

**Automotive Products Professional Services Integrated Solutions** 



## Internet of Vehicles (IoV)

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genda of the work shop		
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<b>*</b>	Understanding OBD – On Board Diagnostics	
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	OBD's role in IoT - IoV	
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	Security threats	
	Questions	

Live OBD demo on Vehicle



LIVE

### **Introduction**





# **Understanding OBD**





## **Understanding OBD**

#### **Engine Control**

#### Transmission

Fault Detection

#### **Body Control**

Monitoring

Infotainment



## **OBD regulations timeline**





#### OBD's role in IoT - IoV





Health of the vehicle can be monitored remotely & continuously.



- Helpful to OEMs/Service stations in avoiding break downs and accidents by determining the issues of the vehicles in advance and fixing them.
- Helpful to fleet owners in keeping their fleet of vehicles in good condition, there by delivering on time and effective transportation services to customers.



Driving patterns can be studied



- Helpful to insurance agencies in determining the value of the vehicle by studying the data from the vehicle.
- The data helps greatly when reselling the vehicle.
- Helpful to fleet owners in determining the driving patterns of the drivers.
- Helpful to OEMs in understanding the driving patterns of their customers and accordingly calibrating the vehicles to deliver best driving experience.

Accident data can be collected remotely



- Helpful to insurance agencies and police in determining the cause of accidents.
- Video from dashboard camera of the vehicle can also be delivered over the air, which can help in determining the extent of accidents so that appropriate help can be sent to the accident site.
- Helpful to fleet owners to send alternative vehicles to carry the passengers/goods.



Vehicle location can be tracked



- Helpful to police to track down vehicles.
- Helpful to fleet owners in tracking the path the driver takes to reach destination. This will help in optimising the routes.



Vehicles can be immobilized remotely



- Access can be given to police to immobilize stolen/illegal vehicles remotely and trace the vehicles.
- In GTA style chasing, the cops can immobilize the cars remotely, thereby protecting people and property.



Software updates can be delivered over the air (OTA, like in case of smart phones!)



• Just like smart phones, software updates and calibration changes can be delivered to vehicles over the air. But care needs to be taken that the updates happen only when the car is not in use!





# **Security challenges**











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Thank you very much

