

Privacy, Data and Data Exchange in Connected Cars

29 March 2023

Poznan, Poland

Lene Sørensen, Samant Khajuria, Knud Erik Skouby

Overview

Characterisation of CVs/ data collection

General principles for data protection

Characterisation of data collected/ discussed here

Two CV brands

Tesla and VW

Relevance of data protection in CVs

Conclusion

Connected Vehicles (CVs) and Data Protection

Today's connected vehicles (CVs) are equipped with numerous sensors and computers connected to the internet.

Cars are becoming part of a mobile ecosystem with data flows between a network of carmakers, vendors, and others to support individuals' logistics and infotainment.

Privacy in connected vehicles is thus an important issue as these vehicles gather and transmit a significant amount of personal data.

Services that collect and share this information should be accompanied by a privacy policy that describes data collection and use.

Generally, this is required by, e.g., by EU's General Data Protection Regulation (GDPR) and increasingly by state laws in the US

From GDPR it follows that the following principles should be respected

1. Data collection and storage: only the minimum necessary data to provide the required services should be collected. Collected data should be protected from unauthorized access.
2. Data usage: The data should only be used for the specific purposes for which it was collected.
3. Transparency: Clear and concise information about what data is collected, how it is used, and with whom it is shared.
4. User control: Vehicle owners should have control over their data, including the ability to delete it and prevent its use for certain purposes.
5. Data sharing: Vehicle manufacturers and service providers should limit the sharing of data with third-party entities and ensure that such entities are bound by privacy and security obligations.
6. Anonymization: Personal data should be anonymized to protect the privacy of vehicle owners.

Data and privacy protection in two car brands

As illustration and input for analyses, we have looked at two car brands

- Tesla and Volks Wagen
- Which data are collected
- How does the collection process and privacy protection match the general principles



Tesla – collecting ‘everything’

Tesla was and is both the leader in mass-produced e-car and in collection of data in CVs

Tesla is a data-driven company. Before making cars, Tesla built a large database of consumers interested in buying the latest drive technology. It began recording all data generated by the car and the consumer in all aspects of product use

- Connectivity is an important part of all Tesla vehicles, further enhancing the driving experience by providing access to features that require data usage — including streaming music and media, live traffic visualization and more. All Tesla vehicles come with access to Standard Connectivity.
- If you are a Tesla product or service owner, we may also collect other information from or about you, your Tesla vehicle, energy product, or from third parties. We may collect such information either through remote access or in person (for example, during a service appointment).
- Tesla does not sell your personal data to anyone for any purpose, and does not discriminate in response to privacy rights requests.

<https://www.tesla.com › support › connectivity>

Tesla – following rules?

- Tesla reportedly records a GPS trail of every trip it makes—and shares it with the company. This data is supposedly anonymized.
- However, Tesla really *can't* de-anonymize location data if it wants to effectively use that data to improve its services (IEEE cit).
- Tesla does not sell your personal data to anyone for any purpose, and does not discriminate in response to privacy rights requests.^{you}

Customer Privacy Notice – TeslaUsers

- No independent verification of what Tesla claims its location-based data privacy practice actually is.
- Users may ask Tesla to disable the vehicle's connectivity altogether, if you choose not to share data, 'all Tesla facilities are lost'
- Owners can buy a kit for US \$1,400 giving access to your own car's event data recorder, but just a tiny subset of the data collected. Owners in California and Europe benefit from legislation that means Tesla will provide access to more data generated by their vehicles?



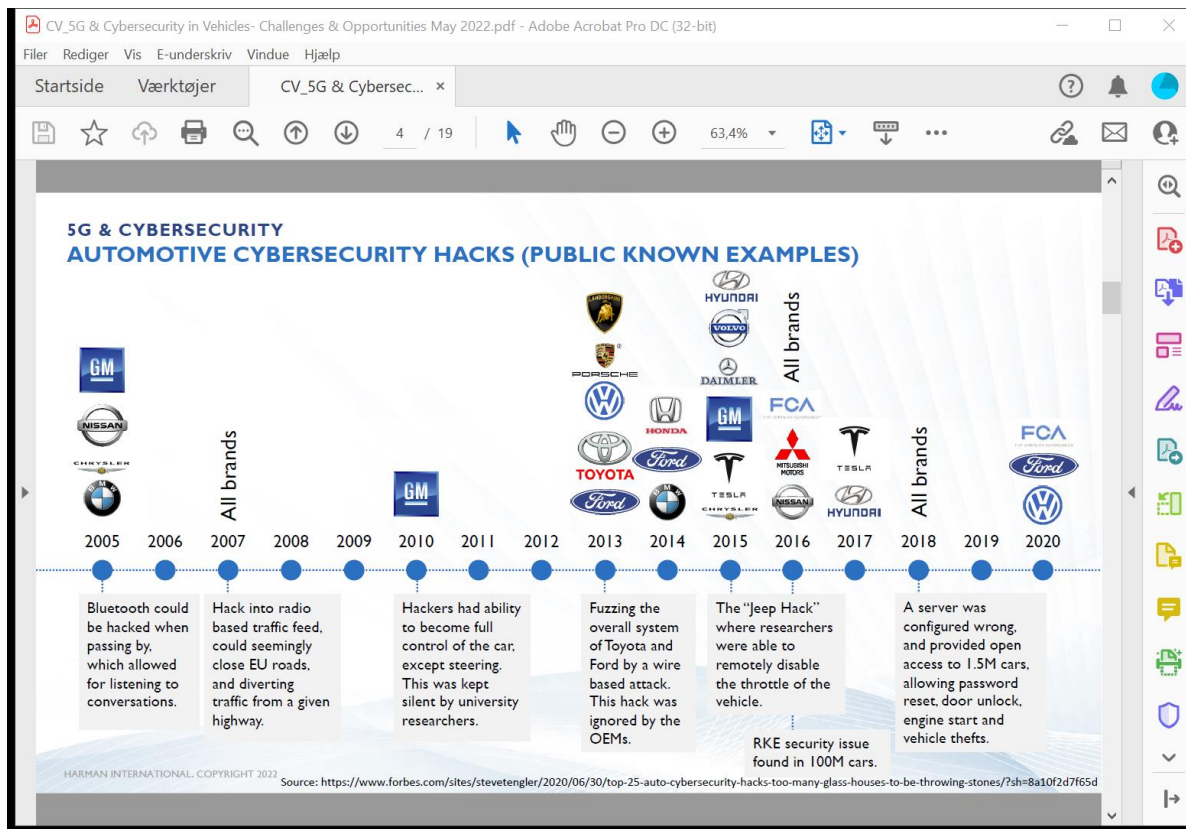
Privacy in CVs

It is an issue –like on any other platform (mobile, Google..)

Much less discussed or addressed by regulation

Breaching & hacking happens!

Breaches & Hacks



Ravi Puvvala,
VP Strategic
Partnerships, Harman.
Presentation at WWRF Huddle 2020

Conclusion

