

Dansk BilbrancheRåd Velkommen

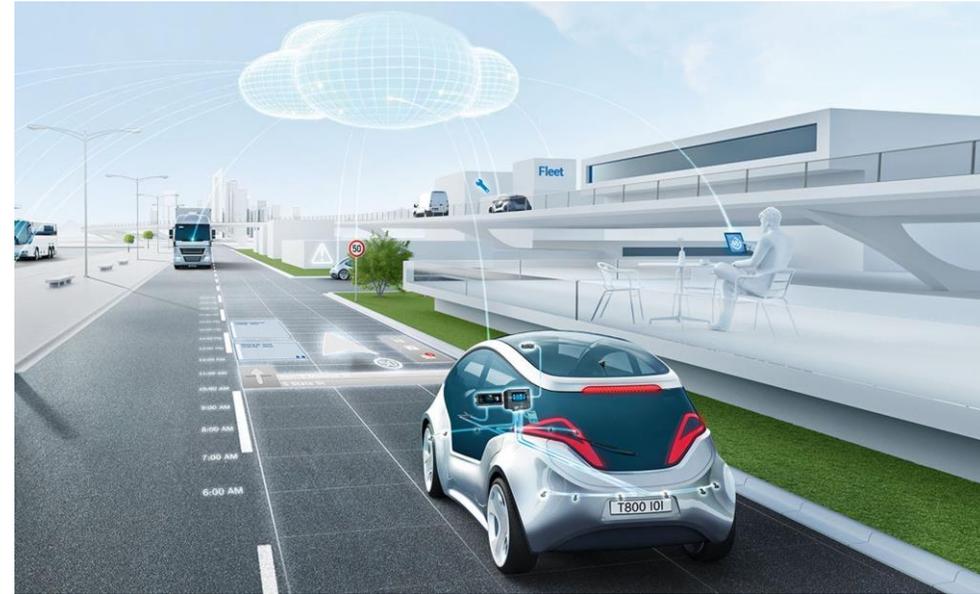


Klaus Skovgaard + Robert Bosch A/S

Dansk BilbrancheRåd

Vigtig ændringer i branchen – set med Bosch øjne

- ▶ El/hybrid kommer hurtiger end forventet.
- ▶ Diesel har aldrig været renere
- ▶ *ADAS systemer i alle biler og i alle pris klasser*
- ▶ *DoIP diagnose via IP adresse*
- ▶ Alle ny biler er online fra 03.2018 – E-call
- ▶ *SGW er lovkrav fra 2020*
- ▶ *PassThru bliver nødvendig for alle værksteder*
- ▶ Værkstedets besøg vil ændre sig I fremtiden
- ▶ *Bilen bliver forbundet med værkstedet, som er forbundet med alt udstyr på værkstedet. CoRe*



Dansk BilbrancheRåd OEM Customers



Automotive



OHW and Construction



2 Wheeler and HD Truck



Others

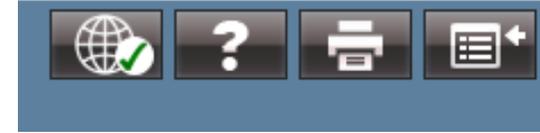
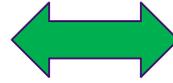


Dansk BilbrancheRåd

Bosch ESI[tronic] går nu 100% online



ESI offline use



ESI online use

- SD Full package local + intermediate Updates
- Updates every 3month
- Information SIS, EBR, M, P
- Search filters included
- Classical information structure
- Information separated SIS-M-P
- CAS Plus
- Car specific SIS + similar instruction

- SD Full package local + intermediate Updates
- Daily updates
- Information SIS, EBR, M, P
- Search engine included
- Enhanced links
- New (combined) information structure
- CAS Plus from 2019/2
- Car specific SIS+ search options

DoPI, Passthru, og SGW



Klaus Skovgaard – Robert Bosch A/S

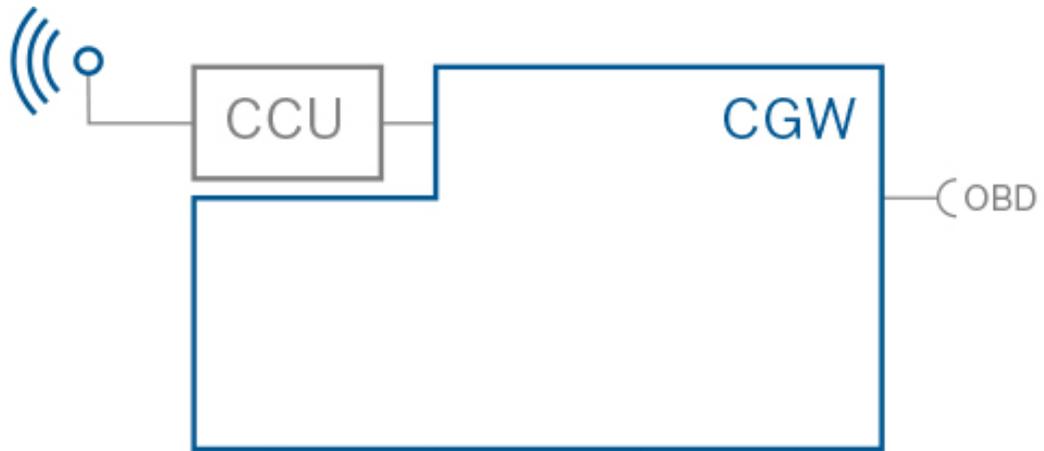
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Nogle biler har mere end 230 networked moduler



Dansk BilbrancheRåd

Nogle biler har 1 netværks modul



Dansk BilbrancheRåd

Fra 2020 kommer alle ny biler med SGW – Hvorfor?

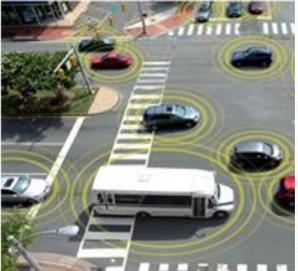
AFTER JEEP HACK, CHRYSLER RECALLS 1.4M VEHICLES FOR BUG FIX



A hacker's guide to fix automotive cybersect

HACKERS
The security researcher known for hacking a 2014 Jeep million-vehicle recall, outlines how automakers can i cyberattacks.

Charlie Miller
Contributor | 10K followers
The CIA Has Looked Into | Connected Vehicles Since



SAE INTERNATIONAL



THE JOURNAL
Markets Opinion Arts Life Real Estate
ie Hacked to Take Control,

common device under the dash

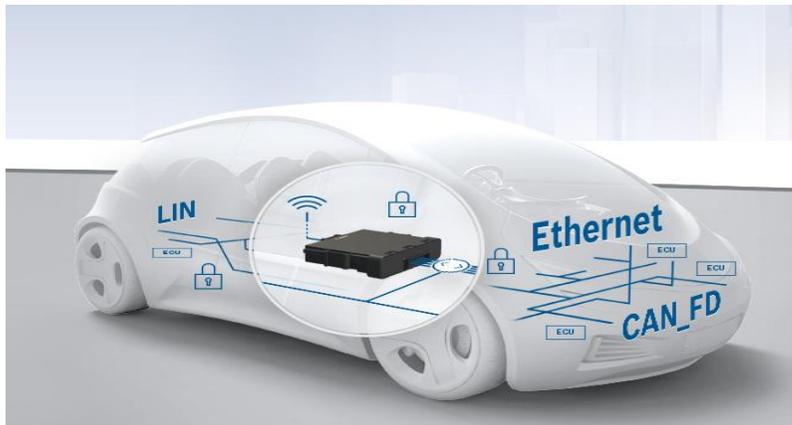
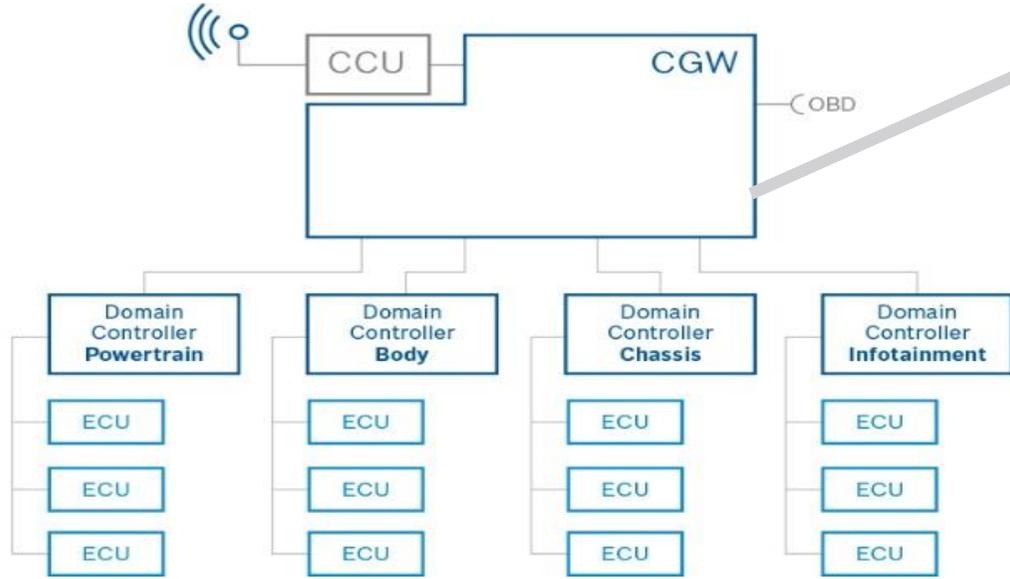


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14.12.17 7:00 AM
**DRIVERLESS CARS
ERS IS HARD. ASK
ER GUY WHO
THEM**



Dansk BilbrancheRåd NEW: Vehicle security (connected/autonomous vehicles)



Dansk BilbrancheRåd

What will happen to the 16pole OBD II Plug?



- ▶ Introduced in 1988 by California Environmental Protection Agency (CARB), to check emission relevant components (DTC, Readiness Codes, ...)
- ▶ Today it is a communication channel to talk with more than 50 ECUs in the car.
- ▶ Direct Access to the vehicle network without Firewall

Will the 16pole OBD II Plug be useless in the near future?

... No!

- ▶ But he will become more „safe“ (data access only with valid authorization/Authentication)
- ▶ Later on vehicle data will be available on different channel

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Paradigm change of Diagnosis



For 30 years the OBD Plug was the only Communication channel with the vehicle



Now the vehicle goes online and offers multiple options to communicate

(OBD II Plug, wireless CCU, Smartphone, eCall..)



Automated Driving and new vehicle technologies will increase Diagnosis complexity.

Alle Communications channels will be used, to exchange Data with the vehicle.

Cybersecurity will be extremely important for the vehicle Diagnosis and the data access to the vehicle.

BOSCH FIA 2706 / FIAT / 500X 1.4 / 334 / 1.4 / 09/2015 - / EAM
DEMO

Diagnosis

Search

Maintenance

Vehicle Identification

By Description

KBA key (D)

VIN identification

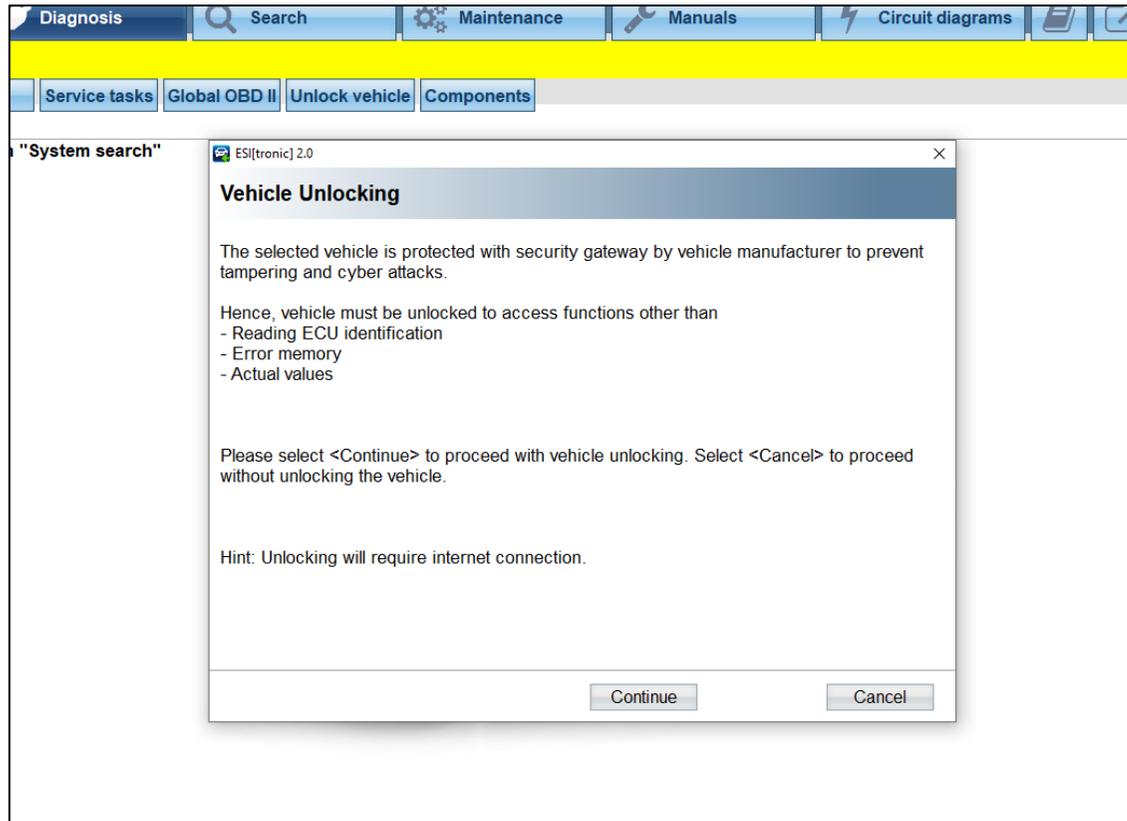
Last 30 Vehicles

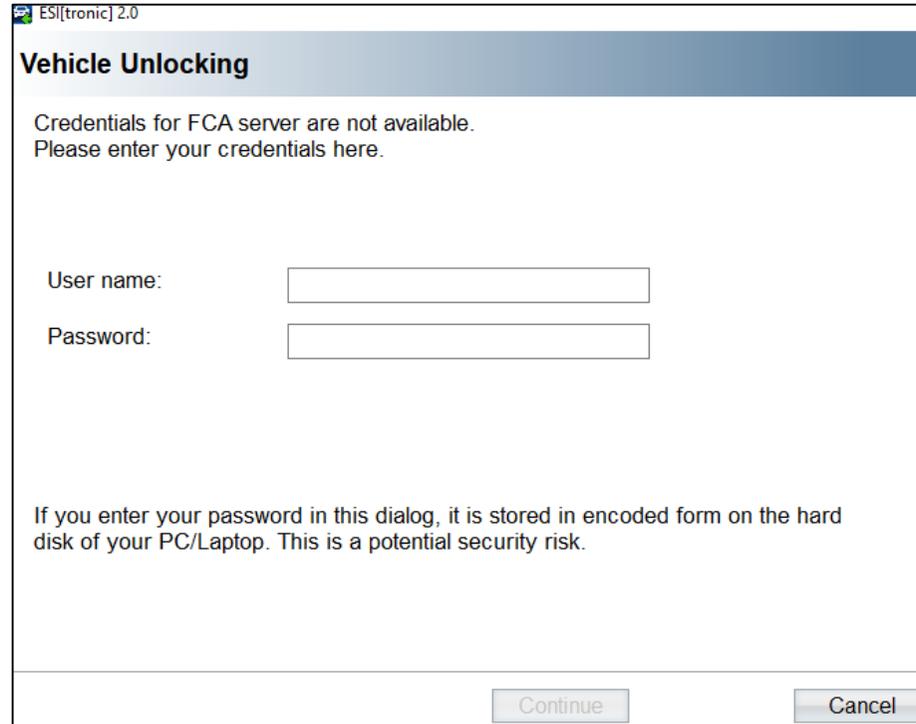
RB key

Type certificate no. (CH)

RB key	Make	Type	Internal Model Range	Liters	kW	Year of manufacture	Et
FIA2706	FIAT	500X 1.4	334	1.4	-	09/2015 -	E
SKO391	SKODA	Superb 2.0 TDI Combi 4x4	3T5	2.0	125.0	09/2009 - 05/2010	C
MB6898	MERCEDE...	AMG C 43 Coupe 4MATIC	205	3.0	287.0	04/2018 -	M
MB175	MERCEDE	C 250	205	2.0	155.0	10/2015 -	M

Modern platforms required to utilise new solutions





ES[tronic] 2.0

Vehicle Unlocking

Credentials for FCA server are not available.
Please enter your credentials here.

User name:

Password:

If you enter your password in this dialog, it is stored in encoded form on the hard disk of your PC/Laptop. This is a potential security risk.

ES[tronic] 2.0

User settings ?

Language settings

Company data

Messages

Proxy settings

Print settings

Protocol

Maintenance

Units

Vehicle Identification

OE Logins

User interface

Asanetwork

Product enhancement

OE Logins

FCA (Fiat Chrysler Automobiles)

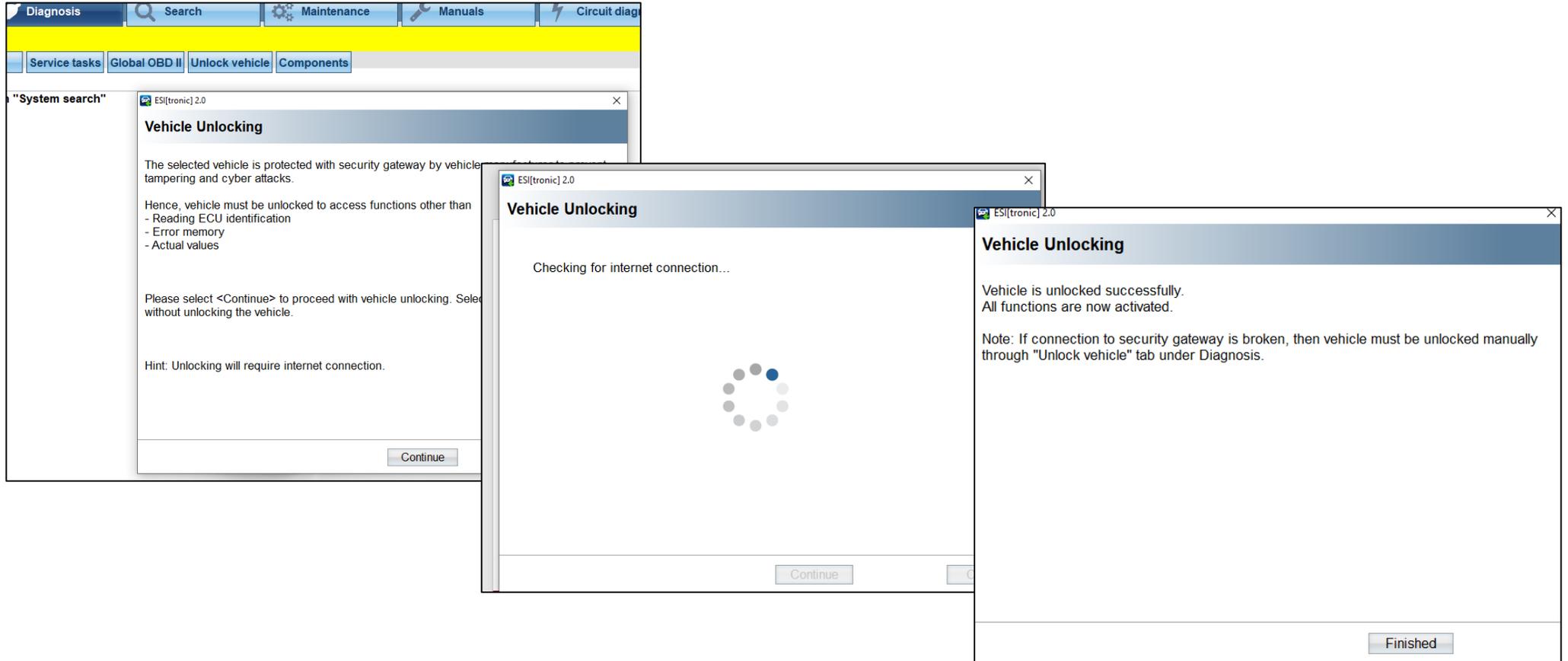
User name:

Password:

[Click here to register on FCA portal.](#)

If you enter your password in this dialog, it is stored in encoded form on the hard disk of your PC/Laptop. This is a potential security risk.

OK Cancel



Ensure ignition is switched on

System overview Repair Service tasks Global OBD II Unlock vehicle C

System group selection ↓ A Z

Search

- Engine control 1
- ABS
- Airbag 3
- Gear control
- Instrumentation 1
- Service Interval Display 1
- Heating/air conditioning 3
- Driver info 3
- Central electronics 1

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NEW: DoIP Infrastructure

OE tool compatible*

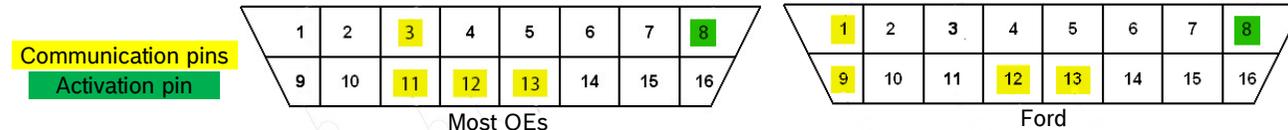


*Bosch manufacture diagnostic equipment for many OEM's on the same production line as the KTS range

Dansk BilbrancheRåd

Ethernet as Diagnostic Interface

- ▶ DoIP (Diagnostics over IP) is the name of the new diagnostic interface based on Ethernet
- ▶ Most European car manufacturer have included Ethernet on the 16 pin OBD socket (BMW, VW, Audi, Mercedes, Ford, ...)
- ▶ 2 variants of pinning:



- ▶ But complete diagnosis still possible via CAN until today

Specialty of the new Volvo XC90 (MY 2016):

- ▶ Ethernet integrated on the OBD socket
- ▶ Regulated OBD and base diagnosis like read / erase error codes is possible via CAN
- ▶ Functions like initialization or calibration are only possible via Ethernet interface
- ▶ → Complete diagnosis needs Ethernet !



ADAS



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Autonomous driving

Who Leads the Autonomous Driving Patent Race?

Number of worldwide patent filings related to autonomous driving (January 2010–July 2017)



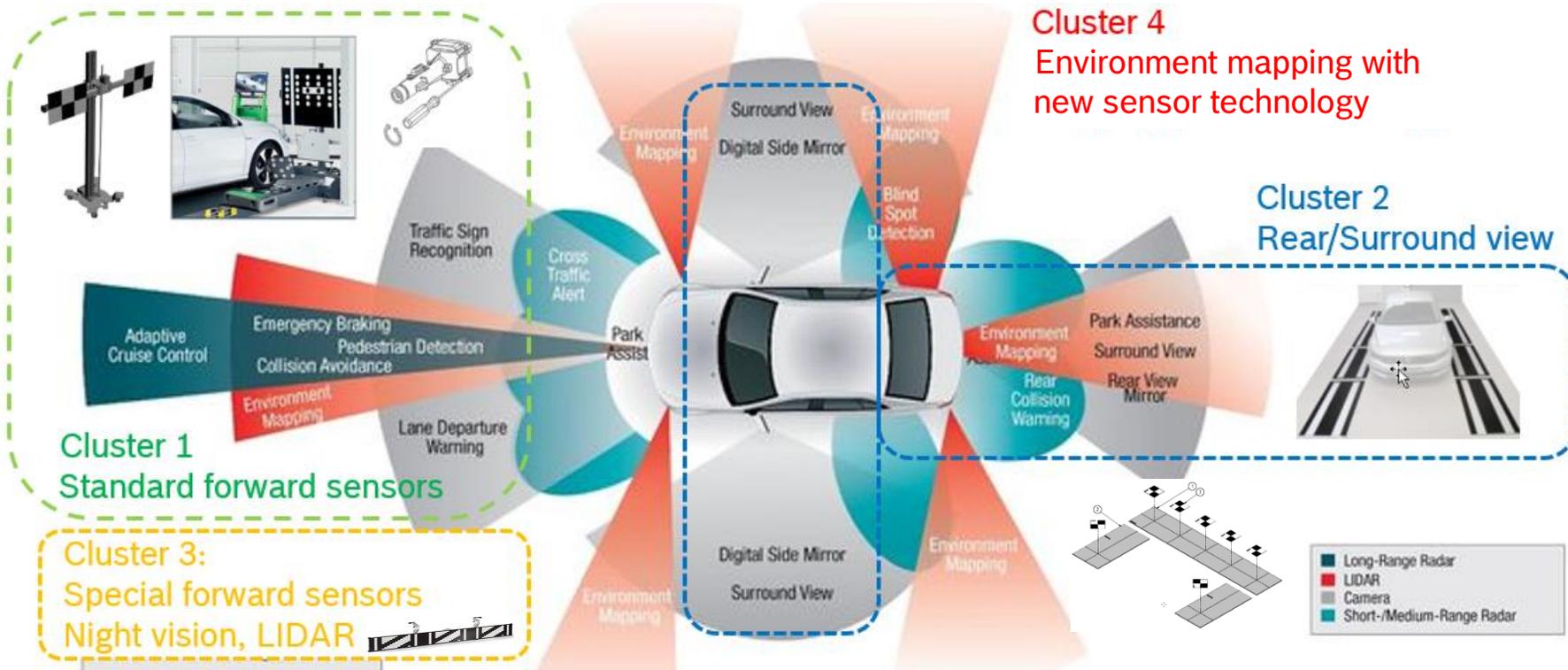
CC BY ND
@StatistaCharts

Based on a total of 5,839 patent filings related to autonomous driving identified and analysed by the Cologne Institute for Economic Research

Sources: Cologne Institute for Economic Research, WIPO

statista

Dansk BilbrancheRåd Technology



Cluster 4
Environment mapping with
new sensor technology

Cluster 2
Rear/Surround view

New car registration with
ADAS take rate:
2017: 25 – 50%
2020: 100%



Adult Occupant		Child Occupant	
	93%		85%
Pedestrian		Safety Assist	
	74%		72%

Growing market: -> 100% vehicle fitting rates with ADAS sensors in 2020 (NCAP: AEB, LKS | automated parking | lane change assist
-> New Sensor technologies for autonomous driving: Environment mapping with LIDAR sensors (laser scanner)
-> Legislation in respect of safety aspects

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Værktøj til Kamera og radar kalibrering

SCT 815

Standalone corner reflector for radar calibration



Radar



Coverage: Radar

1

SCT 415 / SCT 417

Entry and intermediate solution for camera calibration



Camera



Coverage: camera

2

DAS 3000

The professional solution for radar and camera calibration



Radar



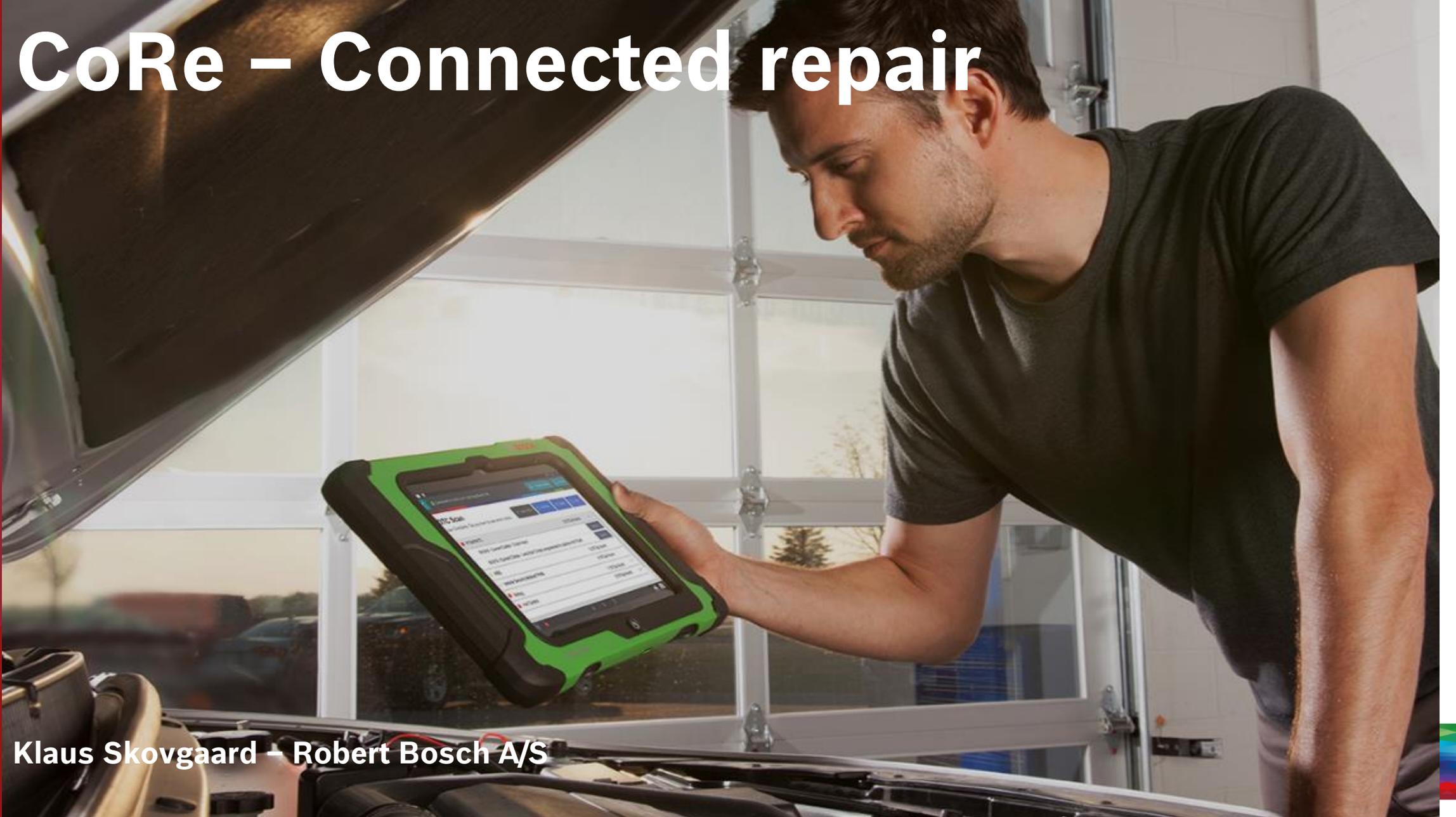
Camera



Coverage: Radar & camera

3

CoRe – Connected repair



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Internal training in KTS/ESI

CoRe – Bosch Connected Repair

„One-PC“



„Local“



„Online“



„Teaser“ for free

Currently 780 reg. Licences
+500% within 12 Months

Connection with Cloud DMS
since beginning of 2019

Connected Tools



Partnership with
Beissbarth

Supplier	Country	Supplier	Country	Supplier	Country	Supplier	Country
qcs	Germany	CDS	Poland	GEMICAR	Spain	MM Software	United Kingdom
ACTIVEX	Portugal	Compiler	Nordic and UK	GROUPAUTO	Italy	MMB Software	Italy
Audatex	Germany, Turkey	create business	Portugal	G	France	PRM Software AG	Germany
Autel	France	C&S	Spain	HELIOS	Denmark	PUGER	Italy
AutoPass	Luxemburg	DVSE (Stahlgruber)	Germany	incadea	Germany	Limex	Germany
Autotest INC	Israel	ED EditorialeDomus	Italy	infoflex	Sweden	SABER	Spain
BeraCom	Germany (AT, FR)	Dynamix	United Kingdom	Bücher	Germany	Vidicom	Germany
BODI-DATA	Germany	MÜBNER	Germany	Integra	Poland	WILLER PRO	United Kingdom
CAR-SYSTEMS B.V.	Netherland	FIDUCIAL VULCAIN	France	KOMUNET INFORMATICA	Italy	WIPAC	Germany
carweb	UK	FTZ	Denmark	KONPLAST	Croatia	WORKSHOP SOFTWARE	Australia
cormeta	Germany	FuturSoft	Finland	kornprobst	Austria	Der Wirtschaftsverlag	Austria
CDK Global	Germany	INTER OASIS	Poland	RIS	Germany		

Working with
45 Partner
after 24 Months

Internal training in KTS/ESI

CoRe – Bosch Connected Repair

PassThru



- BMW
- Mercedes
- VAG
- Opel
- Volvo
- Opel
- Osv.



Connected Repair



Internal training in KTS/ESI CoRe – Bosch Connected Repair



Data from car go to
CoRe

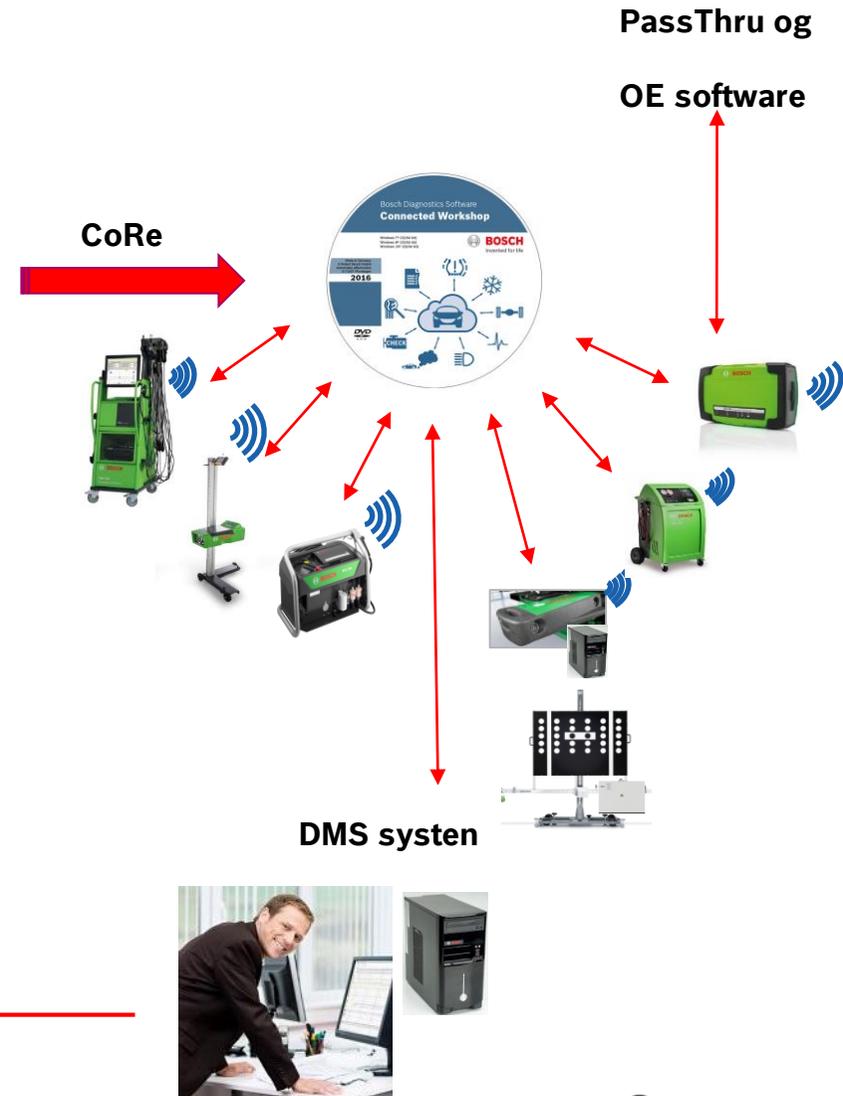
Telematic – step 2



Only 1 id
All data stored
All history from the Car



All data back to the customer on Mail



Dansk BilbrancheRåd

Nye tekniske krav til diagnose udstyr

- ▶ Ny teknisk løsning kommer nu som standard i ESI[tronic] 2.0 Online og via KTS 560/590 kan værkstedet ved hjælp af internetforbindelse få tilgang til OE krypterings systemer
- ▶ Bosch anbefaler værksteder med ESI[tronic], at være på forkant, og tilsikre at alle installationer er internet forbundet
- ▶ ESI2.0 brugere med abonnement vil automatisk modtage de software ændringer samt den firmware som behøves til arbejde på krypterede diagnose systemer (via DDM download manager)



ESI[tronic] version 2019/3 (September)

- ▶ Første version med Bosch Gateway løsning til FCA (Fiat/Chrysler/Alfa)
- ▶ Bosch Seed+Key server løsning til nye Mercedes køretøjer (2020->)

Dansk BilbrancheRåd

KTS: Hardware



- ▶ **KTS 250 – (PC+Interface)**
- ▶ Katalog pris: 17.900,-
 - ▶ PassThru, NEJ
 - ▶ Multimeter, NEJ
 - ▶ Oscilloscope NEJ
- ▶ ESI[tronic]:
 - ▶ SD, JA
 - ▶ SIS, NEJ
 - ▶ Masterpakke, NEJ
 - ▶ EBR, NEJ
 - ▶ Online, opdatering
 - ▶ CoRe NEJ (kommer senere)



- ▶ **KTS 350 – (PC+Interface)**
- ▶ Katalog pris : 29.900,-
 - ▶ PassThru, JA
 - ▶ Multimeter, NEJ
 - ▶ Oscilloskop, NEJ
- ▶ ESI[tronic]:
 - ▶ SD, JA
 - ▶ SIS, JA
 - ▶ Masterpakke, JA
 - ▶ EBR, JA
 - ▶ Online/offline, opdatering
 - ▶ CoRe ,JA



- ▶ **KTS 560 / 590 – (Interface)**
- ▶ Katalog pris : 17.900,- KTS560
- ▶ Katalog pris : 26.900,- KTS590
 - ▶ PassThru, JA
 - ▶ Multimeter, JA
 - ▶ Oscilloscope, KTS590 JA
- ▶ ESI[tronic]:
 - ▶ SD, JA
 - ▶ SIS, JA
 - ▶ Masterpakke, JA
 - ▶ EBR, JA
 - ▶ Online/offline, opdatering
 - ▶ CoRe ,JA

Dansk BilbrancheRåd

KTS: Hardware



▶ KTS 460 – (DCU 100+ + KTS 560)

▶ Katalog pris : 30.500,-

- ▶ PassThru, JA
- ▶ Multimeter, NEJ
- ▶ Oscilloscope NEJ

▶ ESI[tronic]:

- ▶ SD, JA
- ▶ SIS, JA
- ▶ Masterpakke, JA
- ▶ EBR, JA
- ▶ Online/offline, opdatering
- ▶ CoRe ,JA



▶ KTS 995 – (DCU 220 + FSA 500 + KTS 560)

▶ Katalog pris : 62.000,-

- ▶ PassThru, JA
- ▶ Multimeter, JA
- ▶ Oscilloscope, JA
- ▶ Motortest, JA

▶ ESI[tronic]:

- ▶ SD, JA
- ▶ SIS, JA
- ▶ Masterpakke, JA
- ▶ EBR, JA
- ▶ Online/offline, opdatering
- ▶ CoRe ,JA



Tak for jeres opmærksomhed



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