

## U of I simulator used to test vehicle stability control systems

**The government is developing rules to make such systems standard by 2012 models.**

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In the hit car song of the 1960s, the driver of a Corvette Stingray saw a speeding Jaguar slide into "Dead Man's Curve."

If only that vintage Jag had been equipped with an electronic stability control system.

The systems are designed to be "smart enough to figure out when the car is doing something you don't want it to do" and to help correct the problem, said Omar Ahmad, a senior team leader for the University of Iowa's National Advanced Driving Simulator.

The simulator is using real people - and computer-simulated driving emergencies - to ensure that new automotive safety systems really help drivers trying to keep their vehicles from going out of control.

The National Highway Traffic Safety Administration has urged auto makers since 2004 to voluntarily add electronic stability control systems as standard equipment on vehicles. The agency is now developing rules that would require manufacturers to make the systems standard on passenger vehicles under 10,000 pounds by the 2009 model year and on all vehicles by the 2012 model year.

U of I researchers have used about 500 volunteer drivers - from teenagers to retirees - to ensure that the systems really do help in real-world situations and to assure that the equipment doesn't in some way actually worsen a potential loss-of-control emergency.

Tests so far show that the system is beneficial, helping drivers regain control of vehicles on both wet and dry pavement, said Tim Brown, a simulator team leader. The testing is nearly complete.

The simulator is a three-ton machine that uses projected images, sound and motion to recreate the effects of driving. The machine is promoted as state-of-the-art equipment, but it has had difficulty in getting into the black in operations.

The electronic stability contract with the highway administration is worth about \$2 million.

Electronic stability control systems are available on many cars, sport utility vehicles and pickup trucks already, and automakers plan to add the systems to more models in the next two to three years.

Greg Williams, general manager of Noble Ford Lincoln Mercury in Newton, took an SUV into an empty parking lot to make sharp turns and try out Ford's system, called AdvanceTrac.

He felt benefits. The vehicle didn't lean over as much as it would have without the system and didn't feel like it wanted to slide, Williams said.

The system responds in milliseconds, he added. "It happens so fast that you don't even know what's happening. It was awesome."

Ahmad said evidence shows that the systems are beneficial for all vehicles, but especially for those with higher centers of gravity, such as SUVs and pickup trucks.

The agency is emphasizing the equipment's effectiveness in preventing rollover accidents.

The computerized systems adjust braking action and power to a vehicle's wheels to help a driver regain control of an SUV, for example, that would skid out of control and likely leave the road without the system. Nearly all rollover crashes occur after a vehicle leaves the road, the federal agency says.

The agency estimates the systems add about \$111 to the cost of a vehicle already equipped with anti-lock braking systems. test



**HARRY BAUMERT/THE REGISTER**

The National Advanced Driving Simulator dome rests on hydraulic legs, which stand on a sliding platform and turntable to allow movement in any direction. The dome, inside which a car is mounted, is 24 feet in diameter.

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