



TU Kaiserslautern successfully tests eSIM deployment within a private network

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Giesecke+Devrient

The Technical University of Kaiserslautern (TUK) has completed the world's first deployment test of eSIMs in a private network. Network solutions from MECSSware and eSIM technology from Giesecke+Devrient (G+D) are being used.

Through this trial scenario, TUK demonstrates the wide flexibility of eSIM technology in private 5G environments. This involved implementing two LTE networks with 5G functions. A mobile industrial robot operates within these two networks. The industrial PC that controls the robot is equipped with a special eSIM solution which enables the robot to quickly, securely and automatically switch cellular connections when it moves from one network to the other.

The test was achieved with the TUK as well as MECSSware and G+D. MECSSware acted as supplier of the network technology as well as system integrator and incorporated G+D's eSIM management solution for private mobile networks into the test platform. This solution allows the required eSIM profiles and credentials to be loaded and managed "over the air" on the industrial PC. Dedicated software ensures that it automatically uses the correct profile when it changes networks.

The trial was set up as part of the "5G Kaiserslautern" research project. This project is funded by the German Federal Ministry of Transport and Digital Infrastructure led by the Chair of Radio Communications and Navigation at TUK. The aim of the research project is to simplify and accelerate the adaptation of private 5G through the testing of concrete application scenarios in industrial use cases.

TUK also plans to test eSIM technology in other environments with networks from other manufacturers.

"Private 5G networks are generally regarded as the main driver of efficient digitization in many industrial sectors," says Prof. Dr. Hans Schotten from the Chair of Radio Communications and Navigation at TUK and coordinator of 5G Kaiserslautern. "The use of eSIM significantly increases the flexibility of these networks. We are very proud to be able to demonstrate this option for the first time ever with our partners MECSSware and G+D."

"MECSSware is proud to be working with G+D and TUK on the very first set of solutions for private LTE/5G networks," adds Dr. Torsten Musiol, CEO of MECSSware. "Our campusXG network can easily be deployed and operated. Support for eSIM greatly simplifies the connection of industrial devices in the process."

Bernd Müller, Global Vice President, Head of Technology, Solutions and Strategy, Trusted Connected Devices at Giesecke+Devrient, emphasises: "It is extremely important for us to implement concrete deployments now in the early stages. We learn more with every trial. We are pleased that, working closely with TUK and MECShare we have been able to successfully connect the very first industrial PC and the first moving robot in a private LTE/5G environment."

A short video from TUK about the test scenario is available [here](#) ↗.

About Giesecke+Devrient

Giesecke+Devrient (G+D) is a global security technology group headquartered in Munich, Germany. As a partner to organizations with the highest standards, G+D's solutions create trust and secure essential assets. The company's innovative technology protects physical and digital payment, the connectivity of people and machines, the identity of people and objects, as well as digital infrastructures and confidential data.

G+D was founded in 1852. In fiscal 2020, the company generated sales of 2.31 billion euros with around 11,500 employees. G+D is represented by 74 subsidiaries and joint ventures in 32 countries. Further information: www.gd-de.com.