttle switches from the laboratory to the street. For this purpose, the project partners of the FZI Research Center for Information Technology have now chosen the Karlsruhe district of Weiherfeld-Dammerstock. Starting in February, the autonomous vehicles will demonstrate their abilities in the real road traffic there - always with a security driver and initially without passengers.

Karlsruhe, 28.01.2020 – The autonomous shuttle for "the last mile" is now one step closer. Starting in February 2020, the mini buses of the project EVA-Shuttle ("Elektrische, vernetzte und autonom fahrende Elektro-Mini-Busse im ÖPNV", engl.: electrical, networked and autonomously driving electric mini buses in public transport) will be tested under real-life conditions, however, always with a security driver and initially without passengers in Karlsruhe. For the selection of the suitable area, the entire urban area of Karlsruhe was comprehensively analysed by the project partner ioki – a subsidiary of Deutsche Bahn. Together with the requirements of the other project partners as well as in consultation with the Test Area Autonomous Driving Baden-Württemberg and the City of Karlsruhe, the district Weiherfeld-Dammerstock has been chosen. On Monday, the project consortium informed together with the City of Karlsruhe local representatives about the planned project.

"The data of ioki do not only show that the district is the best choice for the project and the population regarding the requirements and benefits of autonomous shuttles," says Professor J. Marius Zöllner, member of the Board of Executive Directors at the FZI Research Center for Information Technology and professor at the Karlsruhe Institute of Technology (KIT). "It also provides exactly the right, demanding environment, in which we can demonstrate the newly developed abilities of the vehicles in mixed traffic and implement a security concept adjusted to the area."

In order to be ready for this task, the three basic vehicles of the firm EasyMile – mini buses with six seats and room for four people to stand – were equipped with additional sensors and algorithms in the past months. "We have intensively tested the components in simulations and on a closed area", says Zöllner. "Now, we want to verify the results in a real environment." As consortium leader of the project EVA-Shuttle, the FZI manages not only the continuous enhancement of the shuttle functionalities. It also provides two of the three autonomous vehicles as well as the expertise and algorithms, by which the behaviour of the other traffic participants as well as the necessary reaction of the buses to it can be predicted.

The consortium standing behind the "Test Area Autonomous Driving Baden-Württemberg" has already started to prepare the district of Weiherfeld-Dammerstock onto networked driving. "For this purpose, highly-detailed maps are being developed, on the one hand," explains Zöllner. "On the other hand, the traffic infrastructure is being extended. For example, the shuttles shall directly communicate with traffic lights so that they can recognise the sequence of the traffic lights without optical sensors."

The test runs will begin without passengers for now. Prospectively starting at the second half of 2020, the shuttles will be available to passengers in the entire district of Weiherfeld-Dammerstock for the path from the house to the tram station Dammerstock.

About the project EVA-Shuttle

In the project EVA-Shuttle, the project consortium led by the FZI develops mobility solutions for the first and last mile from the bus stop to your front door. Called per app, the autonomous shuttles will prospectively take the passengers on the principle of car sharing and bring them to their destinations. Besides the FZI, Robert Bosch GmbH, Verkehrsbetriebe Karlsruhe GmbH, TÜV SÜD Auto Service GmbH as well as ioki-GmbH, the subsidiary of Deutsche Bahn, are involved in the development. INIT GmbH, the City of Karlsruhe as well as the Karlsruhe Transport Authority/Albtal-Verkehrs-Gesellschaft accompany the project as associated partners. The German Federal Ministry of Transport and Digital Infrastructure (BMVI) funds the project in the framework of the research programme Automated and Connected Driving with EUR 2.32 million over a duration of 27 months.

About the FZI Research Center for Information Technology

The FZI Research Center for Information Technology, with its head office in Karlsruhe and a branch office in Berlin, is a non-profit institution for applied research in information technology and technology transfer. Its task is to provide businesses and public institutions with the latest research findings in information technology. It also qualifies young researchers for their career in academics or business as well as self-employment. Led by professors from different faculties, research teams at the FZI interdisciplinarily develop and prototype concepts, software, hardware and system solutions for their clients. The FZI House of Living Labs provides a unique research environment for applied research. The FZI is the innovation partner of the Karlsruhe Institute of Technology (KIT).

The Test Area Autonomous Driving Baden-Württemberg

The Test Area Autonomous Driving Baden-Württemberg is a real laboratory for mobility concepts. It shall support the development of future-oriented solutions for private and public transport.

Companies and research institutions can test their technologies and services around networked and autonomous driving – namely in everyday traffic. With automated cars, buses or commercial vehicles such as street cleaning or delivery services.

The test area launched in May 2018, comprises all kinds of public roads in contrast to other projects in Germany: motorway sections, state and federal roads, inner-city routes with bicycle, pedestrian and tram traffic as well as 30 kmh zones, residential areas and car parks. The test area tracks are located between Karlsruhe, Bruchsal and Heilbronn.

The test area is operated by the Karlsruhe Transport Authority (KVV). The KVV itself also uses the test area, in order to test new forms of local public transport – for example autonomously driving mini buses.

Further information

Julia Feilen, Communications
FZI Forschungszentrum Informatik
Haid-und-Neu-Str. 10-14, 76131 Karlsruhe, Germany
Phone: +49 721 9654-943
Email: feilen@fzi.de
Web: www.fzi.de/en