

Transport

Czechs and Israelis have agreed on the development of self-driving minibuses, they could be driving in Prague in a few years

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In October, during a work trip to Israel, Czech Minister for Research and Innovation Helena Langšádlová (Political party – „TOP 09“) rode in a car driven by artificial intelligence. The half-hour tour of Jerusalem, organized for the minister and her entourage, was part of a program focused on opportunities for cooperation between Czech and Israeli researchers. The goal of the joint project is to launch the first self-driving buses on the streets of Prague. The first prototype could go on a test circuit outside of public transport as early as next year.

After her visit to Israel, Langšádlová said that the development of autonomous mobility in the Czech Republic has her support. "I was more than pleasantly surprised by the level and quality of driving a self-driving car, which I could experience myself as a passenger in full Jerusalem traffic. But it is clear that a number of complex problems will still need to be solved on the way to the inclusion of autonomous driving in public transport," the minister wrote in a press statement.

Minibus Cristal

■ The minibuses that the Czech-Israeli project will use to convert into driverless cars are produced by the French company Lohr from Strasbourg. Individual cars can be easily connected behind each other and thus flexibly adapted to the needs of urban transport. One car can fit 14 people and it is possible to line up to four units in a row. According to the manufacturer, the battery lasts for a day of operation, with fast charging it reaches full capacity in 120 minutes, half in 45 minutes. The car has a range of 120 km and reaches a maximum speed of 50 kilometers per hour.

It was during this visit that members of the Czech delegation signed a memorandum of cooperation between CTU and the multinational company Mobileye, which develops, for example, cameras and software for self-driving cars. The agreement also includes the Czech-Israeli company Prague Advanced Technology and Research Innovation Center (PATRIC) and the Czech VDT Technology, which will represent Mobileye on the domestic market.

The intention of the joint project is to use 15 Cristal electric minibuses from the French company Lohr, which will be modified to be self-driving with the help of Mobileye software and cameras. Erik Feldman, chairman of the board of directors of VDT Technology, HN confirmed that the first such minibus could go on a private test circuit as early as next year. Implementation into real operation is still at least three years away and will depend, among other things, on changes in a number of laws. Even so, for the time being, the minibus would drive with an operator – a person who will supervise the ride and be able to intervene in the driving, if necessary, said Feldman.

The Czech Technical University in Prague (CTU) press release states that "the pilot phase of the project is a test phase, at least 15 newly developed cars will be tested in the Czech Republic from a technical and operational point of view. The autonomous bus would first be introduced to the Czech market and then to other countries as well".

Experts point out that before driverless cars and buses appear on Czech roads, it will be necessary to improve existing technologies and resolve a number of controversial questions regarding safety and ethics. For example, who is responsible for any damage or injury if the car crashes.

Ondřej Příbyl, dean of the Faculty of Transport of the Czech Technical University, called the project an important milestone



The first such minibus could go on a non-public test circuit as early as next year. However, implementation into real operation is still at least three years away.

both for electromobility and the domestic public transport network, as well as for the faculty, as it has long been dedicated to the development of autonomous systems and their integration into the running of cities. "The introduction of autonomous solutions in public transport is an important topic at a time when cities strive for cleaner and safer streets for their residents," wrote Příbyl.

Mobileye will be a key partner in the project. The company was founded in 1999 by Hebrew University professor Amnon Shashua, who researched a system by which machines can "see" - that is, detect other objects using a camera and software algorithms. The company gradually grew into an important supplier of automotive safety technologies, at first, for example, emergency braking assistant.

One of the first vehicles to use Mobileye technology was BMW. However, the company has also collaborated with Volkswagen and Tesla on driverless vehicles.

Jerusalem-based Mobileye was acquired by Intel in 2017. He still controls the company, but this year he placed part of the shares on the New York Stock Exchange Nasdaq. The company has offices from New York to Tokyo. After the tragic accident of the self-driving Tesla Model S in 2016, the two companies accused each other of wrongdoing and ended their cooperation.

Prague-based VDT deals with digitization and the Internet of Things. It develops systems for smart cities and transport. Its solutions make it possible to report queues or parking lot occupancy. They also point out bad parking, driving in the opposite direction or passing a red light at an intersection.



Self-driving minibus Before Cristal actually hits the roads, existing technologies will need to be improved and questions will need to be resolved regarding safety and ethics.

Photo: Lohr