

Ready for Logistics 4.0: Smart tachograph from Continental is more than a monitoring device

- **The new DTCO 4.0 digital tachograph brings reliable data into seamless supply and information chains**
- **Intelligent Transportation Systems (ITS) interface assists in transport planning and enables cooperating services**
- **Presentation at IAA Commercial Vehicles addresses current fleet management challenges**

Villingen-Schwenningen, September 10, 2018. The new Tachograph Regulation (EU) 165/2014 takes effect in mid-2019. All newly registered trucks will then be required to have a smart on-board digital tachograph. And it will add numerous functional extensions. The interface to a global navigation satellite system and wireless data transmission for on-road inspections will make life easier for shipping companies and inspectors. A new encryption method will also offer greater security. Dr. Lutz Scholten, Vice President of Segment Tachographs, Telematics and Services at Continental, emphasizes that the new generation of the DTCO signifies no less than entry into a new era of secure data acquisition. For a long time, the tachograph experts at the technology company Continental have regarded the DTCO as much more than just a monitoring device. "Telematic data can be compared to an uncut diamond. It has great potential, but often the data is not available in a trusted or authenticated form upon which business relationships can be built," says Dr. Lutz Scholten. The DTCO 4.0 solves this problem, because it is able to record, validate and process the acquired data based on the most stringent security criteria and then exchange it with clearly defined and authorized third parties. "The new tachograph era brings new opportunities for fleets and their service providers. Countless services and even new business models can now be created based on data from the DTCO."

Better security thanks to cryptography

One of the requirements of the EU guideline is a standardized DSRC (Dedicated Short Range Communication) interface. In the future, the moving vehicle's DTCO 4.0 unit will send to the inspection officer – after suitable authentication and via an antenna mounted to the windshield – vehicle and calibration data, information on safety violations and malfunctions that have occurred in devices. By interfacing to a global navigation satellite system (GNSS), the position data is automatically logged at

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the start and end of the shift, after three hours of driving time and after each change in activities. Also prescribed for the future are enhanced cryptographic security mechanisms which involve a new encryption technology.

This new public key encryption system also applies to communications between the speed sensor and the digital tachograph. Continental has developed the new KITAS sensor 4.0 for this purpose. Together with the DTCO 4.0, it forms a system unit that fulfills the very strict legal requirements.

Trustworthy, authenticated data creates basis for cooperating services

The logistics world faces great challenges today: Online business trade has fundamentally changed user behavior, the complexity of the logistics chain is growing, and new mobility concepts are emerging. “Shipping companies and fleet managers must be able to react flexibly in this environment. Digitalization, networking and real-time data will play a key role in the future of the industry,” says Dr. Lutz Scholten. Fleet managers will benefit from an ITS (Intelligent Transportation Systems) interface which provides a lot of information from the DTCO 4.0 via a standardized interface. Access to this information – which consists of more than 70 different types of information – enables even more efficient transportation planning. The ITS interface is only optional from a legal perspective – but the technology company Continental has implemented it as a standard feature.

Fleet service providers and authorities can also benefit from the new technical possibilities. Continental’s DTCO 4.0 enables direct toll processing, for example, which even includes an integrated, on-board weighing system. The integrated DSRC connection already fulfills the technical requirements for applying country-specific functions to toll billing and toll monitoring in the tachograph. This eliminates the need for additional on-board units. The toll can also be made fairer at the same time if weight data – collected by sensors on the axles and sent to the tachograph in encrypted form – is simultaneously transmitted. In the future, the actual axle load would then be the decisive factor in the calculation of the toll.

Many other applications would be conceivable if the secure data from the tachograph is shared with other data processing systems. For instance, information on the fuel level could be determined by reliable level sensors and be transmitted to the systems of fuel card businesses. Apps could also use information from the DTCO to navigate drivers to a preferred fuel station nearby or to a parking lot that can be reached ideally at the start of a rest period. Another potential application is providing data to payroll service providers or insurers for individual wage accounting. Continental has already developed interfaces that enable the exchange of authenticated, trusted data from the tachograph.

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The EU General Data Protection Regulation (GDPR) was also addressed throughout system development. This enables fleet managers and service providers to very quickly identify the tachograph data that falls under GDPR guidelines and requires the driver's approval.

The basis for the processing the tachograph data described here is Continental's TIS-Web fleet management software. Every possible service is based on strict protection standards for all the data acquired by the tachograph. "With the DTCO 4.0, the amount of GDPR-compliant data we can use to support specific higher-level fleet management systems is increasing significantly. This also increases the overall number of opportunities," says Dr. Lutz Scholten. "We are looking forward to supporting the transport industry in implementing new ideas based on our competence in tachographs and telematics."

IAA Commercial Vehicles: Solutions for challenges in the fleet office

Continental is presenting the DTCO 4.0 and the business opportunities it generates at the IAA Commercial Vehicles motor show. This is one of the solutions that the technology company is providing to address fleet management challenges. Efficiency is the keyword here. Those who want to succeed in tough competition and with relatively small margins need a digital control center which also utilizes real-time data. Continental is presenting its solutions for the transport industry in an area of its booth that is dedicated to the fleet office.

Under the slogan "Make the digital leap!" Continental is showing – at booth B11/A06 in Hall 17 – how the transportation industry can make the leap into the digitalized world and thereby leverage efficiency potentials of an entirely new kind. The company is also presenting its trade show highlights at the IAA Press Conference on September 19 from 2:15 pm to 2:40 pm in Room 3B of the Convention Center.

DTCO 4.0: The Smart Digital Tachograph

Continental develops pioneering technologies and services for sustainable and connected mobility of people and their goods. Founded in 1871, the technology company offers safe, efficient, intelligent and affordable solutions for vehicles, machines, traffic and transportation. In 2017, Continental generated sales of €44 billion and currently employs more than 243,000 people in 60 countries.

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