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Analysis of Car Applications

The full text is currently only available in the Deutsch version. A translation will follow.

Archived. This content is no longer updated. It remains available for reference.

Source https://technology2.a-sit.at/en/publications/analysis-of-car-applications/

This survey evaluates the state of the art of mobile applications for cars. It gives an overview of popular mobile applications for cars and their functionality. With the sustained popularity of mobile communication technologies in the last years, such apps are now heavily deployed in the automotive sector. One example is mobile applications which allow drivers to interact with their vehicles. Locking and unlocking, or remote climate control and pre-heating are only some examples for possible use cases of mobile applications.

However, several incidents in the past have shown, that the applications provided by manufacturers are not resilient to attacks and thus compromise the security of the overall system. As a result, mobile applications pose a potential field of application, which can benefit from the correct usage of secure information and communication technologies.

Additionality, this survey deals with the used technologies and authentication mechanisms. This data is further used to identify possible risks and attack vectors of mobile applications. The survey is complemented by a detailed analysis of applications of car manufacturers. The results show that mobile applications for cars can be susceptible to targeted attacks and there is room for improvement.

Following responsive disclosure principles, possible weaknesses are depicted, but without disclosing specific applications. Manufacturers will be noticed.