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Launch of Stadler's new automatic train protection system in the latest BLS trains

The ETCS automatic train protection system GUARDIA developed by Stadler and the joint venture ANGELSTAR is being rolled out in the new FLIRT trains for BLS – a key milestone for Stadler's new Signalling business unit.

The new GUARDIA train protection system from Stadler will be used in the new FLIRT trains for the Swiss railway company BLS. This is the first time the innovation has been fitted in a larger series of multiple units in Switzerland. GUARDIA consists of both hardware and software installed in the train. It allows the train driver to visualise the train's position, speed and additional data, which is also transmitted to the control centre. Data such as track warrants can be collected at the same time. GUARDIA represents a key milestone in the history of the rail vehicle manufacturer from Eastern Switzerland.

"We are delighted to be able to equip BLS trains with our automatic train protection system. To ensure the company's independence, it is important for Stadler to be able to offer its own signalling solutions. This is also a significant step forwards into the digital future for Stadler," commented Alexandre Grêt, Head of Signalling, at Stadler.

"We welcome this competition in the field of automatic train protection systems and are convinced that GUARDIA will prove to be an innovative, reliable and flexible automatic train protection system for our BLS FLIRT trains. It will keep our annual system operating costs low, and vehicle availability high. Alongside the security aspect, it will also be of direct benefit to our customers," explained Stefan Maurer, project manager at BLS.

Stadler decided to invest in the field of signalling two years ago in order to develop a further important part of modern train technology within the company. It hopes to increase Stadler's independence as a result. The ANGELSTAR joint venture with the Italian automatic train protection system manufacturer Mermec came about as part of this expansion. Stadler has also set up its own engineering site in Wallisellen.

ETCS stands for European Train Control System and describes the European standard for automatic train control, which aims to allow harmonisation on all lines throughout Europe. As part of a joint venture with Mermec, a company which specialises in train protection, Stadler is offering its own ETCS on-board system, the high-performance GUARDIA solution. This completely new system is currently undergoing field tests and has started the approval process in Switzerland. It will be introduced simultaneously in several European countries.

The FLIRT trains for BLS will be fitted with a state-of-the-art ETCS level-2 system (SRS 3.4.0). ETCS level-2 automatic train protection uses digital communication technology (GSM-R) to follow train movements in the Radio Block Centre (RBC), and meets the highest security standards thanks to tried and tested SIL-4 signalling hardware. The on-board European Vital Computer (EVC) monitors data exchange and ensures compliance with the maximum permitted speed. All trains regularly transmit their precise position and direction of travel to the RBC. Track warrants, speed limits and track data are constantly communicated to the train.

In January of this year, BLS placed an order for 52 latest-generation FLIRT trains, with an option for 90 additional vehicles. The comprehensive approval tests will start in mid-2019 and the trains will be put into operation gradually between 2021 and 2025.

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About Stadler

International rail vehicle construction company, Stadler, is headquartered in Bussnang in Eastern Switzerland. Founded in 1942, it has a workforce of over 7,600 based in various production, service and engineering locations across Switzerland, Germany, Spain, Poland, Hungary, the Czech Republic, Belarus and the United States. Service locations are also being operated in countries including Algeria, Denmark, France, Italy, the Netherlands, Norway, Russia, Sweden and the UK. Stadler provides a comprehensive range of products in the heavy and urban transport segments: high-speed trains, intercity trains, regional and commuter heavy rail trains, underground trains, tram trains and trams. Stadler also manufactures main-line locomotives, shunting locomotives and passenger carriages, including the most powerful diesel-electric locomotive in Europe. It is the world's leading manufacturer in the rack-and-pinion rail vehicle industry.

The best-selling FLIRT (Fast Light Intercity- and Regional Train) vehicle has already sold more than 1,600 units in a total of 18 countries. The KISS, an acronym of the German for Comfortable Innovative Speedy Suburban Train, is also very popular, with nearly 300 units sold in 11 countries. The most powerful diesel-electric locomotive in Europe is the EURO4000, which has sold 140 units in 7 countries. The Stadler Service division maintains vehicle fleets and comprises more than 680 vehicles, covering a combined annual distance of 120 million kilometres in 16 different countries.

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