
Test result gives rise to hope for more security in German road traffic
Chip-based license plates from TÖNNJES E.A.S.T. from Lower Saxony detect motor cars at 100 percent

Bremen, October 2016. The RFID chip technology from TÖNNJES E.A.S.T. convinces again: The German company could successfully complete a joint field trial with the Dutch Ministry of Defence for vehicle identification by means of RFID chip technology in August this year. The system offers in combination with the encrypted chip technology NXP UCODE DNA a secure, robust, effective and reliable possibility for vehicle identification - and this with distances of up to twenty metres and speeds up to 150 kilometres per hour. Now TÖNNJES E.A.S.T. Presents test results for the first time. The result: The two-month practical phase on a military area near Eindhoven confirms that motor vehicles can be identified at 100 percent. Conventional, camera-based systems achieve only a detection quota of up to 62 percent. The comparatively weak performance of the camera technology can be traced back to the strong dependence on weather and visibility conditions, which quickly reaches its limits in case of rain, snow or dirty license plates. Corresponding camera-based systems are used at present for the planned section controls for the B 6 in Lower Saxony and the A 1 in North Rhine-Westphalia. Unlike previously, here vehicle drivers are not checked at individual locations, but prosecuted for exceeding an average speed over a longer road section.

“The test results confirm our expectations and show that there is no getting around RFID chip technology in the future when it comes to vehicle detection. In addition, there are also now the chances for an early nationwide introduction in our neighbouring country”, says Dietmar Mönning, Managing Director at TÖNNJES E.A.S.T. Against this backdrop, the company encourages to expand the section control planned for Germany by RFID technology. On average, there are 121 rainy days in Germany. Therefore, it is sensible to use an all-weather system. Only this permits the continuous detection of speeders. “Supplementing the camera system section control planned for Lower Saxony and North-Rhine Westphalia would ensure more security and justice in nationwide road traffic”, says Mönning with conviction. Austria had a test track with section control already installed in 2003 on the A22 in the Viennese Kaisermühlentunnel. According to the operator Asfinag, the number of accidents decreased by around 50 percent within ten years. There were no more fatalities. The average speeds also reduced for motor cars by ten kilometres per hour and for lorries by around 15 kilometres per hour. Different from the planned test tracks in Germany, in Austria the tunnel protects even from bad weather conditions.

The current field trial from The Netherlands is mainly composed of three parts: the standard camera-based system with automatic license plate detection, the all-weather RFID chip technology and a combination of both systems. The test result discloses the weak points if only the camera-based technology is used: Out of 100 vehicles, only 52 vehicles could be clearly identified. Ten motor cars were identified inaccurately. 38 could not be detected at all. An inaccurate identification means that one or several characters on the license plate could not be displayed properly - what, however, basically still makes an identification possible. Therefore,

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TÖNNJES E.A.S.T. Recommends, based on the test results, to combine both technologies. In this case 85 out of 100 vehicles could be identified completely and an additional 15 inaccurately. The case that a motor car was not detected at all when both systems were combined, did not occur.

All vehicles tested in The Netherlands were equipped by TÖNNJES E.A.S.T. With IDePLATES and IDeSTIX. These are motor car license plates and windscreen stickers with an integrated RFID chip. They are based on the crypto chip UCODE DNY of the semiconductor manufacturer NXP Semiconductors. This passive security chip has, apart from a high read range, also an encryption technology. It guarantees data protection and privacy of the vehicle drivers. Separate high speed tests also confirm that data protection-friendly encrypted identity checks for speeds of up to 160 kilometres per hour are possible without any problems. This also applies to multilane motorways. To increase the identification quota on German roads, the company from Lower Saxony also works at the moment on the development of a ground antenna. It should be inserted in the respective lanes and serve especially for the identification of IDePLATES. This reduces the distance between the RFID chip and the reading device to a minimum.

About J.H. TÖNNJES E.A.S.T. GmbH & Co. KG

As leading provider of security license plates for vehicles, TÖNNJES E.A.S.T. offers its customers solutions for vehicle identification for different requirements. The products are used to protect from manipulation, fraud and theft. Equipped with latest technologies, the company develops modular systems and individual complete solutions that fulfil the specific requirements in the fields of security, organisation and logistics.

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