

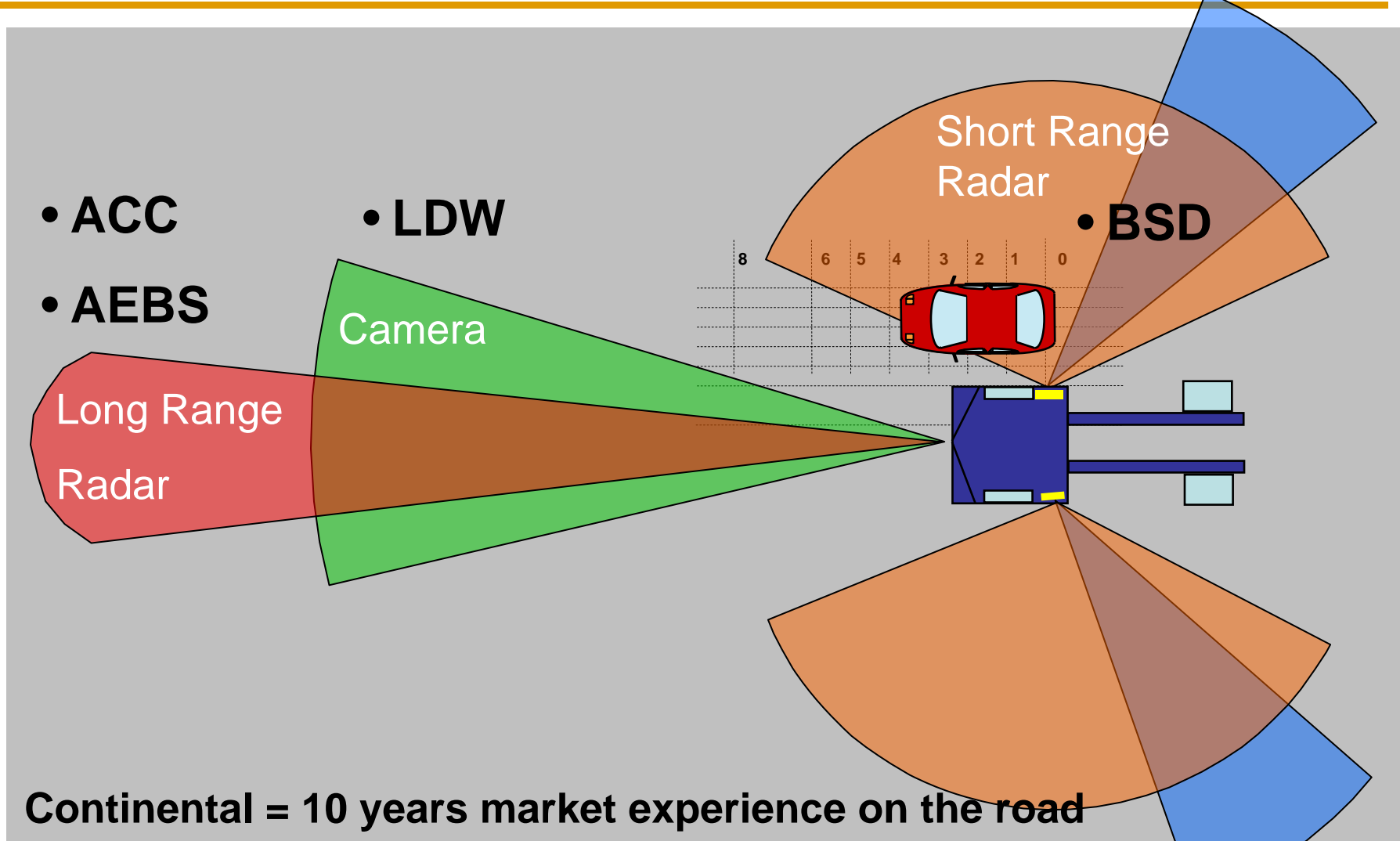


# **Products for Commercial Vehicles (CV's) Focus AEBS**

Wilfried Mehr, 25.06.2009, Paris

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# Current applications in the market:



# Driver Assistance - “makes sense”

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# The sensor portfolio is ready for AEBS and LDW



## Radar



### Technique

- 24 GHz UWB Radar / short range

### Applications

- Lane Change Assist (LCA type 1)

### Technique

- 77 GHz long-range Radar

### Applications

- ACC + Stop&Go
- AEBS (Advanced emergency breaking system)

## Camera



### Technique

- CMOS Camera

### Applications

- LDW
- Object Detection
- Speed Limit Monitoring
- Intelligent Headlamp control

# Radar for AEBS is mature and available in the third generation – approved by billions of Km on the road

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## 2nd. generation ARS200

- On the road since 2003
- 3 beams, 9° field of view, 150m
- Mechanical alignment
- ACC
- **AEBS**



## Third generation ARS300

- On the road since march 2009
- 17 beams, 56° field of view, 60m
- 17 beams, 17° field of view, 200m
- auto alignment by software
- ACC + Stop&Go
- **AEBS**



# The nature of AEBS in CV's



Due to the weight of CV's any collision becomes fatal. Sensors therefore must....

..classify a potential collision as fast and early as possible. Means....

..to detect objects as early as possible

- Range 200m
- High sensitivity under all weather conditions
- >50° field of view

..to classify relevant objects as fast as possible

- High lateral resolution
- Extended driving path prediction by stationary and moving objects

..to measure range, speed and acceleration as best as possible

- Range- and speed-measurement in one cycle.
- Apply "Doppler – Effect" to achieve higher precision of the speed measurement



# Conclusion: The sensors are ready for the legislation

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- Sensors for AEBS and LDW-Systems are available in a very mature status and tested over billions of Km on the road.
- The environment sensor for an AEBS must have a certain performance to support a adequate functionality – Reduced specifications would question the benefit of an AEBS.

