Connected Car runs with G+D technology

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Connected cars using technology from the international technology group Giesecke+Devrient (G+D) are equiped with two eSIM cards. One is used for eCalls, navigation or traffic information services, the other for the driver's private information and entertainment services. The technical base is G+D's DSDA solution (Dual-SIM Dual-Active) and AirOn360 eSIM management platform. These solutions are also used in the BMW iX and BMW i4 and will be available in other new BMW Group models in the future.

In most cases, connectivity is provided by the SIM modules that are already factory-installed in smart devices such as smartphones, smartwatches and smart home devices. Modern vehicles also get equipped with this technology. These so-called embedded SIMs (eSIMs) have been made mandatory since March 2018 in the EU due to their automatic emergency call system, eCall.

When it comes to connected cars, G+D is now taking it one step further together with the BMW Group, as the vehicles will be equipped with two independent eSIM modules. The basis is the DSDA concept, which is now market-ready and takes a user-centric approach to connectivity. The so-called telematics eSIM ensures the manufacturer's digital services such as eCall, navigation or traffic information, while the personal eSIM is used for information and entertainment applications of the driver and their passengers.

G+D's DSDA solution is implemented in the BMW iX and the BMW i4 and will also be available for other BMW Group models in the future. Private digital services in the vehicle can be used by passengers in parallel with car-to-cloud communication for BMW Group telematics services. A second mobile connection is established for the personal eSIM, regardless of the network provider used by the car manufacturer to provide its services.

The driver has thus immediately access to all mobile services such as video or music streaming. An additional advantage is the wide functionality of the eSIM: Multiple personal eSIM profiles can be stored so that the entire family can also access their private digital services when using in the car.

The DSDA solution and eSIM profile provisioning and management are handled by a single, unified solution: the AirOn360 eSIM management platform from G+D. It supports secure lifecycle management of eSIMs. The platform complies with all specifications for remote SIM provisioning set by the GSMA. By using modern IP-based IT architecture standards and protocols, there is a fully owned eSIM provisioning guarantee.

The new solution offers several benefits to both car manufacturers and buyers. Manufacturers can offer infotainment and telematics services to their customers via a central eSIM management platform, with separate accounts, tariffs and mobile connections. For buyers, the DSDA solution brings private connectivity to the car.

This separation of networks also facilitates the path to meeting the different regulatory requirements in many countries. This is especially relevant, for example, when issuing telecommunications licenses for consumer-oriented ISP services (Internet Service Provider services) or for M2M and telematics services.

Last but not least, thanks to the DSDA principle, the previously common but costly Bluetooth pairing of the smartphone with the vehicle, becomes redundant. This is necessary, for example, for the use of the hands-free system. There are several problems associated with Bluetooth pairing. First, the manufacturer must ensure Bluetooth compatibility of the vehicle with a variety of different mobile devices and software versions. Second, with this approach, transmission and reception quality is compromised by vehicle shielding because the mobile device's antennas are used. With DSDA, on the other hand, the external vehicle antenna is utilized, which ensures high signal quality.

"Today's drivers have different expectations of a car than in the past. They rely on navigation systems with always up-to-date maps and traffic information, want to consume multimedia internet content, work and make phone calls in the car, or search for the next free charging station. This means that modern infotainment systems must allow flexible personalization based on user profiles that also regulate access to the internet in the car. We are pleased that G+D has been the solution partner for the BMW Group in the area of eSIM for many years – and now also for the new Dual-SIM Dual-Active solution. Together, we are creating the basic requirement for a new kind of individually networked mobility," emphasizes Carsten Ahrens, CEO of G+D Mobile Security.

About Giesecke+Devrient
Giesecke+Devrient (G+D) is a global security technology group headquartered in Munich. As a partner to organizations with highest demands, G+D engineers trust and secures essential values with its solutions. The company's innovative technology protects physical and digital payments, 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 the fiscal year 2020, the company generated a turnover 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.gi-de.com.