# Future Transportation Prospect :

Vehicle-to-Vehicle (V2V) communication technology

US officials are close to approving new requirements for enabling vehicles to communicate with each other. Officials hope the new technology will reduce the number of traffic accidents. Automobile manufactures may be required to equip all new cars with what are being called 'vehicle-to-vehicle' communication devices within the next 3 years.

## What is V2V?

Vehicle-to-Vehicle, is a communication technology. It enables vehicles to share information about their speed and movement at a rate of 10 times a second. Cars will be able to identify possible dangers within about 300 meters. The cars will then warn their drivers or even take action to avoid in accident.

## IMPROVING SAFETY

V2V technology could help prevent the majority of types of crashes that typically occur in the real world, such as crashes at intersections or while changing lanes.

1. In-Venhicle Warning

Through in-vehicle warnings, drivers would be alerted to imminent crash situations, such as merging trucks, cars in the driver’s blind side, or when a vehicle ahead of them brakes suddenly.

The drivers will be able to see, hear and even feel the warning signals through shaking of the seat. Researches expect the new system to reduce the number of car accidents by as much as 80 percent. V2V communications will enable active safety systems that can assist drivers in preventing 76 percent of the crashes on the roadway, thereby reducing fatalities and injuries that occur each year.

1. communicating with roadside infrastructure,

By communicating with roadside infrastructure, drivers would be alerted when they are entering school zones, if workers are on the side of the road, and if an upcoming traffic light is about to change.

## IMPROVING MOBILITY

According to the Texas Transportation Institute, American drivers spent 4.8 billion hours stuck in traffic in 2010. Connected vehicle technology could enable drivers and transportation system operators to make smart choices to reduce travel delay.

* Anonymous signals in vehicles would help generate up-to-the-minute data on how, when, and where vehicles travel in real time. Informed travelers may be able to avoid congestion by taking alternate routes, using public transit, or by rescheduling their trip.
* Connected vehicles could one day also include buses, trains, and other forms of public transit. By providing real-time information, connected vehicle technology would give travelers a realistic idea of when transit vehicles will arrive while improving bus and train connections to make public transportation more appealing to everyone.
* This technology could also help pave the way to other innovations that improve the way Americans live and travel.

## IMPROVING THE ENVIRONMENT

The total amount of wasted fuel topped 3.9 billion gallons in 2009, the latest year that this data is available. Connected vehicle technology could give motorists the real-time information they need to make “greener” transportation choices. Information about traffic conditions would help motorists eliminate unnecessary stops and let their vehicles reach optimal fuel-efficiency.

## Research And Difficult

Auto makers and researchers have been working for years to develop crash-avoidance systems based on vehicle-to-vehicle communications. Such systems eventually could work in collaboration with technology designed to automate various driving tasks, including braking and steering.

The hardware and software for vehicle-to-vehicle communications is nearly ready for mass deployment. But auto makers have other hurdles to overcome, including establishing a big enough network of equipped vehicles for the system to work.

U.S. officials expect the new technology will be required in American vehicles by early 2017. They believe it is the first step toward a better and safer transportation system.

Thank you.