TrustedIoTAlliance

SMART E-MOBILITY CHALLENGE

TRUSTED DATA FROM A CAR: TRUSTWORTHY ODOMETER DATA

T-LABS & G+D & UBIRCH JOIN FORCES TO COMBINE MILITARY-GRADE CRYPTOGRAPHY WITH BLOCKCHAIN TECHNOLOGY AND BRING IT ON THE SIM-CARD OF A CAR, TO CREATE AN IMMUTABLE LOG OF CAR DATA.

PROBLEM BEING SOLVED

Current security solutions for IoT data don't scale, can't guarantee the authenticity of IoT data end-to-end and don't offer ways to verify data authenticity whenever needed in the business cases repeatedly. This will become mandatory if more and more parties involve in IoT business cases together. Customer, resellers and car manufacturers themselves for example need to be able to fully trust the IoT data they receive from the car. They need to be sure that data coming from the sensor, from the car was not manipulated, injected, changed or deleted and is coming in the right sequence from the right device. Manipulated odometer data are a big issue on the used car market and everyone participating in the value chain of used car sales, is paying his hidden fees for the risk of a manipulated odometer.

SOLUTION BEING PROVIDED

The solution provided focuses on trustworthy odometer data coming from the car. The G+D SIM-Card of the car is generating cryptographically signed and linked blockchain-optimized data packages (the UBIRCH trust protocol) containing the odometer data and stores it into the blockchain. This enables a functional application like the T-Labs Mileage App to verify the authenticity of the car data and to work with trustworthy data.

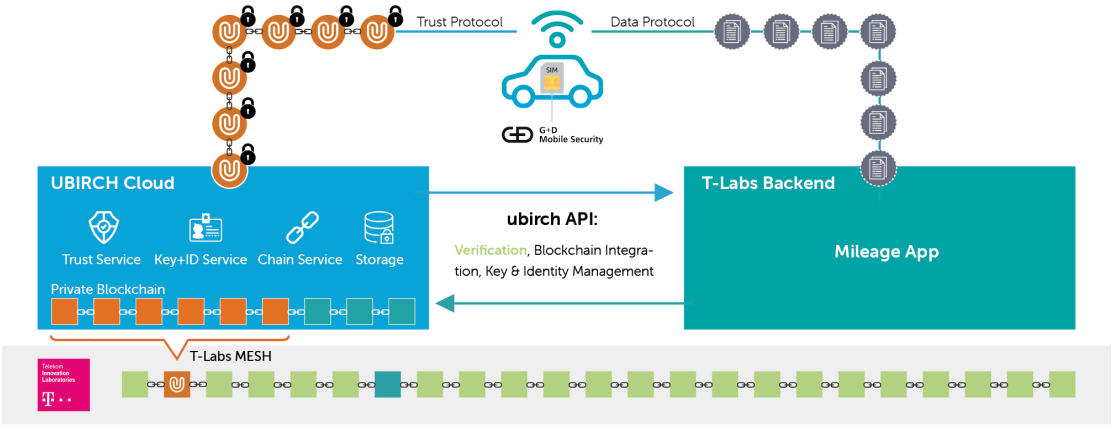
BUSINESS VALUE

Through fully trustworthy car data and the possibility to (re-) validate the authenticity of data against a common, decentralized ground of truth whenever needed, the risk of manipulated odometer data in the used car market gets eliminated and the app offers an easy access for everyone to this validated data.

TECHNOLOGY COMPONENTS

This solution is enabled by a G+D SIGNiT SIM-Card in the car to seals the odometer data cryptographically at the source with a blockchain-style protocol, milliseconds after it has been measured, using the UBIRCH trust protocol. T-Labs uses Stax deployed on state of the art cloud and app technology, to make the verified data accessible to everyone and everywhere. Data is being anchored against the blockchain using T-Labs Stax service, a service that allows every developer to build Blockchain-based IoT ecosystems via simple-to-use and DLT-agnostic APIs. Companies can create consortial IoT ecosystems and experiment with different kinds of Blockchain technologies without the need for their developers to have Blockchain expertise. Stax also enables one-click on IoT device / on premise hosting of DLTs.

TRUSTWORTHY ODOMETER DATA – ARCHITECTUAL OVERVIEW



The car produces two data streams for its IoT data, the data protocol and the trust protocol created directly on the SIM. While the data protocol can be handled by the Mileage App Backend, the trust protocol is handled by the UBIRCH cloud, anchoring the trust protocol packages into the blockchain using T-Labs Stax service. Whenever needed within the business case, the IoT data can be verified for its authenticity against the blockchain using the UBIRCH API.

THESE PARTNERS CONTRIBUTED TO OUR SUCCESSFUL POC

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