Mitsubishi Electric Develops Driver Monitoring System with Wide-angle Camera

First system to simultaneously monitor driver and front passenger with one wide-angle camera

TOKYO, October 5, 2017—Mitsubishi Electric Corporation (TOKYO: 6503) announced today that it has developed the first in-vehicle driver monitoring system using one wide-angle camera to detect the driver and front passenger simultaneously. The technology is expected to contribute to enhanced driving safety and when it launches commercially sometime from around 2018. Mitsubishi Electric will exhibit its driver monitoring system during the 45th Tokyo Motor Show 2017 at the Tokyo Big Sight exhibition complex in Tokyo from October 27 to November 5.

Conventional driver-monitoring systems generally use a camera to analyze the driver’s face for inattentiveness or drowsiness. Recent imaging systems monitor not only the driver but also the front passenger for added safety and convenience. Mitsubishi Electric has now developed a technology that uses just one wide-angle camera to monitor both the driver and the front passenger and warn them about potentially dangerous driving behavior, such as looking off to the side or sleepiness, and to identify face and hand gestures for enhanced assistance, such as changing air conditioning settings.
Key Features

1) Monitoring both driver and front passenger for enhanced safety and convenience
   - Monitor both the driver and the front passenger to provide automated assistance, such as adjusting the air conditioning or audio entertainment system.
   - Recognition of hand gestures of both the driver and the front passenger to control various in-vehicle devices.
   - To-be-developed detection of not only heads but also upper bodies to detect potentially dangerous behavior, such as abnormal postures including slumping over or collapsing backwards.

2) Flexible installation of camera position
   - The wide-angle camera can be installed flexibly within the vehicle and eliminates the need to install a second camera for the front passenger.

Pending Patents
40 in Japan and 22 outside of Japan.

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About Mitsubishi Electric Corporation
With over 90 years of experience in providing reliable, high-quality products, Mitsubishi Electric Corporation (TOKYO: 6503) is a recognized world leader in the manufacture, marketing and sales of electrical and electronic equipment used in information processing and communications, space development and satellite communications, consumer electronics, industrial technology, energy, transportation and building equipment. Embracing the spirit of its corporate statement, Changes for the Better, and its environmental statement, Eco Changes, Mitsubishi Electric endeavors to be a global, leading green company, enriching society with technology. The company recorded consolidated group sales of 4,238.6 billion yen (US$ 37.8 billion*) in the fiscal year ended March 31, 2017. For more information visit: www.MitsubishiElectric.com

*At an exchange rate of 112 yen to the US dollar, the rate given by the Tokyo Foreign Exchange Market on March 31, 2017