Future-proof Security

Digital Security Risks to Transport Infrastructure

Automated Vehicles – the good, the bad and the ugly!

Sebastian Rohr, CISA/CISM/CISSP
Who am I? Sebastian Rohr, CEO of accessec GmbH

- Started career in (IT-) Security @ Siemens
- Security Research @ Fraunhofer SIT

- Chief Security Advisor @ Microsoft
- Security Strategy for SME/Corporations

- Product-/Production Security
- Secure Automotive Networks & Backends
Roadway Security & Safety! My secured castle!
Well, not anymore, Ladies & Gentlemen
New architectures are needed!
Automotive Networks Previously...
And now...
Vehicles today are “moving data-centers” – with lots of vulnerable interfaces!

- Car-2-X Communication
- Interfaces:
  - OBD
  - Tire Pressure Monitoring
  - EV Charging
- E/E, ECU Security:
  - Tachograph
  - Chip Tuning
  - Function Activation
- Infotainment
  - USB
  - Lightning
  - GSM/UMTS/LTE, WiFi, Bluetooth
  - GPS, DAB, TMC, RDS
- Remote Keyless Entry
- Immobilizer

Picture source: https://www.sit.fraunhofer.de/de/automotive-security/

OECD Workshop, Paris
And unfortunately, they are exploited as we speak...

Vehicle hack using a car gadget
Youtube: “Corvette hacked through text message”
https://www.youtube.com/watch?v=XdALgh4KOw

Jeep Cherokee Hack
Youtube: “Hackers Remotely Kill a Jeep on the Highway—With Me in it”
And why is that so?
• Absence of incentive for securing the „product“ (car) alone
• Absence investment in security infrastructure of roadways either
• Absence of regulative pressure (who needs security?)

Good example: GDRP!
→ Lots of awareness created on board level
→ Significant effort put into protecting data and endusers (finally)

Suggestion:

Move forward to establish international „minimum security requirements“ for autonomous vehicles
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Suggestion: Move forward to establish international "minimum security requirements" for autonomous vehicles
When will we start?

Sebastian Rohr, CISA/CISM/CISSP
CEO & Founder
accessec GmbH
rohr@accessec.com
+491715580066