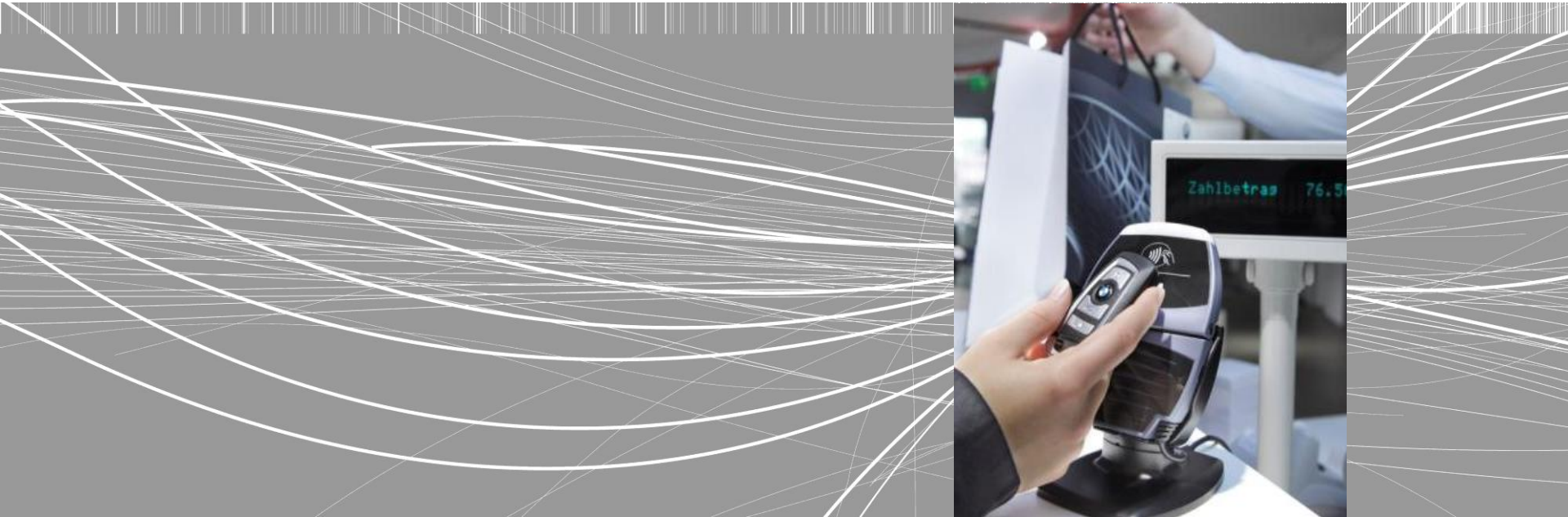


BMW Forschung u. Technik GmbH.

25th Anniversary of a Think Tank.



ITDrive.

BMW Group



ITDrive.

Contents.

Automotive electronics today.

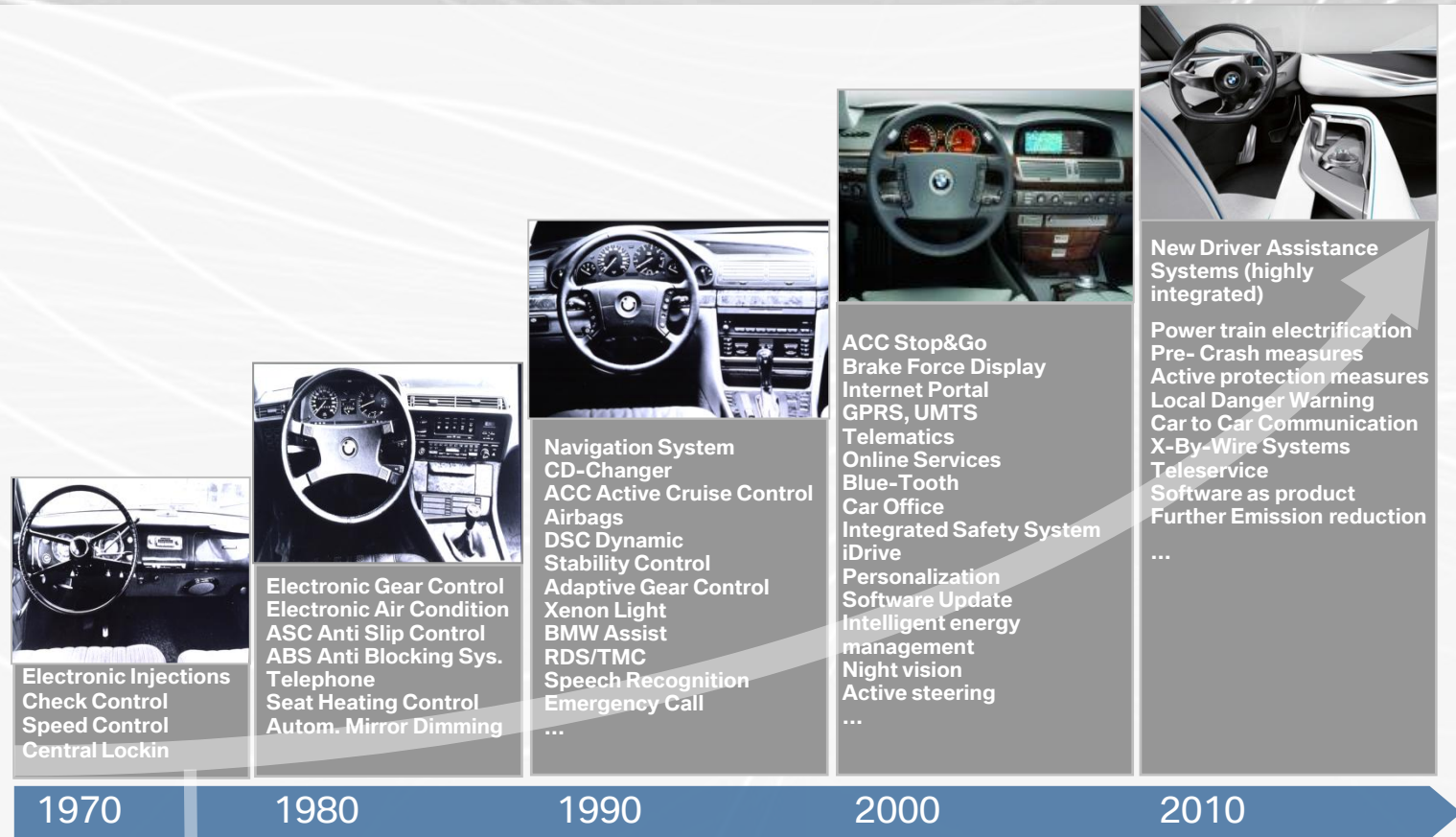
Automotive electronics – vision.

IT-Motive 2020.

BMW Key. Multifunctional car key.

ITDrive.

More than 90% of all automotive innovations are driven by electronics and software.



Degree of Interdependence

iDrive.

BMW 7 series tops iSuppli's Automotive Technology Scorecard (04/2009).



New iDrive control concept. 3D navigation, entertainment-server, 80 GB hard disk drive.

World premiere of driver assistance systems: Speed Limit Information, Night Vision with pedestrian detection.

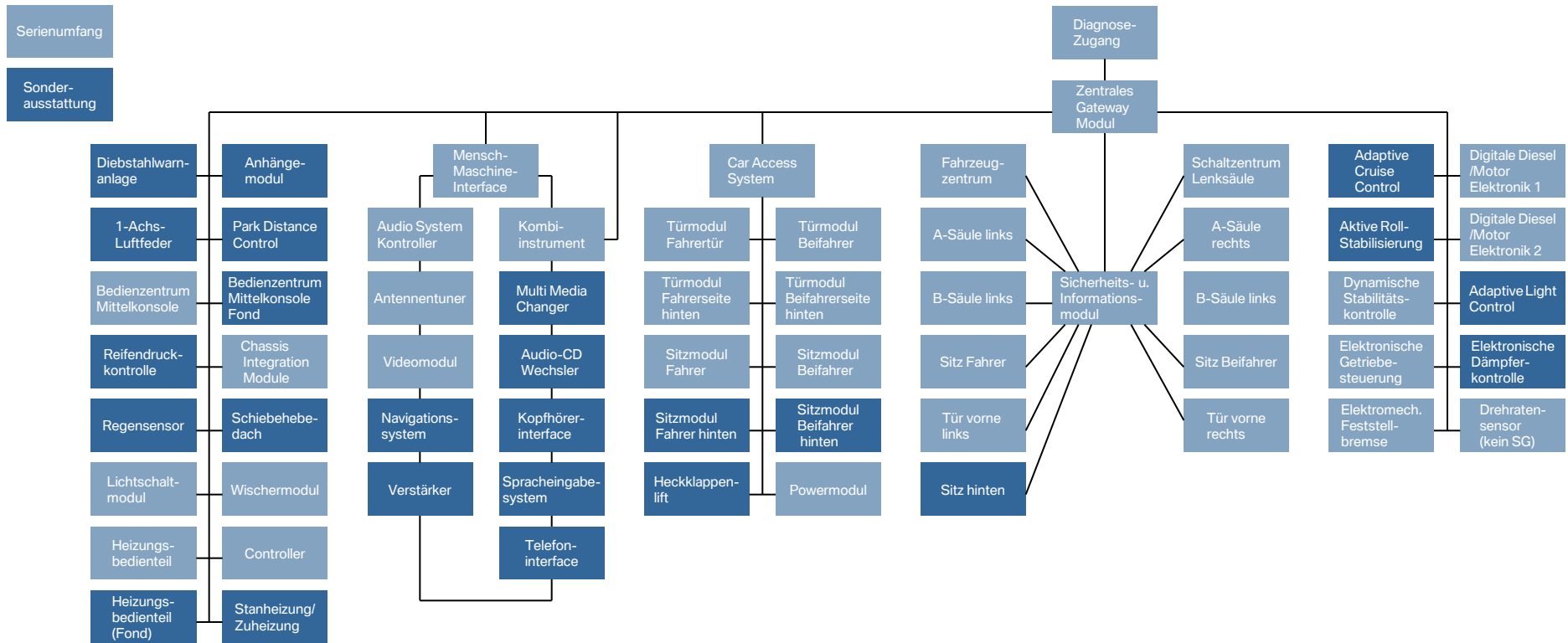
ACC Stop&Go, Dynamic Brake Control, belt latch tensioner.

BMW Assist incl. eCall, internet in the car.

Lowest consumption 7.2 l/100 km in its class.

ITDrive.

Automotive Electronics: A Complex Network of Control Units.



Body/Comfort

MMI/Multimedia

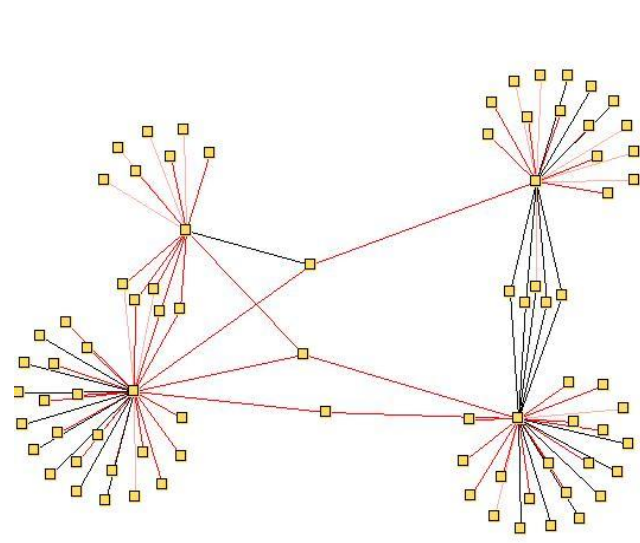
Body/Comfort

Security

Chassis/ Power Train

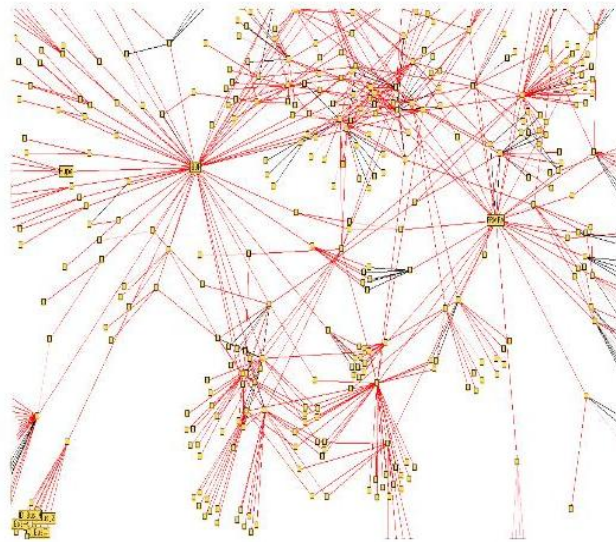
ITDrive.

Automotive Electronics: A Complex Network of Control Units.

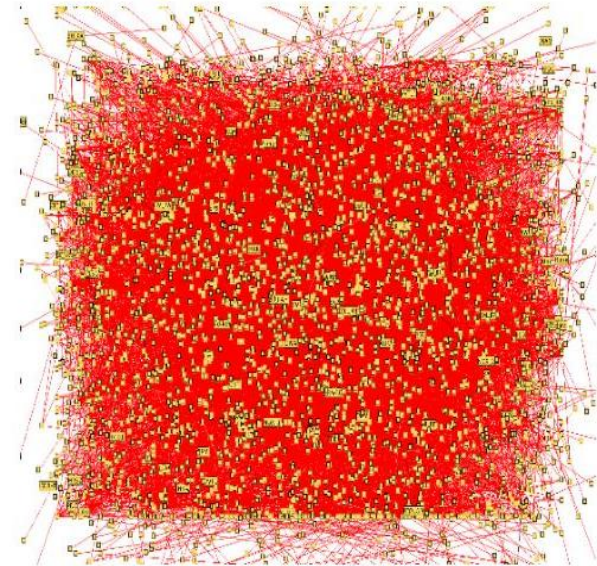


Basic functions in one ECU

...



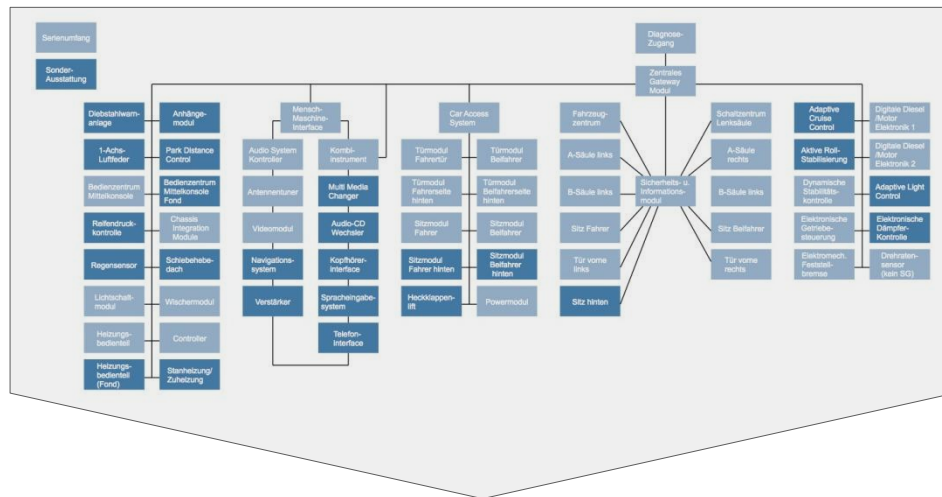
two ECUs linked...



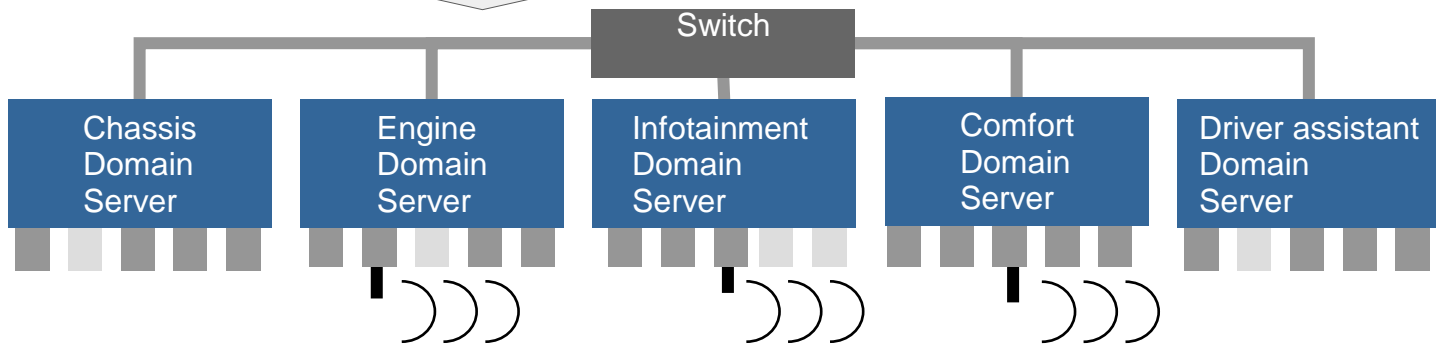
... basic functions
of a vehicle system

ITDrive.

Vision for Tomorrow: A Cluster of Homogeneous Domain-Servers.

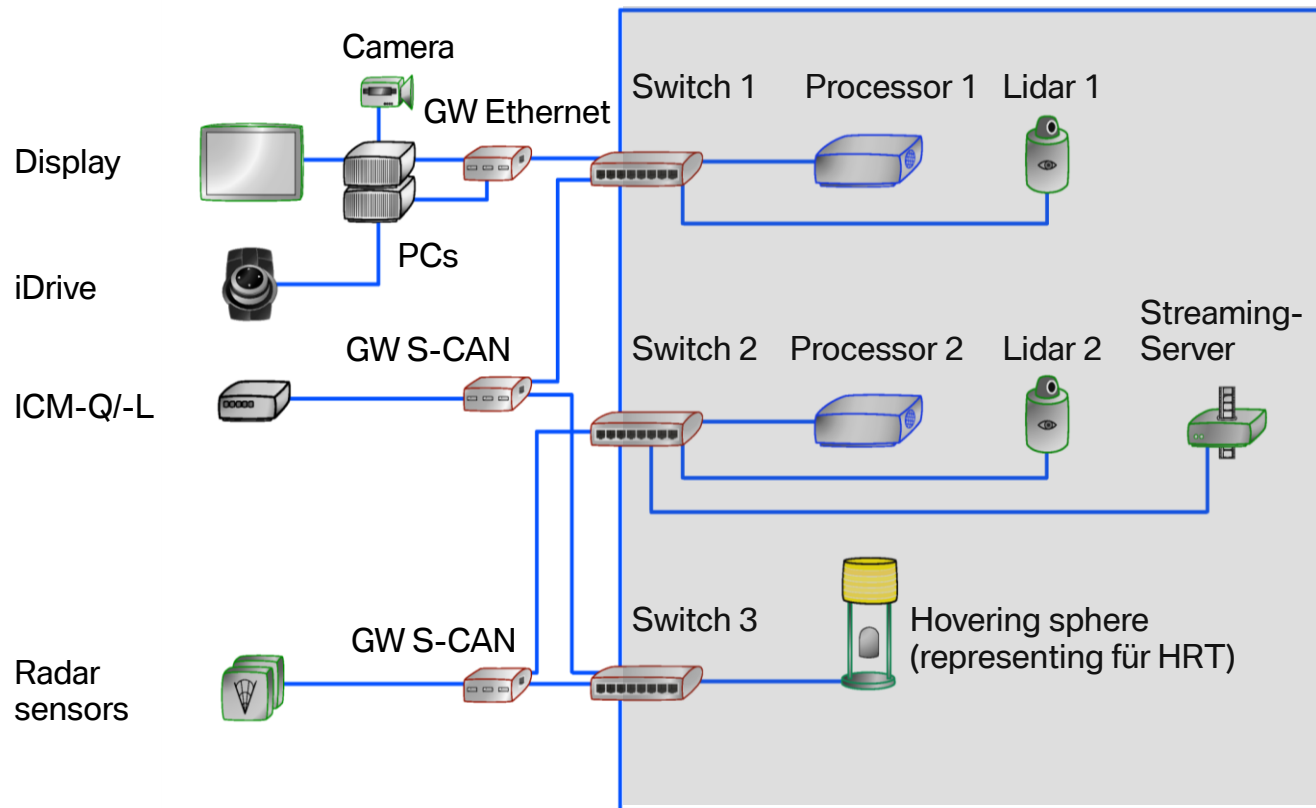


- Increase Robustness
- Reduce Complexity
- Homogeneous Components



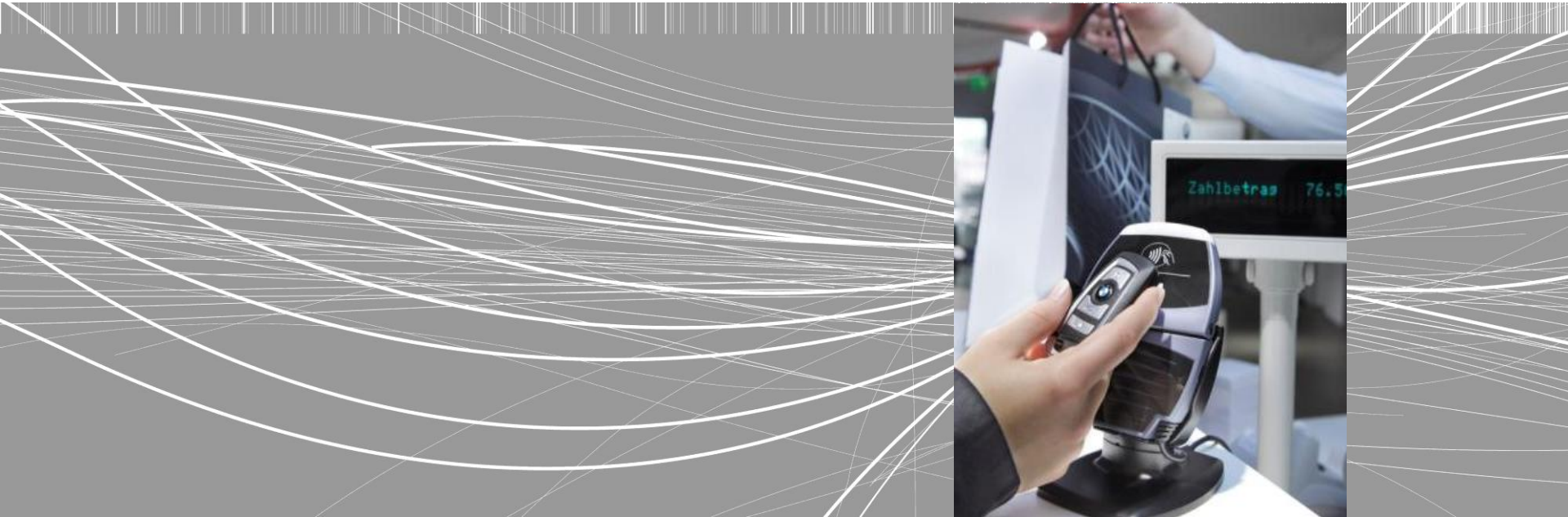
ITDrive.

Robustness Demonstration BMW 7 Series.



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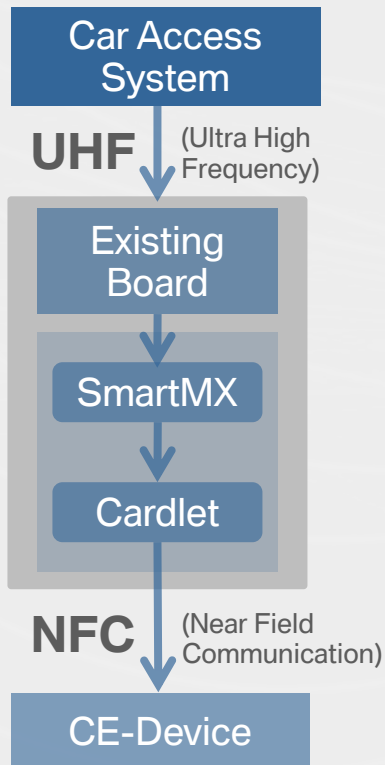
ITDrive.

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ITDrive.

BMW Key. The key to a new experience of mobility.



Key features

- NFC (Near Field Communication) Tag-Type 4 interface (ISO14443).
- Certified smartcard-controller with JCOP (Java Card Open Plattform).
- Connection to existing key electronics.
- Supply of vehicle data via NFC.

ITDrive.

BMW Key. The key to a new experience of mobility.



eTicketing

- selection and ticketing via vehicle display
- payment via backend
- ticket transfer via vehicle to the key

ITDrive.

BMW Key. The key to a new experience of mobility.



Displaying vehicle data

- overview over vehicle status
- check of service and vehicle data
- display of last vehicle location

ITDrive.

BMW Key. The key to a new experience of mobility.



ePayment

- contactless payment with the car key
- car key as branded lifestyle-object
- guaranteed solvency on route

ITDrive.

Thank you for your attention.

