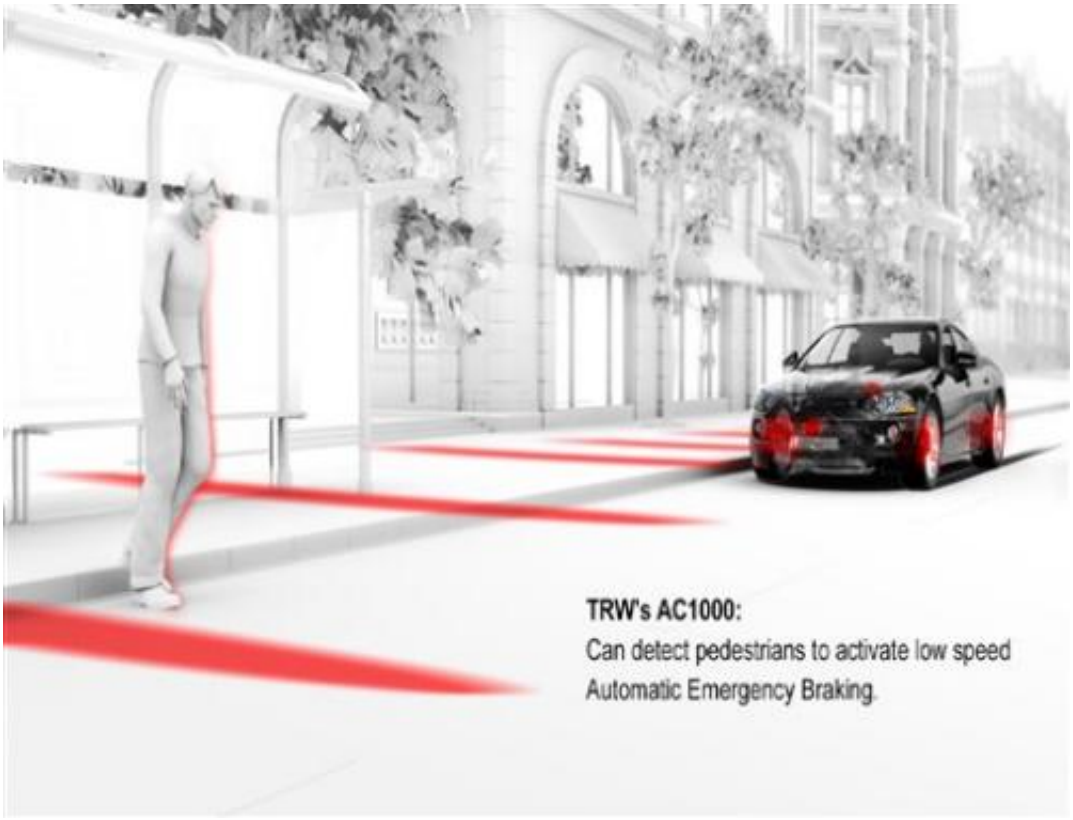
Five new features that could be on your next car

July 5 2013, by Dee-Ann Durbin



This photo provided by TRW Automotive shows a radar and camera systems that warn you, with beeping sounds, of a possible front-end crash is highlighted. The systems are the outgrowth of adaptive cruise control, which came out 15 years ago and helps keep cars a safe distance from vehicles in front of them. (AP Photo/TRW Automotive)

Cameras that check around the car for pedestrians. Radar that stops you

from drifting out of your lane. An engine able to turn off automatically at traffic lights to conserve fuel.

Technology that saves lives—and fuel—is getting better and cheaper. That means it's no longer confined to luxury brands like Mercedes and Volvo. It's showing up in mainstream vehicles like the Nissan Rogue and Ford Fusion.

"What we see today as slightly elitist technology is changing very, very fast," said Steven Lunn, chief operating officer for TRW Automotive, which supplies electronics and other parts to carmakers.

TRW says its newest radar is a quarter of the price of the model it sold 10 years ago. Its cameras are smaller and cheaper, too, making it easier to put multiple ones on each car.

High-tech options can still cost a few thousand dollars more, but those costs will come down as technology improves and automakers add them to more and more vehicles.

Here are some up-and-coming features that drivers can expect on their next cars:

— Collision warning with automatic braking:

New cars have radar and camera systems that warn you, with beeping sounds, of a possible front-end crash. Some even stop the vehicle, or at least slow it enough to make a crash less severe. More sophisticated systems apply the brakes if a car veers off the road and heads toward a moving or fixed object. The systems are the outgrowth of adaptive cruise control, which came out 15 years ago and helps keep cars a safe distance from vehicles in front of them.

Mercedes, Honda, Toyota, Infiniti, Volvo and other brands offer automatic braking to avoid a collision; more automakers will follow soon. The systems seem to be working. David Zuby, the chief research officer at the Insurance Institute for Highway Safety, said collision warning systems alone reduced crashes by 7 percent in a study of insurance claims for several thousand Mercedes vehicles with the technologies. Adding automatic braking doubled that benefit.

— Advanced cameras:

Automotive cameras are showing up on more cars ahead of a government requirement to install backup cameras, which is expected by 2015. But with cameras getting smaller and cheaper, automakers aren't just putting them on the back of the car anymore. Honda has side cameras that come on automatically when a turn signal is employed, so drivers can spot obstacles while turning. Nissan's around-view monitor blends images from four cameras tucked in the mirrors and elsewhere around the car into a composite, bird's-eye view to help the driver back out of a parking spot. The system is available on a high-end Rogue, which costs $6,000 more than the base model. Volvo and Subaru have front-mounted cameras that can apply brakes to avoid hitting pedestrians.

According to Mobileye, an Israeli maker of automotive cameras, car companies are adding cameras that can read wrong-way road signs, detect large animals such as deer, and even note the colors of traffic lights. All that technology is coming by 2015. The next wave? Nissan and TRW are working on a system to automatically steer the car away from an obstacle. Expect that by 2016.

— Lane Centering:

A camera can follow the road and gently nudge a car—using the

brakes—to stay in the center of a lane. These systems—dubbed Lane Keep Assist—are available on most Mercedes-Benz vehicles as well as the Ford Fusion, Ford Explorer, Toyota Prius, Lexus GS and Lincoln MKZ. They aren't cheap. A combined lane-keeping and lane-centering system is a $1,200 option on the Fusion SE. Prius owners must spend $4,320 to get the system, packaged with cruise control and an entertainment system. Lane-centering is an outgrowth of lane-keeping systems, which first appeared on commercial trucks a decade ago. Those systems—now offered by Honda, Buick, Cadillac, Nissan and other brands—sound a beep or vibrate the driver's seat if a camera senses that a car is swerving out of its lane.

— Adaptive headlights:

Headlights don't have to be round any more to accommodate bulbs, so designers have more flexibility on where to put lights. And LEDs, or light-emitting diodes, are letting automakers cram more brightness into smaller spaces. Audi, Mercedes, Acura, Mazda and others have so-called adaptive headlights that swivel in the direction the car is going to help drivers see around corners as they turn. And many cars now have high-beam lights that sense oncoming traffic and dim automatically. The Ford Fusion and other mainstream cars have them, and drivers can buy after-market kits to add automatic high beams to cars without them.

— Stop-start:

By 2025, new cars and trucks sold in the U.S. will have to average 54.5 miles per gallon (4.3 liters per 100 kilometers) of gasoline, up from the current 30.8 mpg (7.6 liters). One feature will almost be a must-have: A "stop-start" device that shuts off the engine at a stop light and automatically turns it on when the driver releases the brake.

Alex Molinaroli, a vice president with Johnson Controls Inc., which

makes batteries that power the systems, estimates they raise gas mileage by a minimum of 5 percent.

Stop-start first surfaced in Europe, where gas prices are far higher. Now, nearly all gas-electric hybrid vehicles have it, as do some cars and trucks with conventional engines. The BMW 3-Series has a simple system, helping the four-cylinder version with an automatic transmission get 28 miles per gallon (8.4 liters per 100 kilometers) in combined city and highway driving. A high-mileage version of Chrysler's Ram pickup also has it, boosting combined mileage by 1 mpg to 21 (11.2 liters per 100 kms).

Currently, 5 percent of new U.S. cars have the systems as standard or optional equipment, up from just 0.5 percent two years ago, according to the Edmunds.com automotive website. Johnson Controls predicts that to rise to 40 to 45 percent by 2016.