Title: ***Robustness of alternative Authentication methods in Connected Vehicles***

Format: Half day

Organizers

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Abstract

Today, vehicle manufacturers have already deployed various technologies for driving assistance, driving aid, anti-theft, and seamless authentication using, for example, key-fob devices. Tomorrow, alternative authentication modalities (i.e. face, eye, fingerprint, and voice) will be used to access future connected vehicle's features and services. Several studies have been done showing that an in-vehicle network can be easily compromised using commercial devices and performing reverse engineering. However, to the best of author's knowledge, there hasn't been any specific study where all the possible technologies have been collected, studied, compared and their security aspects analyzed.

Join this tutorial to learn and understand how these new technologies will impact vehicle security and customer experience. In this session, the pros and cons of each technology, the user experience vs the technical challenge, edge computing vs cloud computing, and the Internet of Thing (IoT) ecosystem integration will be discussed.

Finally, a real demo of the main authentication technologies will be performed.

List of topics

- Pervasiveness of each modality
- Regulatory compliance – FIDO, iBeta, etc.
- Data confidentiality/Security
- User experience
- Connected Vehicles and IOT Ecosystem

Tentative list of presenters together with a draft schedule

1) Description of each modality (15 minutes)
2) Pro's and con's of alternative authentication process (45 minutes)
3) Use cases and business model (45 minutes)
4) Actual demos (30 minutes)
5) Q&A and idea sharing (30 minutes)
6) Wrap up (15 minutes)

A udience background knowledge: Engineering / Software / Data Science / Business

Personal computer and software requirements for attendees: No personal computer is required