TECHNOLOGY

Distributed Sensor for Smart Car Seats

OVERVIEW

Considerable interest has been focused recently towards the development of a wider variety of car seat sensors by all the automobile manufacturers. These sensors aim primarily at classifying the weight of the occupants, so that an air bag can be deployed appropriately during a collision. Recently, there have been extensive efforts to develop car seat sensors with more sophisticated capabilities to enhance the safety of the passengers, particularly in case of accidents. For example, car manufacturers are using a variety of sensors including ultrasonic, infrared, and piezoelectric to appropriately control the air-bag deployment. In a recently issued U.S. patent, a seat belt torsion sensor assembly is considered in conjunction with a weight sensor under the seat to provide information about the passenger's weight, size, and position. A controller uses this information to compute the appropriate air bag deployment speed and force.

Researchers in the Mechanical engineering department at the University of Maryland have invented a radically different class of smart car seat sensors. These sensors are arranged in a way such that they continuously monitor weight of the occupants, location of their center of gravity, and spatial orientation of their bodies. The novel sensor can be easily integrated with the air bag controller to regulate the deployment process according to the weight and position of the occupants. This will provide a huge advantage for car manufacturers as they strive to eliminate injuries due to incorrect air bag deployment.

For additional information, please contact the Office of Technology Commercialization, University of Maryland College Park, via phone at (301) 405 -3947 or e-mail at otc@umd.edu.

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Additional Information

INSTITUTION

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PATENT STATUS

Patent(s) pending

LICENSE STATUS

Contact OTC for licensing information

CATEGORIES

- Sensors/Monitors

EXTERNAL RESOURCES

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