##### Economy/Road Traffic/Road Safety

**Automated Driving: Camera Detects Road Markings**

In St. Valentin, Austria, researchers at the Chair for Sustainable Transport Logistics 4.0 at the Johannes Kepler University Linz carry out successful tests on automated driving.

The Digitrans proving ground in St. Valentin is at the center of intense research on autonomous driving. At the test site, SWARCO Road Marking Systems figures prominently as an exclusive system partner for road markings. Together with researchers at the Chair for Sustainable Transport Logistics 4.0 at the Johannes Kepler University Linz (JKU), SWARCO Road Marking Systems’ experts are conducting studies on the detectability of markings, using LiDAR and a camera. The JKU experts’ fully automated test vehicle was already able to detect the lane markings with both systems and stay within the lane easily in the very first test series, making this a successful start to the in-depth research.

**22 February 2022** – “The researchers agree: The future of private transport belongs to automated driving. However, until cars can operate without any intervention from a human driver, a lot of research is still needed,” explains Friedrich Wiesinger, Team Leader Product Development at SWARCO Road Marking Systems. Some of the research is taking place on the Digitrans test track in St. Valentin, Lower Austria. These tests are among the most comprehensive cross-company practice trials relating to semi-autonomous systems that are currently undertaken. In this context, SWARCO Road Marking Systems operates as Digitrans’ exclusive system partner for road markings.

**JKU’s Fully Autonomous Vehicle**

In addition to many renowned companies, scientists at the Chair for Sustainable Transport Logistics 4.0 at the Johannes Kepler University Linz are also conducting research and tests at Digitrans in St. Valentin. Recently, they tested the detectability of standard markings using a fully autonomous vehicle developed for this purpose, together with a camera, the open source software OpenPilot, and a LiDAR system. These are used by automated driver assistance systems for orientation on the road. “We wanted to obtain precise answers as to whether the sensors would detect the markings. The results were clear. The markings were detected, which enabled our vehicle to navigate on the road without a hitch,” explains Prof. Cristina Olaverri-Monreal, Ph.D., who holds the Chair for Sustainable Transport Logistics 4.0 at JKU. “Our test vehicle drove without any external human intervention,” she adds. “We only controlled speed, using cruise control, and tested speeds up to 55 km/h. Both the camera and the LiDAR sensors were able to detect all of the markings.” LiDAR (Light Detection and Ranging) is a technology which is similar to radar and uses laser beams to measure the position and speed of objects. This is why it is essential that in the LiDAR wavelength, too, markings demonstrate optimal visibility.

**Perfect Conditions for Perfect Tests in St. Valentin**

“During the test drives, the weather and conditions were optimal, leading to good results. We’re now even more curious to see what will happen in future test series,” Friedrich Wiesinger says. In fact, this success marked the beginning of a whole series of trials which will be carried out in all conceivable weather conditions, including snow, rain and fog. Currently, Digitrans is even setting up an outdoor sprinkler system at the test site in St. Valentin to be able to simulate varying levels of rain intensity. Future tests will also aim to clarify how well cameras and LiDAR can detect individual markings and their contrast with the road.

**About SWARCO Road Marking Systems**

Quality products and services from SWARCO Road Marking Systems guide traffic safely from A to B by day and, above all, by night. Whatever the weather. From a single source. Over 5,000 customers in more than 80 countries place their trust in them.

For further information visit: [www.swarco.com/rms](http://www.swarco.com/rms)