April 17, 2019

Pioneer and Canon agree to co-develop 3D-LiDAR sensor, drive the development of compact, high-performance 3D-LiDAR sensors

TOKYO, April 17, 2019—Pioneer Corporation ("Pioneer"; Headquarters: Tokyo, Japan; Representative Director and President: Koichi Moriya) and Canon Inc. ("Canon"; Headquarters: Tokyo, Japan; Chairman and CEO: Fujio Mitarai) today announced that the companies have entered into an agreement to co-develop a 3D-LiDAR sensor.

3D-LiDAR sensors use laser light to accurately measure the distance of objects as well as ascertain three-dimensional information relating to distance and the surrounding environment in real time, and are regarded as an indispensable key device for the realization of level-three and above autonomous vehicles. Pioneer has been pursuing the development of compact, high-performance Micro Electric Memory Systems (MEMS) mirrors that can be produced at a low cost with the aim of mass production from 2020 onwards. In addition to developing object recognition algorithms and vehicle ego-localization algorithms, the company provided its 2018 3D-LiDAR sensor models to companies for testing in September 2018. Additionally, in January 2019, Pioneer established a new organizational structure that integrates autonomous-vehicle-related R&D, technology development and business development to further accelerate the growth of its autonomous vehicle business. Canon is currently taking steps to expand into a variety of industrial areas through the provision of the optical technologies it has cultivated over its long history. To that end, the company is strengthening its engagement with the automotive industry, where rapid growth is expected as a result of the technological innovation exemplified by autonomous vehicles in particular.

Under the agreement between Pioneer and Canon, the companies will engage in the joint development of a 3D-LiDAR sensor towards the goal of mass production by Pioneer. Based on Pioneer's automotive-device-related know-how and expertise in such areas as miniaturization technology and digital signal processing technology as well as Canon's advanced optical technologies and experience, this partnership will facilitate the early realization of compact, high-performance 3D-LiDAR sensors for sophisticated autonomous driving.

■About Pioneer's 3D-LiDAR sensor development
　http://autonomousdriving.pioneer/en/