DKT - Deutsche Kennzeichen-Technik GmbH

DKT and carTRUST at the ITS World Congress in Hamburg

DKT and carTRUST represented in hall B5 at booth 007 with 18 sqm joint booth

Ahrensburg, August 25, 2021 - The Free and Hanseatic City of Hamburg, ERTICO - ITS Europe and the German Federal Ministry of Transport (BMVI) will host the 27th ITS World Congress - the international industry platform for intelligent mobility and connected transport of tomorrow. From October 11 to 15, 2021, thought leaders, developers, entrepreneurs and decision makers from the fields of transport, logistics and IT will meet at the congress center. The future of mobility is right around the corner: to test, apply and understand. In Hamburg, an international trade hub and model city for intelligent transport and logistics, numerous innovative projects show where the journey is headed. Autonomous and connected driving, sustainable sharing and pooling solutions, and smart logistics solutions can be experienced on test tracks and driving demo areas.

In line with the central theme of "Mobility of the Future," DKT is presenting its hybrid license plate for the secure identification of vehicles. Placing a third license plate behind the windshield as protection against theft, fraud and tampering is a well-established security feature. However, combining the "Windshield Tag" with the functionality of two RFID components (HF and UHF) in combination with other security features and tamper evident is an innovation. This makes vehicle identity even more efficient and unambiguous.

In both stationary and moving traffic, simple readers can be used to retrieve vehicle registration data and individual information at any time and in real time. For example, a common Android cell phone and DKT's CarCon app solution makes it possible to check vehicle registration data or determine whether the vehicle is insured or taxes have been paid. Other use cases such as data from technical vehicle monitoring (PTI), parking authorization, toll or access control are additionally possible through the hybrid solution.



Topics of the ITS World Congress 2021

- · Automated, cooperative and networked mobility
- Mobility services (Mobility as a Service and Mobiliy on demand)
- Digital port and logistics solutions
- Intelligent infrastructure
- New services from new technologies
- Sustainable solutions for cities and citizens

Digital twins on blockchain as the basis for smart cities

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In a future smart city, vehicles will communicate with the city's infrastructure and citizens will expect to be able to access services completely digitally. Unfortunately, analog vehicle documents stand in the way.

At ITS, carTRUST will present its blockchain-based solution for digital proof of ownership and rights for vehicles. carTRUST digitally maps the ownership, tangible assets and rights to vehicles. Legally secure and thus as an alternative to analog documents.

Vehicles are given a secure digital identity by carTRUST and can communicate with the infrastructure of a smart city and even use services independently. For example, the municipality can issue a digital resident parking permit or send (flood) warnings to vehicles in an affected zone. Vehicles independently settle parking transactions in a city, autonomous vehicles can safely interact with the city's infrastructure, barriers open without interacting with an app, and road permits are fully digital. All of this can only work if physical vehicles can identify themselves digitally. With a digital identity from carTRUST

By using blockchain technology and self-sovereign identity, identity and rights can be digitally confirmed, transferred and invalidated. The metadata is immediately available to all authorized parties and flows seamlessly into their own processes. Owners retain full control over the vehicle, the rights and the data. Analog documents thus become obsolete: True and complete digitization takes place, including digital rights management (right of disposal and right of use)

Whether operated as a central vehicle register by official institutions or in ecosystems of the private sector: carTRUST provides the trust anchor so that services related to vehicles can be offered and used digitally. Interoperable, secure, efficient.

carTRUST was developed by Christoph Kroschke GmbH and is currently being piloted.

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Hybrid license plate for unique identification

Vehicle identification is not only simple with the new hybrid license plate, but also extremely secure.

In both stationary and moving traffic, vehicle registration data and individual information can be retrieved at any time and in real time using simple RFID readers thanks to UHF/HF RFID technology. A common Android cell phone and DKT's CarCon app solution make it possible, for example, to check vehicle registration data or determine whether the vehicle is insured or taxes have been paid. Other use cases, such as data from technical vehicle monitoring (PTI), parking authorization, access control or environmental zone management are additionally possible through the hybrid solution. The hybrid number plate allows data, for example from the vehicle registration, to be easily read out via common mobile phones.

Proven overhead readers and RFID reader products mounted on gantries, toll gantries or existing transport infrastructure read the existing data via the UHF antenna. Handheld readers enable vehicle data control even in stationary traffic or parked vehicles.



By means of online request to the central information platform as well as by using a standard database, there are no limits. You as the operator decide which data is stored, which third-party provider or organization may access the protected database.



In addition to the unique vehicle identification number (VIN), numerous other identification features such as registration date, make, type, colour, up to the PTI due date, exhaust classification or authorizations can be stored.



Via a protected cloud or Internet platform, authorized persons can log on to the system with a terminal of their choice (with personal access ID). Data synchronization can take place via GSM connection in real time or you can work offline and synchronize your end device at a later time.

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The specially developed software is a central database solution and compares the data stored on the Hybrid Third License Plate with the vehicle data and information from the vehicle registration and the other applications of a vehicle (for example, insurance, taxes, technical vehicle inspection, etc.). If a match is negative because the registration data is incorrect or has been tampered with, or the vehicle has been reported stolen by police authorities, the status is displayed in real time in our mobile APP solution. Different users can have different control and access rights.

Whether checkpoints, traffic controls or technical vehicle inspections (PTI stations), for the quick retrieval of vehicle data and information, the CarCon APP is ideal and a modern tool for vehicle identification at the highest level!



DKT (Deutsche Kennzeichen Technik GmbH) develops innovative registration, traffic guidance and traffic monitoring systems for maximum customer benefit. The Kroschke Group and Bremicker Verkehrstechnik GmbH combine, under the umbrella of DKT as a joint venture, their specialist expertise and experience from 149 years of company tradition in family ownership. The merger of the two German market leaders offers a digital and holistic security concept. Modular systems for companies, authorities and complete states with a unique consulting service for individual requirements. DKT offers smart system solutions according to customer requirements. Mobile crime and insurance fraud don't stand a chance with DKT's products and solutions.

Vehicle registration: registration software, digital registration process

License Plate manufacturing: German manufacturing, customer-oriented manufacturing processes, life cycle management, quality and safety accreditation

Security features: third license plate, hologram, watermark, laser mark, laser writing, country features (flag, logo, coat of arms), 2D barcode, serial number, HU sticker

Vehicle identification: RFID/NFC solutions, third license plate, RFID reader, software and app solutions.

Traffic technology: traffic signs according to StVO, variable message signs (prism, LED), traffic guidance systems, traffic data acquisition systems, speed warning systems, DCPS - Digital Car Pricing System, smart city solutions (parking guidance systems and many more)

Contact - Your contact persons:

DKT - Deutsche Kennzeichen-Technik GmbH

Phone: +49 4102 8043 400

Mail: goett@dkt-international.com

Hans-Peter Gorbach, Head of Marketing & Communication

Phone: +49 881 642 -265, Mobile: +49 151 6880 5304

Mail: gorbach@bremicker-vt.de

Marcus Olszok, Head of carTRUST

Phone: + +49 151 551 489 43

Mail: marcus.olszok@cartrust.com