Someday 'talking cars' may save lives

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Could "talking cars" save lives? Auto companies are developing safety systems using advanced WiFi signals and GPS systems that could allow vehicles to communicate with each other on the road. The cars could then send messages to warn their drivers about potential crashes.

Ford Motor Co. is demonstrating the technology for policy makers and journalists in advance of the Washington Auto Show in the nation's capital. The technology sends out multiple messages per second about the vehicle's location, speed, brakes and steering.

If a vehicle detects a potential hazard, it can warn the driver. The technology aims to prevent collisions involving a car changing lanes, approaching a stalled vehicle, or heading into an intersection in which another car ignores a red light or a stop sign.

"We really see a safety opportunity here," said Mike Shulman, technical leader for Ford Research and Advanced Engineering.

Auto companies have been working on the technology for nearly a decade. Several automakers are part of a consortium sharing information on the crash avoidance systems, including General Motors, Toyota, Daimler and others.

The systems, which warn drivers through beeping sounds and flashing red lights at the base of the dashboard, are still five to 10 years from being deployed into the nation's fleet. But Ford officials said the technology, if installed on enough vehicles, could reduce the more than

30,000 people who are killed each year on the nation's highways.

The government has touted the intelligent vehicle systems. In October, the National Highway Traffic Safety Administration said the vehicle-to-vehicle communication could potentially address about 4.3 million vehicle crashes, or about 4 in 5 crashes involving drivers who are not impaired by drugs or alcohol.

Some crash avoidance systems have used radar systems positioned in the front or back of the vehicle. Ford said the GPS/WiFi systems are less costly and can detect movements surrounding the vehicles, including conditions along winding roads where a driver's vision might be obstructed or in side crashes involving a car that barrels through a red light. The broad availability of GPS and WiFi, meanwhile, could help car companies eventually install the technology on vehicles already in the fleet, Ford said.

To showcase the technology, auto companies plan to hold driving clinics next summer to let consumers experience the intelligent vehicles. Car companies and the government are developing standards and hoping to complete research by 2013 and plan for future deployment.

"This technology is an opportunity to help create a future where millions of vehicles communicate with each other by sharing anonymous real-time information about traffic speeds and conditions. This new world of wireless communication will make transportation safer," said Peter Appel, administrator of the Transportation Department's Research and Innovative Technology Administration.

https://phys.org/news/2011-01-cars.html