

Porsche introduces blockchain to cars

This article reflects the status at the time of its publication. The content may since have become outdated.

22/02/2018 In collaboration with the Berlin-based start-up XAIN, Porsche is currently testing blockchain applications directly in vehicles. This makes the Zuffenhausen-based company the first automobile manufacturer to implement and successfully test blockchain in a car.

Transactions based on this technology are both secure and can be processed far more quickly than anything that has come before. The applications tested include locking and unlocking the vehicle via an app, temporary access authorisations and new business models based on encrypted data logging. This could be developed further, for example, to improve autonomous driving functions.

Blockchain is a decentralised protocol for data transactions between business partners. It also forms the basis of the well-known cryptocurrencies Bitcoin and Ethereum. Every change is recorded in chronologically arranged data blocks, making it transparent and tamper-proof. This could hold

enormous potential, according to Oliver Döring, Financial Strategist at Porsche: “We can use blockchain to transfer data more quickly and securely, giving our customers more peace of mind in the future, whether they are charging, parking or need to give a third party, such as a parcel delivery agent, temporary access to the vehicle. We translate the innovative technology into direct benefits for the customer.”

The services are fast and secure

The services developed on the foundation of blockchain are fast and very secure. The car becomes part of the blockchain, making a direct offline connection possible – that is, without diversion through a server. Taking 1.6 seconds, the process of opening and closing the car via an app is up to six times faster than before. In addition, efficient cryptographic encryption takes place. This process ensures that all activities are documented in the blockchain in a way that prevents them from being modified, and can be viewed using an app. For example, access authorisations can be distributed digitally and securely and can be monitored by the vehicle owner at any time. Access also works remotely.

Moreover, the technology makes it possible to assign temporary access authorisations for the vehicle – in a secure and efficient manner. A protected connection to vehicle data and functionalities can be established using blockchain. At the same time, it protects all communication between participants. Third-party providers can be integrated without the need for additional hardware, simply by using “smart contracts”. Smart contracts are automated contracts that trigger transactions upon the occurrence of previously defined conditions. This means that compliance with the contract is ensured through technology.

New business models based on blockchain

Porsche is also working on new business models based on blockchain: Through auditable data logging, the data to be processed is encrypted locally in a distributed blockchain. The user is in control of the data, deciding how to use it depending on the situation. All activities are documented in the blockchain, making deletions transparent. With this basis, the future of autonomous driving will see improved functions on offer: Local data can be used to obtain regional learning effects, which can be shared securely with other vehicles. The customer can make use of swarm data, which is protected at the same time.

Link Collection

Link to this article
https://newsroom.porsche.com/en/innovation/digital-deep-tech/porsche-blockchain-panamera-xain-technology-app-bitcoin-ethereum-data-smart-contracts-porsche-innovation-contest-14906.html

Media Package
https://pmdb.porsche.de/newsroomzips/a3719bc1-a2db-4353-95a1-4de36077148c.zip

Dr. Ing. h.c. F. Porsche Aktiengesellschaft
Porscheplatz 1
70435 Stuttgart