

# Making travel quick, safe for cars, bikes, walkers

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In a Monday, Sept. 8, 2014 image from video, an indicator on a digital display in a car detects a pedestrian walking nearby during a demonstration hosted by Denso at the Intelligent Transportation Society's World Congress in Detroit. The auto parts supplier is working on technology that uses smartphones to signal drivers if someone is walking into their path. (AP Photo/Mike Householder)

Cellphones that warn drivers when people are crossing in front of them. Bicycles and cars that communicate with traffic lights. Sensors in cars

that quickly alert other drivers to black ice, potholes or other hazards. A low-priced camera system that brings high-tech automatic braking to the masses.

These life- or time-saving technologies are being shown off this week at the Intelligent Transport Systems World Congress in Detroit. Here are five smart things coming to your car in just a few years:

**WALKING SAFELY:** Pedestrians sometimes wander into traffic. Imagine if their cellphones could alert oncoming drivers. In a system being tested by auto parts supplier Denso, computer software in the car would receive the phone signal, analyze speed and direction, and instantly determine if the pedestrian will cross the car's path. That cuts down on false warnings. "It even can go as far as applying the brakes for you," said Doua Vang, a Denso engineering manager. The [technology](#) is five or more years away. Cars need receivers and radio frequencies need to be set aside by the government. Sending out a constant signal will quickly drain a cellphone battery. And engineers are working on distinguishing between a phone in a pedestrian's pocket from one held by a passenger inside another car, Vang said. The hope is fewer pedestrian deaths. In 2012, the last year for which data is available, 4,473 pedestrians died in traffic crashes, the highest number in five years.

**PREVENTING PILEUPS:** Black ice that forms suddenly is often blamed for multi-vehicle pileups worldwide, because drivers can't stop in time. Now, state transportation officials in Nevada, Minnesota and Michigan are testing technology that can warn people when the first car hits ice. "We're using it now," said Steve Cook, field services engineer for the Michigan Department of Transportation, who wouldn't guess how long it will take to get all cars on the system. Sensors on the vehicles measure road surface temperature and other weather data. They also check the pavement for potholes. The cars relay the information, as well as data on location and windshield wiper, antilock brake and traction

control use, to a central computer that sends messages telling other drivers to slow down.

**AUTOMATIC BRAKING FOR ALL:** We've all seen television commercials advertising fancy radar systems that automatically brake a car to avoid a crash and save an inattentive driver. The systems are typically expensive options, around \$3,000, on high-end luxury cars. But auto parts maker Aisin aims to bring the technology to mainstream cars. The system's cameras, two in the front and two in the back, can sense children, other cars and even deer, and automatically brake the car, said Ichiji Yamada, deputy general manager of chassis systems. Engineers wouldn't reveal the price, but said Aisin is working with Toyota to put the system on mass-market cars around 2020. The cost is lower because of advancements in camera technologies.

**HEY TRAFFIC LIGHT! I'M HERE!:** Bicycle riders are often ignored by systems designed to change a [traffic light](#) when a car arrives. A Raleigh, North Carolina, company called Kimley-Horn has come up with a smartphone app that gets cyclists noticed. It uses the phone's GPS and signals a central computer via the Internet to turn the light green. The system will be tested this fall with 100 cyclists in Austin, Texas. It could go citywide by 2016, said Kimley-Horn's Doug Gettman. Similar transmitters could be installed on all vehicles, so the computer can detect them and manage traffic lights, keeping them green for large blocks of vehicles, Gettman said.

**STOPPING HOV LANE CHEATS:** Japanese technology company NEC wants to stop single riders from cheating in high occupancy vehicle lanes reserved for cars with two or more people. NEC has a system of cameras and infrared sensors that records the number of people in a car and the license number. Isamu Suzuki, senior manager of business development, says enforcement is low because a limited number of humans monitor the lanes. The system can immediately notify police or store information

so traffic tickets can be sent later. Due to privacy concerns, it doesn't store facial images. State governments could begin using the system late this year or early next year, hopefully speeding up travel for those who use the lanes properly.

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