Volvo and NTU to develop autonomous electric buses in Singapore

Volvo Buses has announced that, in partnership with Singapore’s Nanyang Technological University (NTU), it will begin testing autonomous electric passenger buses in the city-state in 2019.

Although Volvo has already demonstrated its autonomous technology in mining, quarry and refuse collection operations, this will be its first autonomous application in public transportation anywhere in the world.

The company’s 11m-long (36ft) 300-passenger electric bus is already in service around the world, providing quiet and emission-free operation, and requiring 50% less energy than an equivalent diesel bus. The Singapore buses will be deployed in Singapore will be equipped with a range of advanced technologies to ensure safety, including obstacle avoidance, on-road navigation, lane change monitoring and road detection.

The buses will be tested from early 2019 at the NTU’s Centre of Excellence for Testing and Research of Autonomous Vehicles (CERAV), which replicates different elements of Singapore’s roads, with common traffic signals, road infrastructure and traffic rules. The circuit features a rain simulator and fixed points to test autonomous vehicles’ navigation abilities under tropical weather conditions, and also helps improve overall safety and efficiency by allowing researchers to assess the vehicles’ interaction with pedestrians. The NTU-Visvo partnership is also part of the collaboration with Singapore’s Land Transport Authority (LTA) under the university’s Living Lab platform, which unites technology, industry and road-worthiness, including the verification of the technologies for deployment on public roads.

The NTU-Visvo program will be supported by Singapore’s public transport operator SMRT, which will play a critical role in determining the readiness of autonomous buses and assist in operational trials. One of the buses will undergo trials at a local SMRT bus depot which will test its capability to autonomously navigate and stop safely in and out of service. Charging infrastructure as well as in-vehicle diagnostics and maintenance systems will also be implemented.

Visvo and NTU will be partnering with MAB to provide a station capable of recharging buses in 30 minutes, during lunch breaks at the new school’s end points.

“We are seeing fast-growing interest in both autonomous and electric vehicles in cities all over the world. Together with NTU, we now have the possibility of testing various solutions under realistic conditions in a major city that has high ambitions for its public transport,” said Ian Agnew, president of Volvo Buses. “The technology developed in Singapore can contribute to our future autonomous applications.”

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