Car-to-Car Communication

A simple wireless technology promises to make driving much safer.

By Will Knight

Breakthrough
Cars that can talk to each other to avoid crashes.

Why It Matters
More than a million people are killed on roads worldwide every year.

Key Players
- General Motors
- University of Michigan
- National Highway Traffic Safety Administration

Hariharan Krishnan hardly looks like a street racer. With thin-rimmed glasses and a neat mustache, he reminds me of a math teacher. And yet on a sunny day in September 2014, he was speeding, seemingly recklessly, around the parking lot at General Motors' research center in Warren, Michigan, in a Cadillac DTS.

I was in the passenger seat as Krishnan wheeled around a corner and hit the gas. A moment later a light flashed on the dashboard, there was a beeping sound, and our seats started buzzing furiously. Krishnan slammed on the brakes, and we lurched to a stop just as another car whizzed past from the left, its approach having been obscured by a large hedge. "You can see I was completely blinded," he said calmly.

The technology that warned of the impending collision will start appearing in cars in just a couple of years. Called car-to-car or vehicle-to-vehicle communication, it lets cars broadcast their position, speed, steering-wheel position, brake status, and other data to other vehicles within a few hundred meters. The other cars can use such information to build a detailed picture of what's unfolding around them, revealing trouble that even the most careful and alert driver, or the best sensor system, would miss or fail to anticipate.

Already many cars have instruments that use radar or ultrasound to detect obstacles or vehicles. But the range