Vehicle Safety -
(R)Evolution of Driving Assist Systems

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Which Driver Assist Systems are already available today?

- Parking
- Side view
  - Lane Change Assist
  - Blind Spot Detection
- Automated Parking
- Rear Cross Traffic Alert
- Parking
- Front view
  - ACC
  - AEBS
  - Sign Recogn.
  - LDWS
  - Traffic Jam Assist
Which Driver Assist Systems are already available today?

Adaptive Cruise Control (ACC)

Sensor Configuration

Control Systems
Which Driver Assist Systems are already available today?

Advanced Emergency Braking System (AEBS)

Sensor Configuration

Control Systems
Which Driver Assist Systems are already available today?

Road Sign Recognition
Sensor Configuration
Control Systems

Optional: Speed Adaptation in ACC
Which Driver Assist Systems are already available today?

**Lane Departure Warning System (LDWS/LKAS)**

- Sensor Configuration
- Control Systems
Which Driver Assist Systems are already available today?

**Parking Systems**

- Sensor Configuration

**Control Systems**

- ACC
- AEBS
- Sign Recogn.
- LDWS
- Automated Parking
- Rear Cross Traffic Alert
- Lane Change Assist
- Blind Spot Detection
- Traffic Jam Assist
Which Driver Assist Systems are already available today?

- Lane Change Assist (LCA)
- Sensor Configuration
- Control Systems

- ACC
- AEB
- Sign Recog.
- LDWS
- Automated Parking Rear Cross Traffic Alert
- Lane Change Assist Blind Spot Detection
- Traffic Jam Assist
Which Driver Assist Systems are already available today?

**Traffic Jam Assist (TJA)**

Sensor Configuration

Control Systems
The Systems of the Future?

Highway Pilot

Valet Parking
Highway Pilot

Sensor Configuration

Control Systems
Valet Parking

Sensor Configuration

Control Systems
Levels of Automatisation
Permanent Monitoring by the Driver

Driver

Level 0
Driver Only

Level 1
Assisted

Level 2
Partial Automation

Level 3
Conditional Automation

Level 4
High Automation

Level 5
Full Automation

System is driving, with more or less backup by the driver

Driver

System

Driver System

System System

Driver or System
... and which Levels have the Systems mentioned before?
For Questions, please contact:

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Links to videos which have been basis for the presentation

ACC: http://www.youtube.com/watch?v=own_VaRZ9M8

AEBS: http://www.youtube.com/watch?v=ehkDZS1hFnc

Traffic Sign: http://www.youtube.com/watch?v=FM1a2zS2Eec

LDWS: http://www.youtube.com/watch?v=GSzEi8dIFlc
http://www.youtube.com/watch?v=GdtVe1Pnayg

Parking: http://www.youtube.com/watch?v=HWMzP9HYNCQ

Side Assist: https://www.youtube.com/watch?v=DtmyjAN7KAY

Traffic Jam: https://www.youtube.com/watch?v=Sc8wvpya15A

Highway Pilot: https://www.youtube.com/watch?v=tbvTQuKpZNo

Valet Parking: http://www.youtube.com/watch?v=vaAnVpBW6gw
http://www.youtube.com/watch?v=QPH8j2mrepM