Dialog - Blockchain

Author: Melanie Wirdemann

In the following dialog, Ralf, the father, asks his daughter Lara if she can explain the topic of blockchain to him.
Since Ralf knows that Lara has already dealt with the topic of blockchain, he hopes to receive a brief explanation from her. He himself has not yet dealt with the subject, as he was not interested in it at first either. However, since his colleagues have already talked about it and he was unable to contribute anything to the conversation, which was quite unpleasant for him, he would like to have a short, comfortable explanation without having to find out anything for himself.

Dad: Hi Lara, I just have one little question.

Lara: Hey Dad, of course, how can I help you?

Dad: Last week I saw an article in a magazine about Blockchain. I was not that interested at first. But then yesterday a few work colleagues were talking about it and I could say almost nothing about it. That made me feel uncomfortable. Could you explain blockchain to me briefly? I know you're familiar with it.

Lara: Wow, that's not a small question anymore, Dad! What do you already know?

Dad: The best thing to do is to start from scratch.

Lara: Ok, then let’s start. A blockchain is a distributed database that is shared among the nodes of a computer network. As a database, a blockchain stores information electronically in digital format. A blockchain makes it possible to transmit information in a tamper-proof way using a decentralized database shared by many participants, so that copies are impossible. It is stored on many computers in a peer-to-peer network, with each new node adopting a full copy of the blockchain when it joins, and from now on it has the task of verifying and documenting transactions.

Dad: Phew, that sounds complicated. How does something like that work?

Lara: Someone initiates a process by generating a data record (block), which is then verified and stored by thousands or even millions of computers in the network. The verified block is cryptographically encrypted and appended to a chain of records (blockchain), creating a large number of unique records, each with its own traceable history.

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Blockchains are therefore secure, always up-to-date directories in which digital transactions can be reliably documented in a way that is traceable for the participants. They are constantly expanded chronologically and linearly, comparable to a chain in which all participating computers are integrated as links and which is constantly expanded by new links (hence the term blockchain).

Dad: However, my work colleagues have been talking about Bitcoin among other things. What does that have to do with Blockchain?

Lara: Bitcoin is a digital currency based on blockchain technology. Bitcoins are created without the involvement of central banks through the calculation of blocks that contain transactions and are created through cryptographic calculations in the course of so-called mining. By means of the electronic currency, payments can be processed anonymously and without traditional banks in a short time (almost real time) worldwide.

Dad: And that’s Secure?

Lara: Yes, it is! Security is a major advantage of the blockchain. Transactions must be agreed upon by all parties before they are recorded. Once the approval process is complete, the transaction is encrypted and linked to the previous transaction. Because the information is stored on a network of computers rather than on a single server, it is virtually impossible for hackers to compromise transaction data.

Dad: Ok, thank you! This will definitely help me the next time I have a conversation in the office so I don't stand there like I have no idea!

Lara: Your welcome, but, Dad, next time, you need to get into the subject and read such important articles as well.

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Glossar

Distributed database	information is stored on a network of computers rather than on a single server
Tamper-proof way	Method that is protected from tampering and counterfeiting
Peer-to-peer Network	In a peer-to-peer network, all participants have equal rights. There are no typical client-server structures and every computer can offer functions, resources or services or make use of them
cryptographically encrypted	
Bitcoin	digital currency based on blockchain technology