Ford connecting cars to cloud-based apps
Next-gen cars will be able to avoid traffic jams or point out a restaurants recommended by Facebook Friends

By Lucas Mearian
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Imagine if, while driving, the cars further up the road could tell you there's a speed trap ahead, or that a restaurant that's highly recommended by a Facebook friend is nearby.

That's what Ford hopes to create based on current in-car interface technology combined with wireless networks and smartphones.

Venkatesh Prasad, group and senior technical leader at Ford's Vehicle Design and Infotronics division, told attendees at M.I.T.'s Emerging Technology conference here that the automaker is already testing a network that would link cars with cloud-based applications.

"We're trying to reach out and explore new dimensions. The benchmark not what's in a [competitor's] car, but what's in the driver's hand," he said, referring to smartphone technology.

Prasad pointed out that interactive touch displays in today's vehicles -- even those using integrated chip technology -- are based on the auto industry's 10-year development cycles, meaning the estimated time a car will be on the road. So oftentimes. the technology available when a person buys a car is outdated. Therefore, Ford believes that investing in embedded technology today may not be as fruitful in the long term as putting money into building network interface and hardware connectivity technology that would allow communication between next-generation tablets and smart phones and vehicles, Prasad said.

Ford envisions a day in the not too distant future when "socially networked road trips" will be very real, he added.

For example, last summer, Ford gave four students the opportunity to develop applications for Fiesta automobiles and then drive the cars from Michigan to California. The students chose to develop a one-touch application that would immediately alert the other cars in their caravan to speed traps. When the lead car was pulled over for speeding, the other three were immediately alerted to slow down, Prasad said.

Another application being beta tested today offers diabetic drivers to have their blood sugar levels tracked and to receive advice on when to test and when to eat. The application combines voice recognition technology from Nuance with a health monitoring service from WellDoc.

Demonstrating the technology in a Ford Edge vehicle parked outside M.I.T.'s Media Lab today, Prasad pushed a button and the vehicle asked what service he wanted. Prasad responded by saying, "glucose", and the service told him his last blood glucose level and then advised him that he should retest because it was low, and if necessary, eat "some fast acting carbs."

Because the vehicle's GPS navigation system knows where the car is located, it can also recommend where the nearest eatery or convenience store is to find those "fast acting carbs," he added.

While the service doesn't actually test blood glucose levels - it depends on data fed into it - it does act as a reminder and advisor.

Vehicle GPS technology can also prepare vehicles for oncoming weather changes or traffic jams.

For example, if cars down the road are experiencing heavy rain and slippery conditions, the vehicle's anti-lock break system can be adjusted to respond accordingly. Or, if there's an accident up ahead, the car's navigation system can suggest an alternate route, Prasad said.

"People spend 47 hours a year in their car going nowhere [in traffic]," he said. "That's the equivalent of a week's vacation."