Car-to-X Technology (Vehicle-to-Vehicle)

Mercedes-Benz was the first automotive manufacturer to bring Car-to-X Communication to series production vehicles in 2013. Car-to-X communication enables the exchange of information between individual vehicles as well as between vehicles and the traffic infrastructure. Thanks to Car-to-X communication, Mercedes-Benz customers become early aware of hazardous locations so that they can take appropriate action. Car-to-X communication, thus, helps to avoid critical situations arising in the first place. In addition to enhancing safety and convenience, Car-to-X Communication can also contribute to making mobility more efficient by providing highly accurate traffic information.

Cellular communication-based approach

To bring the technology to the roads, the Drive Kit Plus will be used as an initial step. In combination with a smartphone and the Digital DriveStyle App developed by Mercedes-Benz Research & Development North America, it turns the vehicle into a simultaneous transmitter and receiver of information.

When warning messages have been issued in the vicinity of the vehicle, for example by an emergency services vehicle or a broken down vehicle, the driver can receive a warning early on and the hazardous location can be marked on the map. In addition to receiving warning messages, each vehicle fitted with Car-to-X communication can also transmit information on dangers to other road users and, therefore, contribute to enhancing road safety.

Mercedes-Benz passenger cars are able to detect many of these dangers automatically and without the driver being required to take any action. This is due to the seamless integration of the Car-to-X system in the vehicle's onboard systems. For road hazards which are not detected automatically, or which cannot yet be detected automatically, an efficient manual notification option has been designed. At the press of a button, stationary vehicles or animals on the road, wrong-way drivers or shed loads can be registered in the Mercedes Cloud.
In both cases, all vehicles fitted with Car-to-X communication technology and within ten kilometers of the road hazard will be provided with an anonymous notification message, which is displayed as an icon on the navigation map. However, a pop-up is only displayed on the screen, if the vehicle travels towards the road hazard and the hazard is of immediate relevance.

Daimler is using this cellular communication-based approach because it offers the quickest way to deploy this future technology and, therefore, the fastest path to unlocking the safety potential of Car-to-X Communication. However, Daimler is also involved in the further development of Car-to-X communication and, based on a hybrid approach, can also include ad-hoc communication between vehicles.

Availability

The modular approach ensures quick market launch and allows to retro-fit the technology in many Mercedes-Benz vehicles.

Through the integration of Car-to-X communication in the Drive Kit Plus and the Digital DriveStyle app, Mercedes-Benz makes the benefits of Car-to-X communication available for as many Mercedes-Benz customers as possible. This is due to the fact that the Drive Kit Plus can be ordered for new vehicles and also installed in customer vehicles as a retrofit solution.

Nest Labs

Another world premiere is a partnership with Nest Labs to demonstrate a concept of connecting Mercedes-Benz vehicles to the Nest Learning Thermostat using Nest's web APIs. Mercedes-Benz and Nest are demonstrating how this solution makes life easier and more convenient. The vehicle will interact with the Nest Thermostat so that your home will be at a comfortable temperature upon your arrival. With such intelligent links between the consumer's home and vehicle, Mercedes-Benz is creating a new interactive experience to increase convenience for its drivers with the planned release in spring of 2014 as part of Digital DriveStyle app.

Digital DriveStyle App - current features

- Facebook
- Twitter
- Glympse
- Social Playlist
- My Music
- AUPEO! Personal Radio
- Internet Radio
- Navigation powered by Navigon – a Garmin brand
- Lane Assistant Pro
- Real Road Signs
- Speed Limit Assistant
- Voice-prompted, turn-by-turn directions including spoken street names
- Real Time Traffic Information
- 2D and 3D map display (bird's-eye view)
- 3D buildings and landmarks

- Local Search and Street View powered by Google
- Preloaded points of interest including gas stations, restaurants and other businesses
- Car Finder
- Car Info with Vehicle Identification Number, Odometer and Fuel Level
- Settings