



To the Press and Whom it May Concern,

July 18th, 2018
ZMP Inc.

ZMP Begins Implementation Project of Tire Tests with Bridgestone using ZMP Autonomous Driving Vehicle – Aiming at the Practical Application of Tire Noise Tests with SAE-Level 4 Automated Driving of Unmanned Vehicle in 2019 -

ZMP Inc. and Bridgestone Corporation have announced the start of a development project to automate the tire noise tests, one of Bridgestone’s tire performance tests. Currently automotive driving of manned vehicles at Bridgestone’s proving ground has been achieved and the aim is at the implementation of SAE-Level 4 automotive driving for unmanned vehicles. The automated vehicle is powered by IZAC, the autonomous driving software used in ZMP’s platform vehicle for autonomous driving, named “RoboCar[®] MiniVan”. In addition, the vehicle also has cameras, sensors like LiDARs and map information of Bridgestone’s proving ground mounted on.

Using actual vehicles for the tire performance tests has challenges on factors like traveling route, speed, driver requirements. By introducing the autonomous driving vehicle, this will enable continuous testing with stable conditions. Furthermore, by introducing tests using the automated driving vehicle which does not rely on the skills and expertise of test drivers, this technology will allow improvement of accuracy and efficiency of the tire tests.

This development also makes it possible for automated driving in bank areas of the testing course where the front view is obstructed. This is enabled by 3D LiDARs which are set up at the bank area which can detect the vehicle. When it detects the vehicle, it sends the information to the automated driving vehicle. This technology for driving with prior safety control in the testing course is made possible using this communication between the vehicle and the 3D LiDAR.

This project has been in progress since January 2017 where ZMP received a request by Bridgestone for an outsourcing development of the automation of its tire noise tests.

As of now, autonomous driving of manned vehicles has been achieved and the project will carry out the formulation of the implementation operation and aim for the practical application of the tire noise tests of multiple unmanned vehicles with SAE-Level 4 automated driving which will coexist with manned vehicles in 2019.

With the insight and experience from this project, there are intentions to apply them in developing tires for next generation automobiles including self-driving cars and also in the technology behind performance evaluation in the automobile industry.

For details of this project please visit the ZMP Forum held between Wednesday, July 18th to Friday, 20th where there will be a presentation on the second day (Thursday, July 19th) regarding this topic.





【About ZMP RoboCar® MiniVan】

<http://www.zmp.co.jp/products/robocar-miniivan>

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RoboCar® 1/10

RoboCar® MV2

RoboCar® MiniVan

CarriRo®

CarriRo® Delivery

"Robot of Everything" Under the mission of autonomous driving, creating a safe, enjoyable and convenient lifestyle for all kinds of people. ① ADAS (Advanced Driving Support), Autonomous Driving development platform RoboCar® series as well as Sensor system ② RoboTest®, Support for development such as Autonomous Driving for mobile body manufacturers (automobiles, commercial vehicles, construction machinery, agricultural machinery, distribution conveyance equipment, outdoor work machines, etc) ③ We are developing and selling logistic support robot CarriRo® Auto Taxi. Also, we are conducting demonstration experiments on technologies and services on public roads toward realization of Auto Taxi® in 2020. We began demonstration experiments on Home delivery robot, CarriRo® Delivery aiming for Japan's first pedestrian walk from 2017. ZMP will continue to provide products and services that impress the world.