

### PIONEER CORPORATION

28-8, Honkomagome2-chome, Bunkyo-ku Tokyo 113-0021, Japan

# News Release

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PIONEER CORPORATION PIONEER SMART SENSING INNOVATIONS CORPORATION

Participated in an autonomous driving demonstration under 5G environment in Malaysia

— Expand demonstration area for commercialization of autonomous driving service in ASEAN region —

Pioneer Smart Sensing Innovations Corporation (hereinafter "PSSI"), a consolidated subsidiary of Pioneer Corporation, announced today that it and eMoovit, a company incorporated abroad in Malaysia of MooVita Pte Ltd (hereinafter "MooVita"), get involved an autonomous driving demonstration taking place in Malaysia from January 2020, through next-generation communication standards "5G".

This demonstration is done as a part of "5G Demonstration Project" which is convened in six states of the country by Malaysian Communications and Multimedia Commission, and verify for autonomous driving through 5G in partnership with Altel. The autonomous vehicle in the form of a four-seater driverless shuttle transmitting data through 5G has been adapted to help with transporting guest and tourist around Pelangi Beach Resort & Spa in Langkawi.

PSSI and MooVita have been conducted demonstrations of an autonomous shuttle bus equipped with Pioneer's 3D-LiDAR sensor, aiming to commercialize services of autonomous driving level 4 from 2018. 3D-LiDAR sensors use laser light to detect and accurately measure the distance of objects and can ascertain three-dimensional information related to the surrounding environment in real-time, they are regarded as an indispensable key device for the realization of level-three and above autonomous vehicles (conditional automation).



[autonomous shuttle bus equipped with Pioneer's 3D-LiDAR sensor]

PSSI will continue to participate in various projects, starting at ASEAN region, and contribute to the early practical implementation of autonomous driving and autonomous driving services in order to expand services and solutions related to autonomous driving using proprietary sensing technology globally.

# ■About Pioneer Smart Sensing Innovations Corporation

As a new company to take over the business activities which handles autonomous driving-related business in Pioneer, Pioneer Smart Sensing Innovations Corporation" is established on October 1, 2019. PSSI has been pursuing the development of compact, high-performance, and low-cost MEMS mirror-based 3D-LiDAR sensors, and will churn out from 2020 onwards. At the same time, PSSI is currently developing "high-precision object recognition algorithms", "vehicle ego-localization algorithms" and "difference extraction of surroundings algorithms", and utilizing 3D-LiDAR sensors.



URL: http://autonomousdriving.pioneer/en/

# ■About MooVita

Founded in 2016, MooVita is a high-tech startup specialised in providing autonomous driving solutions. The company is headquartered in Singapore with offices in Malaysia and India. MooVita is founded by a passionate team who are one of the first teams to put autonomous vehicles on Singapore public roads. MooVita is developing complete "Autonomous Driving Software Solutions for Urban cities." For more information about MooVita, visit: <a href="http://www.moovita.com">http://www.moovita.com</a>

### ■About Altel

Founded in 2012 as a subsidiary company of AlBukhary Group of Companies, Altel provides mobile and network solution using wireless technology and adopts Mobile Virtual Network Operator model. For more information about Altel, visit: <a href="https://www.altel.my/">https://www.altel.my/</a>