

Networked trucks: DB Schenker and MAN intensify their partnership for autonomous driving

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- **Parties sign cooperation agreement on the development of high-tech trucks**
- **First platooning trials in a real logistics environment**

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High-tech trucks on the highway: the new project by DB Schenker and MAN is the first time that a logistics company and a vehicle manufacturer have cooperated to develop networked truck convoys for use in the logistics business. The two companies signed a cooperation agreement on this technology, also known as platooning, at the “transport logistic” in Munich today.

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For the first time, truck platoons will be tested for several months in an authentic road traffic environment as part of DB Schenker’s regular business operations. Another first is that instead of test drivers at the wheel, the vehicles will be steered by professional truck drivers. During the test phase, which will begin in spring 2018, DB Schenker and MAN will operate platoons on the “Digital Motorway Test Field” on the A 9 motorway between the DB Schenker branches in Munich and Nuremberg. Each platoon will consist of two trucks. To begin with, the trucks will run without a load, so that the driving conditions can be tested in ordinary traffic situations and the drivers trained in how to operate the vehicles. This will also give them the chance to learn the special driving techniques. This will be followed by weekly and later daily test runs. During the course of 2018, the tests will move on to regular trips carrying real freight, with the platoons running between the DB Schenker logistics centres in Munich and Nuremberg up to three times a day.

When does it make sense to form a platoon? What is the best way to make up and disband platoons according to the individual situation and traffic conditions? These are core questions that the parties plan to answer in the course of their cooperation. The tests will also examine what data has to be transmitted to the manufacturer and logistics specialists to achieve

MAN Truck & Bus is one of Europe’s leading commercial vehicle manufacturers and transport solution providers, with an annual revenue of some 9 billion euros (2016). The company’s product portfolio includes vans, trucks, buses/coaches and diesel and gas engines along with services related to passenger and cargo transport. MAN Truck & Bus is a company of Volkswagen Truck & Bus GmbH and employs more than 35,000 people worldwide.



optimum monitoring of the platoon. In that connection, they will also address issues such as data transmission and the provision of information to the leading pilot driver, for instance how up-to-date alerts about road works can be communicated to the driver in order to disband the platoon in good time.

“Networked and autonomous driving will revolutionise transport in future. On signing this contract, we are not only consolidating our cooperation with MAN, but also corroborating our claim to be the driver of digital business models in the interests of our customers. Platooning provides us and our customers with a solution to the demand for completely transparent, as well as faster and more eco-friendly transport processes. We are confident that these tests will deliver information about the specific potential for increasing efficiency in real operating conditions over a prolonged period,” says Ewald Kaiser, Chief Operating Officer Freight at DB Schenker.

DB Schenker is also interested in learning how to draw up the optimum platooning deployment plan within its own logistics processes. For instance, how will logistics centres have to be designed and equipped in future in order to load and unload networked truck convoys as quickly as possible?

And finally, both parties also wish to find out how this new technology is accepted by professional drivers. A parallel study will involve scientific evaluation of the participating truck drivers’ experience and analysis of the test drive records in terms of the platoons’ interaction with other traffic participants: How do the drivers cope with the use of this new technology? How can the driver’s work be extended or adjusted and what changes will this entail for vocational education and training for professional drivers? This data will also help them to assess what other activities the drivers in the second truck would be permitted to perform during autonomous driving phases. As from 2019, a second pilot project will be rolled out to examine autonomous driving for use in terminal operations within a logistics centre.

Both partners consider the project as a platform to take further steps towards autonomous driving in parallel or following the platooning project. Gerhard Klein, Head of Engineering Central at MAN, stresses the importance of this project from the vehicle manufacturer’s point of view: “For MAN, this cooperation with DB Schenker is a major milestone en route to the launch of autonomous driving. Amongst other things, MAN already conducted the “Konvoi” research project between 2005 and 2009, testing platoons of up to four vehicles. This was followed in 2016 by participation in the European Truck Platooning Challenge. Together with DB Schenker, we are now transferring the research findings acquired in the course of these projects into concrete logistics applications for the first time. By working



together with the logistics planners and the drivers, we are directly involving the users during the test and development phases. This is a huge step forwards which will eventually enable us to apply this technology in day-to-day operations.”

The term platooning refers to a vehicle system for road traffic in which at least two trucks can drive on the motorway with only a short distance between them with the help of technical systems. All the vehicles in the platoon are linked up to one another by means of electronic “drawbars” in the form of car-to-car communication. The leading vehicle determines the speed and direction. The distance between the individual trucks is around ten metres, equivalent to roughly half a second’s driving time. The electronic links between the individual vehicles in the platoon guarantee the safety of operations. The primary objective of this procedure is to enable slipstreaming and thus achieve fuel savings of up to ten per cent for the entire platoon. The reduction in fuel consumption also reduces carbon emissions.

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Caption:

Partnership for Platooning: Similar to this illustration DB Schenker and MAN intend to test in 2018 networked truck convoys on the A9 motorway between Munich and Nuremberg.