

Better than blockchain? Uniscon's STAN

May 20th 2019 – Munich: IT experts had originally envisioned a rosy future for blockchain technology, for example as a means of keeping transactions secure or as a digital delivery note. The possibilities seemed almost limitless! Still there has been growing concern about whether innovation comes at the expense of the environment and data privacy. IT security expert and Uniscon CTO Dr. Hubert Jäger outlines the problems of blockchain technology.

Blockchain pros and cons

Often when we talk about blockchain, what we actually mean is distributed ledger technology—the two terms are frequently used synonymously. A distributed ledger is a distributed database in which all participants in a network automatically agree on the order of a series of transactions. All participants constantly have access to the most recent version of the database. This decentralized structure gives blockchain technology a number of advantages over regular (conventional) central data management, such as:

- Considerable transparency between the participants
- Independence from intermediaries
- Consequently, a high level of tamper protection

However, these advantages also give rise to several major disadvantages:

- High energy consumption resulting in insufficient scalability
- Lack of confidentiality or inadequate data protection
- Lack of accountability for many legal constructs

“Distributed storage of the data prevents the records in the blockchain from being tampered with,” Jäger explains. However, this multiple, independent, and thus permanent storage is questionable from a data privacy perspective. Permanent storage conflicts, for example, with the ‘right to be forgotten’, otherwise known as the ‘right to erasure’ (Article 17 GDPR), as well as with obligations relating to the restriction of processing (Article 18 GDPR) and rectification (Article 16 GDPR).

The high energy consumption of many blockchain technologies arises from the proof of work process that many blockchains use to allow contributions. These are usually extremely processor-intensive tasks that drive up the energy usage of a large blockchain to the level of a small town. However, as computing resources and the energy these use are limited, the blockchain’s performance and scalability is considerably restricted.

STAN instead of blockchain

Particularly in the corporate sector, a variant of blockchain known as permissioned blockchain is frequently used. This adds important functions to Uniscon’s Sealed Trust Anchor Network (STAN), giving STAN the following advantages over conventional—public—blockchain technology:

- *Significantly lower energy usage (since no proof of work is required)*
- *Higher scalability as a result*
- *Clear lines of responsibility¹*
- *Confidentiality and integrity of data not only during storage but also during processing at the network nodes*
- *Data protection through the possibility of complete erasure of data*

“Uniscon’s Sealed Platform reliably protects the data stored in the data center from unauthorized access,” says Jäger. “The data can also be deleted without trace by the user, which means there is no conflict with the GDPR.”

Unlike blockchain on its own, for example, STAN is therefore also suitable for processing of personal data. “We originally developed STAN as a tamper-proof key service for our Sealed Platform². However, the distributed network can also perform other tasks, such as an inventory service for the commissioning of devices on the Internet of Things (IoT) or as a distributed ledger for keeping transactions secure,” Jäger explains.

Have we sparked your interest in our Sealed Platform? Then test the high-security cloud platform for your data and applications. [Find out more!](#)

Further information and printable images are available upon request at presse@uniscon.de

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Press contact

Uniscon GmbH, Ms. Claudia Seidl
Ridlerstr. 57
80339 München
E-Mail: presse@uniscon.de
Internet: www.uniscon.com
Telefon: 089 / 41 615 988 104

Kafka Kommunikation GmbH & Co KG, Julia Fehrle
Auf der Eierwiese 1
82031 Grünwald
Tel. +49 (0) 89 74747058-0
Fax + 49 (0) 89 74747058-20

¹ Clear lines of responsibility are indispensable for legal implementation of new business models.

² <https://www.uniscon.com/cloud-solution/sealed-cloud-platform/>