Visteon's Cockpit Concept System Can Stop A Car Thief – With the Help of Your Face

by Jim Stickford

Visteon Corporation's new cockpit concept system uses multiple cameras in the vehicle to keep a constant watch on both the driver and road ahead.

This system is designed to address the challenge of driver distraction, said David DeCoste, manager of Marketing and Communications for Visteon.

The new camera-enhanced cockpit concept from Visteon Electronics – designed with input from consumers – uses cameras to automatically enlarge certain driver controls, thus limiting the time needed to operate them and helping prevent potential collisions, DeCoste said. The concept also recognizes the driver's need to adjust settings.

Visteon's system offers potential improvements over other camera-based systems by providing a simple user interface, and through the efficient way in which it could be integrated into the vehicle, DeCoste said.

"Auto manufacturers are constantly looking for ways to reduce driver distraction while enhancing user experiences, and this new cockpit concept addresses both issues," said Anthony Ciatti, a Visteon electronics innovator. "This solution offers advantages related to user-interface, anti-theft and safety to keep the driver focused on the road and potential obstacles ahead."

During a recent Visteon consumer research study, 80 percent of those surveyed reacted positively to Visteon's camera-enhanced cockpit concept, which allows cameras to be integrated into various locations to provide optimal viewing angles, DeCoste said.

The cameras determine where the driver is looking and – paired with a microprocessor that calculates data from the cameras – can ascertain which center display panel controls the driver is eyeing. Based on this data, the system can automatically and instantly enhance these controls, making them easier to view.

This recognition capability can also be used to automatically adjust controls like seat position and side mirrors, DeCoste said.

In addition, it can help guard against theft by ensuring the vehicle's engine won't start in the event of a break-in – even recording images of the intruder. An anti-theft capability that works from facial recognition – where it has pre-registered the driver's face – can stop a person from stealing a car.

The front-facing camera captures obstacles ahead of the vehicle, such as pedestrians and road signs, DeCoste said.

A microprocessor calculates data from the front-facing camera and the driver cameras to ascertain the direction the driver is looking when pedestrians or important road signs appear – and to determine whether they have been seen.

This information then can be relayed to the driver through an audible alert and a visual cue on the instrument cluster.

Visteon Electronics is currently showing the cockpit concept to various vehicle manufacturers with the goal of incorporating the technology into future vehicle programs, DeCoste said.

"It's just a concept at this point," DeCoste said. "It eliminates driver distraction. If the driver isn't looking at the road, the forward-looking camera can show if someone is in the road ahead. Systems like this are the future."

The concept Visteon created uses low-cost cameras, making the concept an inexpensive solution and will become less costly as the price of cameras decline, DeCoste said. The challenge right now is not the hardware, it's the software that will allow the cameras to communicate with the driver.

"Right now, most of the cost will be associated with developing the algorithms that let cameras interact with the driver," DeCoste said.

"This camera-enhanced cockpit concept is a logical extension of Visteon's expertise in cockpit electronics, and reflects our commitment to help vehicle manufacturers improve the overall driving experience," Ciatti said.

GM Sets Up Degree Program

Northwood University in Midland has entered into a new partnership with GM that gives their dealers and their employees the ability to pursue bachelor's and master's degrees, as well as continuing education opportunities, in automotive marketing, business, and leadership, said Northwood President Keith Pretty.

It is designed to attract and retain talent, build skills and increase employee engagement across all GM brands, Pretty said. The new program enables GM dealers, their employees, and GM field employees to choose from three unique retail professional development majors customized specifically for the automaker's needs.

"We know our people are key players in our mission to build the most customer-centric automobile company on earth," said Chris Bower, senior manager – GM Sales, Service and Marketing Center of Learning.

"We chose Northwood University as our educational partner because of the institution's unique focus on business and automotive marketing/management education.

"The university's long history with automotive retail management allowed its academic specialists to customize a program specifically tailored to the needs of GM dealership partners and their future leaders."

More than 1,000 GM dealers and other GM dealership employees have earned or are earning a bachelor's degree in automotive marketing and management from Northwood, Pretty said.