

DAIMLER

Automotive Radar Systems – Helping to Improve Road Safety

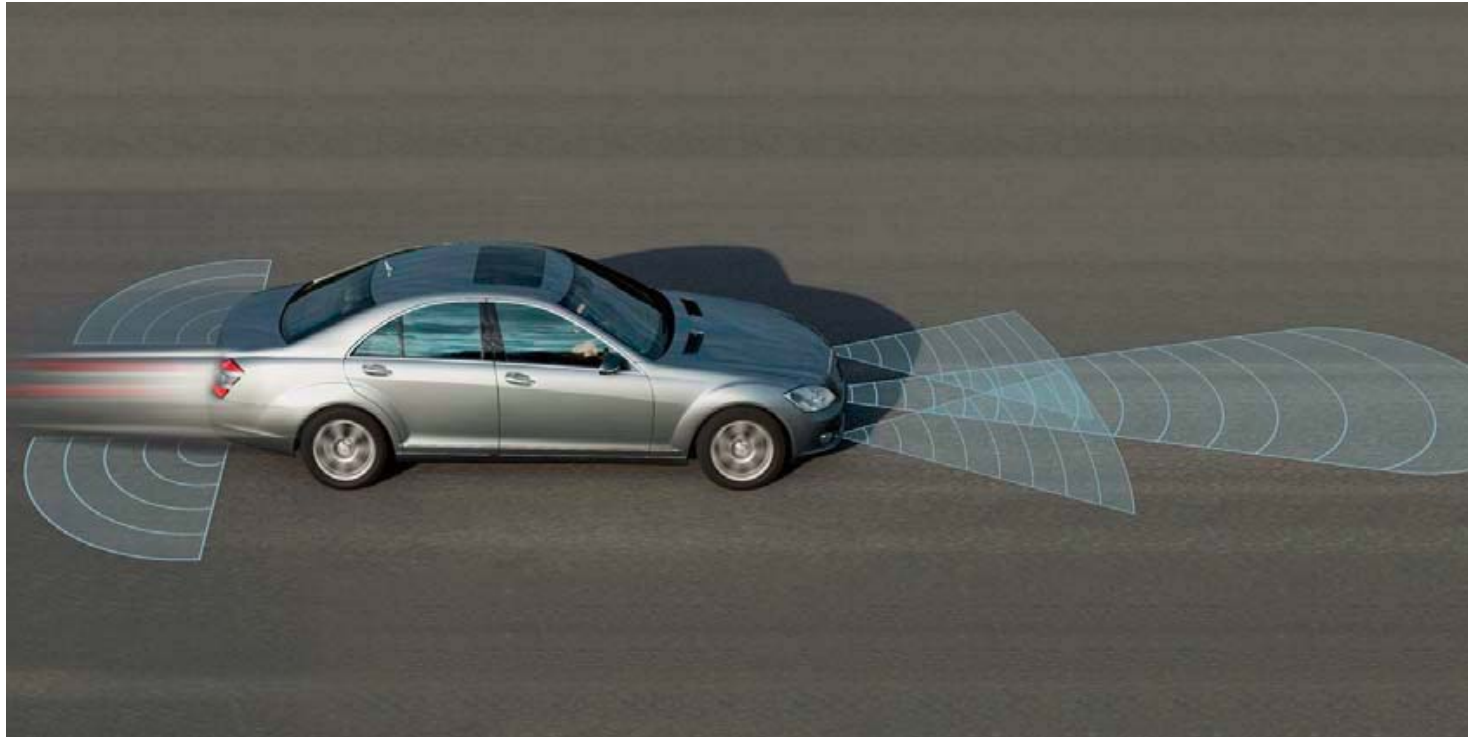
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79 GHz Workshop
November 7th, 2012 • Geneva • Switzerland

Overview

- Radar Technology in Mercedes-Benz Cars
- Radar Based Driver Assistance Systems
 - Active Blind Spot Assist
 - DISTRONIC Plus
 - PRE-SAFE® Brake

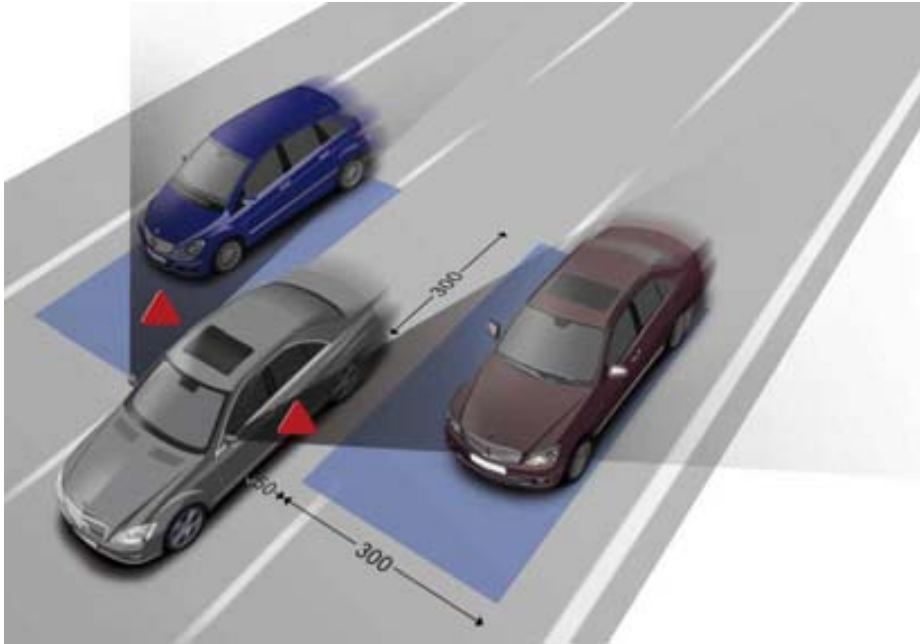
Radar Sensors in Mercedes-Benz Cars



Mercedes-Benz Cars can be equipped with two types of radar sensors:

- **Long Range Radar:** 76 GHz Narrow Band (behind the radiator grill)
- **Short Range Radar:** 24 GHz Ultra-Wide Band (inside the

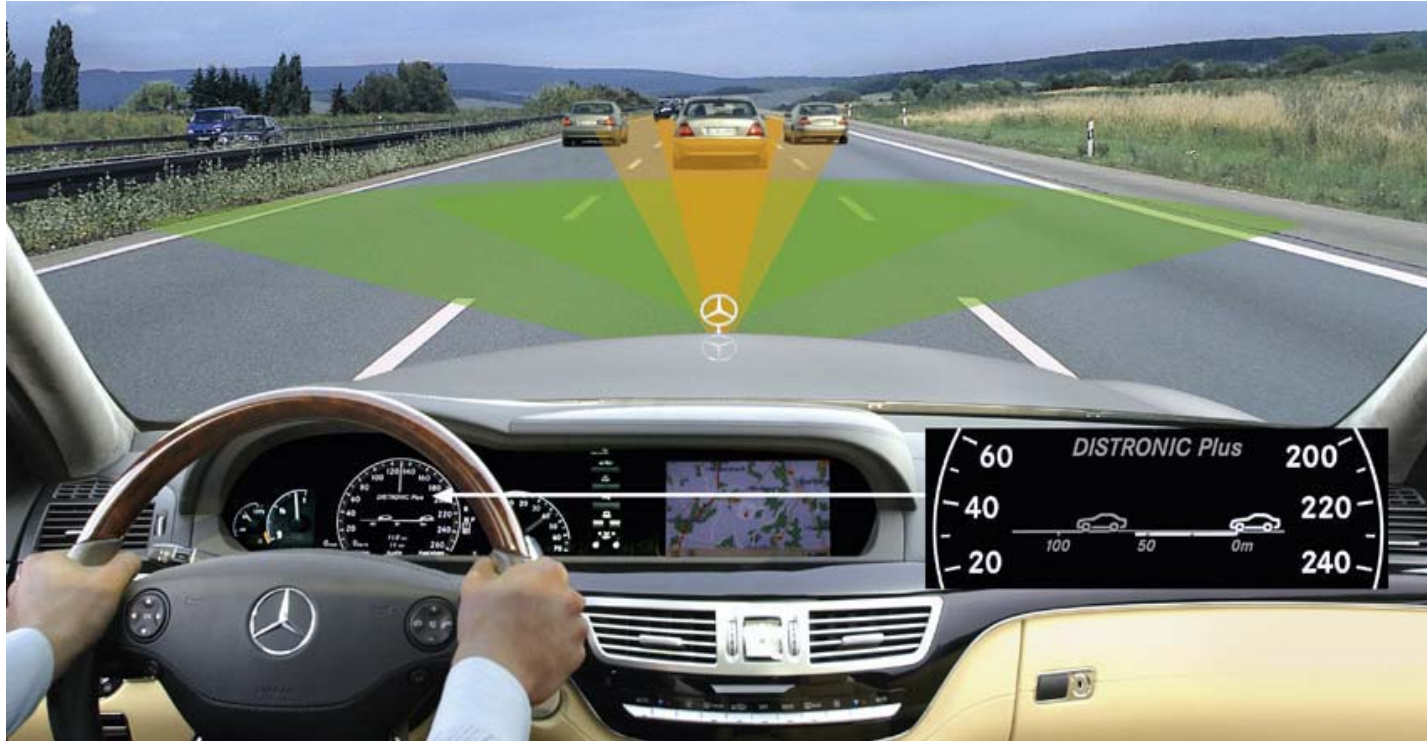
Active Blind Spot Assist



Short Range Radar sensors in the rear bumper observe the vehicle's blind spots. The driver is assisted in three stages:

- Warning symbol in the exterior mirror indicate a vehicle in the blind spot
- Flashing symbol and acoustic warning when turn indicator is activated
- Corrective steering by autonomous single wheel braking action when side-to-side collision is imminent

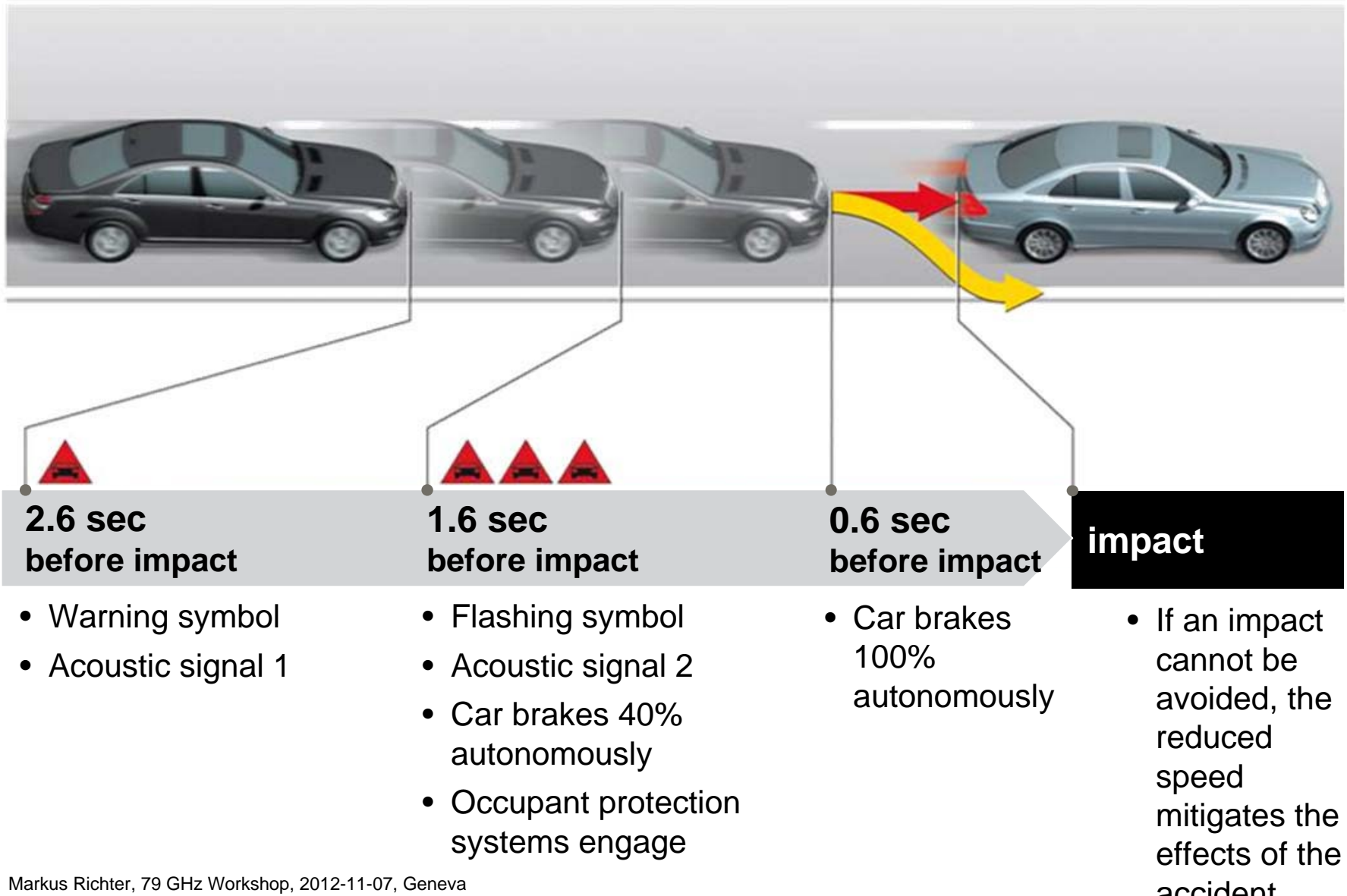
DISTRONIC Plus



Long Range Radar sensors and **Short Range Radar** sensors observe the lane in front of the vehicle.

- The system regulates the vehicle's speed ensuring that a safe distance to the vehicle ahead is maintained
- The system also supports stop-and-go traffic

PRE-SAFE® Brake



Effective Crash Mitigation through PRE-SAFE® Brake

Scenario: Two vehicles – one with PRE-SAFE® Brake, one without – drive towards a fixed obstacle at 51 km/h.

Without
PRE-
SAFE®
Brake

Speed:

51 km/h

Energy:

210 kJ



With
PRE-
SAFE®
Brake

Speed:

23 km/h

-55%

Energy:

43 kJ

-80%



Thank you for your attention!