
TechTalk SAFETY AND MOTION

TechShow 2021

CRASH SENSING - EVOLUTION OF OCCUPANT PROTECTION APPLICATIONS


Bayerisches
Rotes
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FEUERWEH
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Accidents Happen
Restraint Systems reduce injuries

- WHO estimates > 1,35 million road traffic deaths worldwide each year
- Restraint Systems helped to reduce the number of road fatalities and injuries significantly
- Safety is not negotiable: the next decades of mobility will require Restraint Systems

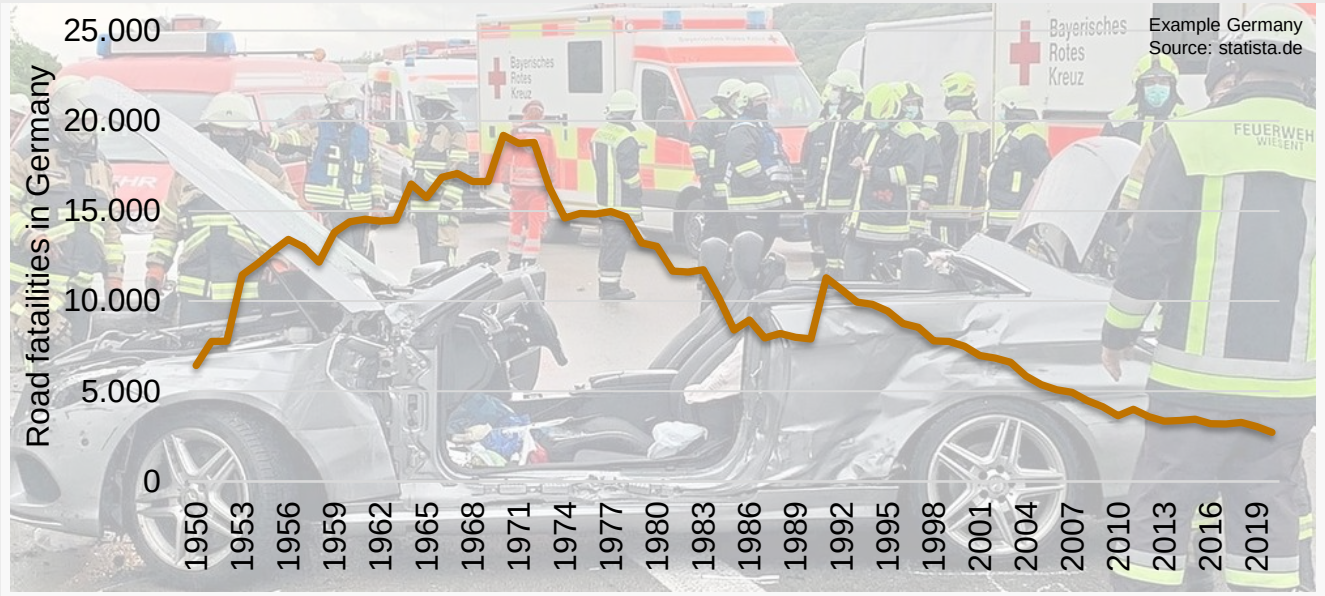


Image Source: FF Wiesent

Image Source: Adobe Stock // B Toy Anucha

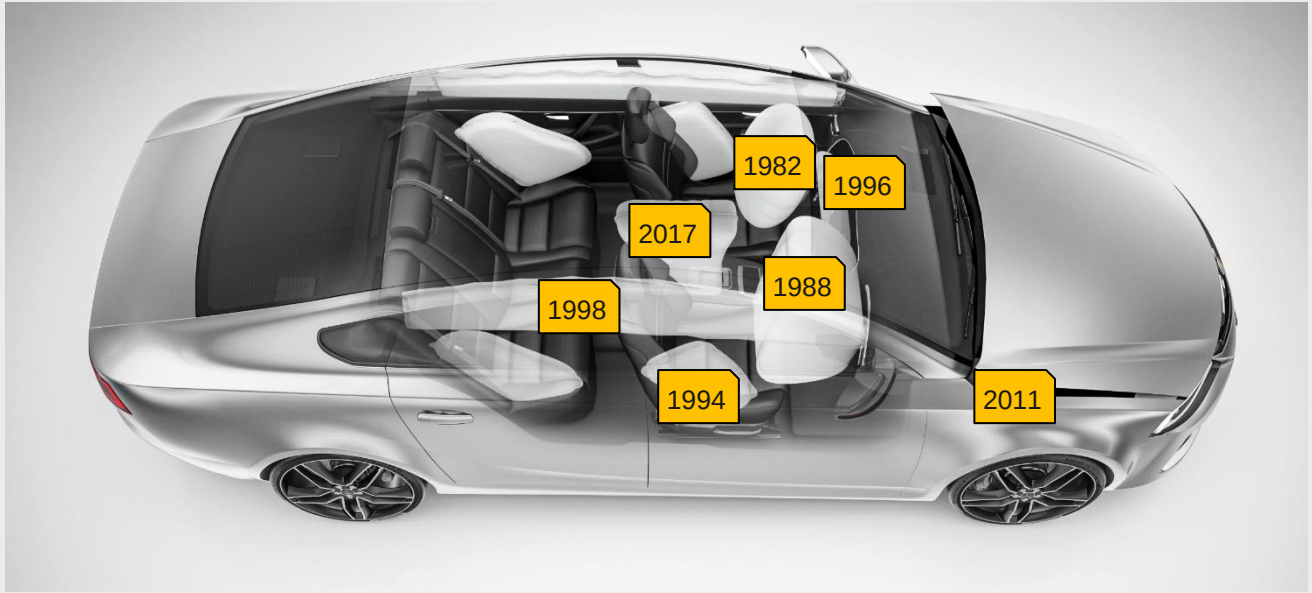
Restraints Protect All Traffic Participants
Crash-Sensing is time critical

- Within milliseconds, the Airbag Control Unit decides the deployment of protective measures
- Airbags are inflated around the occupants
- Active Belt Tensioner can be activated even before the impact
- Pedestrian protection serves vulnerable road users outside of the vehicle

Image Source:Adobe Stock // B Toy Anucha

Restraints Protect All Traffic Participants
Evolution of actuators

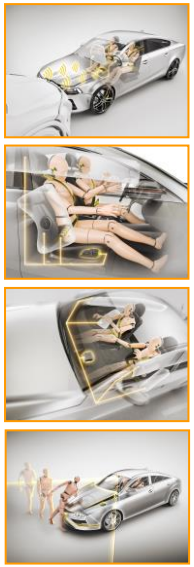
- Started with the driver airbag and Active Belt Tensioner
- Passenger airbag was available 1988
- Extension to sidecrash protection 1994
- Pedestrian Protection 2011
- Interaction Airbag 2017
- Pre-Crash Belt Restraints 2017
- 202x: Adaptive Safety, EV-Safety

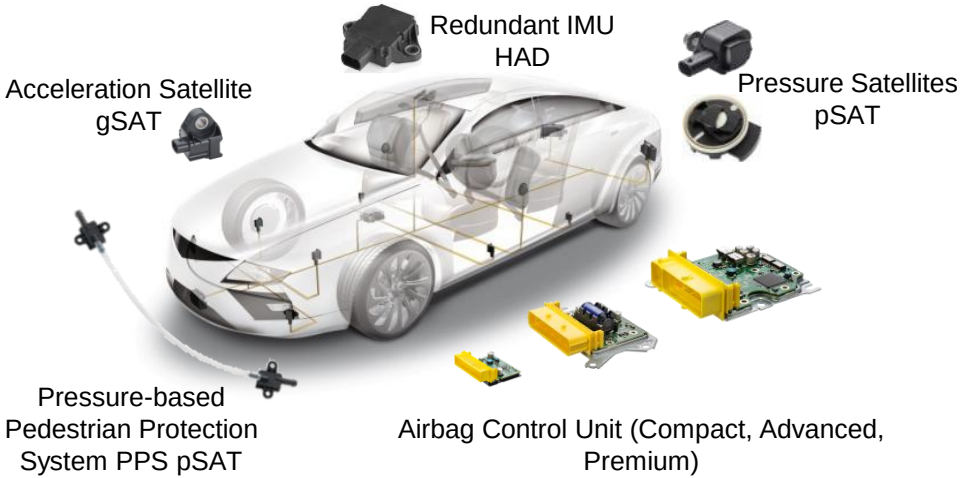


Restraints Protect All Traffic Participants

40 years of experience @Continental

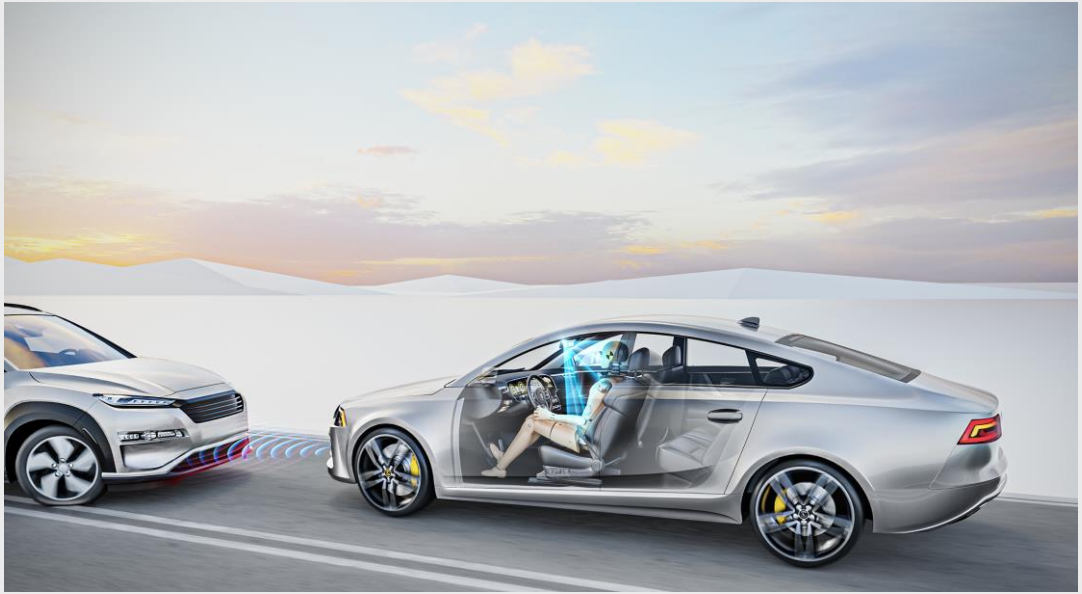
- 40 years of airbag development
- 25 years of sidecrash sensors (satellites) development
- 20 years of inertial measurement unit production
- 10 years of Pedestrian Protection pSat
- 350 million Airbag Control Units produced
- 1 billion satellite sensors produced

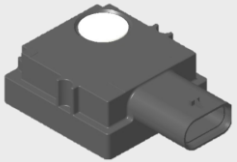




Future Restraint Systems
Support Future Mobility

- New automotive mobility concepts require adaptation of integrated safety
- Increased space and comfort in the cabin bear challenges for protection of occupants
- Cars predict crashes and react
- Airbag Control Valves deploy airbags adaptively
- CoSSy* senses low speed contacts
- **This is Allround Protection**





*CoSSy = Contact Sensor System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2021
THANK YOU!