

Smart Cars Need Smart Drivers

by Celeste Allen, CPCU, CLU, ChFC, FLMI

Imagine if you will ... you're sitting back in your car, relaxing or reading a newspaper — and leaving the driving up to the car. This is not a description of a scene in a futuristic sci-fi movie. It's a description of something that will soon come to fruition. A number of advances rely on existing technology, and new concepts currently are being tested — all of which will make fully automated driving a reality.

Volkswagen has partnered with different companies and has initiated internal projects on concept cars such as the VW iCar (intelligent Car), which involves its Golf 53 research vehicle and its Passat. iCar innovations entail automating several processes and maneuvers, including the car's remaining in the center of a lane, executing a passing maneuver, and automatically stopping and/or slowing down in sync with approaching traffic.

Volkswagen also has a Pyrobrake System that employs a stereo camera and radar sensors that can anticipate an accident and rapidly apply brakes (within 80 milliseconds). Development of PyroBrake technology is predicated on the fact that "48 percent of drivers fail to brake in a frontal collision." These innovations are based on technology that has been in existence for some time, such as video cameras, laser sensors, radars, electromechanical power steering, a computer-controlled electronically actuated parking brake, anti-lock brakes designed to prevent unintentional skidding, beeps that sound when cars back up, and headlights which change with bends in the road.

The European HAVE-IT (Highly Automated Vehicles for Intelligent

Transport) project focuses on the concept of fully automating driving. Smartweb is a technology that was developed to address word recognition and understanding words by computers. The Safe Intelligent Mobility project in Germany uses vehicle-to-vehicle and vehicle-to-infrastructure communication, wherein mini computers in cars are linked via radio networks. Computer technology will also provide the ability of car computers to transmit hazardous road conditions to drivers regarding black ice, fog and drivers driving in the wrong direction. Infrared cameras and onboard computers will be used to detect the presence of pedestrians. Warning sounds will be activated when it is determined that a driver's reflexes are waning due to exhaustion.

Automotive engineer [Merkel Weiss](#) is in favor of most advancements in car technology, but he prefers technologies that increase driver awareness. These include computers that emit buzzers or other sounds (or some type of mild "joy buzzer"), anti-lock brakes, radar-activated brakes, and seat belts which automatically tighten. All of the



mentioned innovations lessen bodily damage and financial costs associated with accidents.

In "Confronting Driver Distraction," an article Weiss wrote for *The Futurist*, he states that 80 percent of motor vehicle accidents can be attributed to driver distraction. He contends that the less effort people have to exert while driving, the less attentive, focused and effective they will be. Weiss asserts that driver distraction is a function of driver complacency, which in turn can lead to a dangerous and costly outcome relative to damage to people, pain and suffering, costs of medical care, legal costs and more. He also argues that the more effortless driving becomes, the more encouraged drivers will be to travel at faster speeds.

No matter what innovative marvels take place with automotive technology, the driver is still integral to driving the vehicle. Drivers need to be smart in their approach and their use of new technology to enhance their driving experiences. They should not seek to employ technology that solely puts the computer in the driver's seat. Smart approaches will lend themselves to smart and cost effective outcomes. ■

References

Amend, James. "VW Closer to Automated Driving." *WARD's Auto World/Electronics* August 2008: 20-21.

Anonymous. "Germany's Smart Cars: Computerized Automobiles to Make Driving Safer, Less-Stressful, and Maybe Even Cheaper." *German Business Review* January 2008: 4.

Weiss, Merkel. "Confronting Driver Distraction." *The Futurist* January/February 2007:16-17.